APPENDIX 2

HEALTH RISK ASSESSMENT

Inland Valley Infrastructure Corridor

CONSTRUCTION HEALTH RISK ASSESSMENT

CITY OF HIGHLAND, CITY OF SAN BERNARDINO, AND COUNTY OF SAN BERNADINO

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg	Microgram
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APS	Auxiliary Power System
AQMD	Air Quality Management District
ARB	Air Resources Board
CEQA	California Environmental Quality Act
CPF	Cancer Potency Factor
DPM	Diesel Particulate Matter
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
HHD	Heavy Heavy-Duty
HI	Hazard Index
HRA	Health Risk Assessment
LHD	Light Heavy-Duty
MEIR	Maximally Exposed Individual Receptor
MEIW	Maximally Exposed Individual Worker
MHD	Medium Heavy-Duty
NAD	North American Datum
OEHHA	Office of Environmental Health Hazard Assessment
PM_{10}	Particulate Matter 10 microns in diameter or less
Project	Inland Valley Infrastructure Corridor
REL	Reference Exposure Level
RM	Recommended Measures
SCAQMD	South Coast Air Quality Management District
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TA	Traffic Analysis
TRU	Transport Refrigeration Unit
URF	Unit Risk Factor
UTM	Universal Transverse Mercator
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

This report evaluates the potential health risk impacts to sensitive receptors (which are residents) associated with the development of the Project, more specifically, health risk impacts as a result of exposure to Toxic Air Contaminants (TACs) including diesel particulate matter (DPM) as a result of heavy-duty diesel trucks and construction equipment used during construction of the proposed Project. This section summarizes the significance criteria and Project health risks.

The results of the health risk assessment from Project construction-generated DPM emissions are provided in Table ES-1 below for the Project. Because the proposed Project would not generate TAC emissions during long-term operation, an operational HRA is not required.

CONSTRUCTION IMPACTS

Without Mitigation

Table ES-1 presents the estimated construction risk prior to mitigation that would result under each construction activity for sensitive receptors located within 40 feet of Project construction activities. Without implementation of mitigation measure (MM) AQ-1, the maximum incremental cancer risk during roadway installation, channel improvement installation, and sewer installation would exceed the South Coast Air Quality Management District (SCAQMD) significance threshold of 10 in one million. Under all construction activities, without implementation of MM AQ-1, non-cancer risks would not exceed the applicable significance threshold of 1.0.

TABLE ES-1: SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS – WITHOUT MITIGATION

Construction Activity	Time Period	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
Category 1 – Roadway Installation	0.97 Year Exposure	11.29	10	YES
Category 2 – Channel Improvement Installation	0.97 Year Exposure	11.29	10	YES
Category 3 – Storage Reservoir	0.60 Year Exposure	6.09	10	NO
Category 4 – Extraction Well	0.23 Year Exposure	1.14	10	NO
Category 5 – Sewer Installation	0.97 Year Exposure	11.29	10	YES
Construction Activity	**Time Period**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Category 1 – Roadway Installation	Annual Average	0.02	1.0	NO
Category 2 – Channel Improvement Installation	Annual Average	0.02	1.0	NO
Category 3 – Storage Reservoir	Annual Average	0.03	1.0	NO
Category 4 – Extraction Well	Annual Average	0.04	1.0	NO
Category 5 – Sewer Installation	Annual Average	0.02	1.0	NO

With Mitigation

Table ES-2 presents the estimated construction risk with mitigation that would result under each construction activity for sensitive receptors located within 40 feet of Project construction activities. With implementation of MM AQ-1, the maximum incremental cancer risk would remain below the SCAQMD significance threshold of 10 in one million during all construction activities. Additionally, with implementation of MM AQ-1, non-cancer risks would not exceed the applicable significance threshold of 1.0 during all construction activities.

TABLE ES-2: SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS – WITH MITIGATION

Construction Activity	Time Period	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
Category 1 – Roadway Installation	0.97 Year Exposure	5.35	10	NO
Category 2 – Channel Improvement Installation	0.97 Year Exposure	4.24	10	NO
Category 3 – Storage Reservoir	0.60 Year Exposure	0.79	10	NO
Category 4 – Extraction Well	0.23 Year Exposure	0.17	10	NO
Category 5 – Sewer Installation	0.97 Year Exposure	4.24	10	NO
Construction Activity	**Time Period**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Category 1 – Roadway Installation	Annual Average	0.01	1.0	NO
Category 2 – Channel Improvement Installation	Annual Average	0.01	1.0	NO
Category 3 – Storage Reservoir	Annual Average	<0.01	1.0	NO
Category 4 – Extraction Well	Annual Average	0.01	1.0	NO
Category 5 – Sewer Installation	Annual Average	0.01	1.0	NO

MM AQ-1

When using construction equipment greater than 150 horsepower (>150 hp), the Construction Contractor shall ensure that off-road diesel construction equipment complies with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent and shall ensure that all construction equipment is tuned and maintained in accordance with the manufacturer's specifications.

1 INTRODUCTION

This HRA has been prepared in accordance with the document Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (1) and is comprised of all relevant and appropriate procedures presented by the United States Environmental Protection Agency (U.S. EPA), California EPA and SCAQMD. Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of ten (10) persons per million as the maximum acceptable incremental cancer risk due to TAC exposure from a project such as the proposed Project. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulatively considerable impact.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (2). In this report the AQMD states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). A REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. In this HRA, non-carcinogenic exposures of less than 1.0 are considered less-than-significant. Both the cancer risk and non-carcinogenic risk thresholds are applied to the nearest sensitive receptors below.

1.1 SITE LOCATION

The proposed Project area is located approximately 60 miles east of Los Angeles just south of the foothills of the San Bernardino Mountains. It is centrally located between three major freeways (State Route (SR)-210 to the north and east, the Interstate (I)-215 to the west, and the I-10 to the south) and regional attractions including the Loma Linda University and Medical Center (5 miles

southwest of Project area), University of Redlands (8 miles southeast of Project area), the San Bernardino International Airport (SBIA), and commercial shopping destinations in Downtown San Bernardino and the Highland Town Center, both within 5 miles of the Project area, as shown on Exhibit 1-A.

The Project area is located immediately north of the SBIA and the Project area extends to the north side of 6th Street. The western boundary extends to the terminus of the City Creek Bypass Channel, where it joins with Twin Creek, which is about a quarter of a mile to the east of Waterman Avenue. The Project area is bounded to the east by the SR-210 freeway. Third Street in both cities and Fifth Street in the City of Highland serve as the southern boundary of the Project area.

The north side of the Project area is predominantly bordered by a mix of vacant lands and low to medium density residential uses. The Project area is located directly across the street from several public facilities including Indian Springs High School, Cypress Elementary School, Highland Community Park, the Highland Branch Library, and the SBIA.

1.2 PROJECT DESCRIPTION

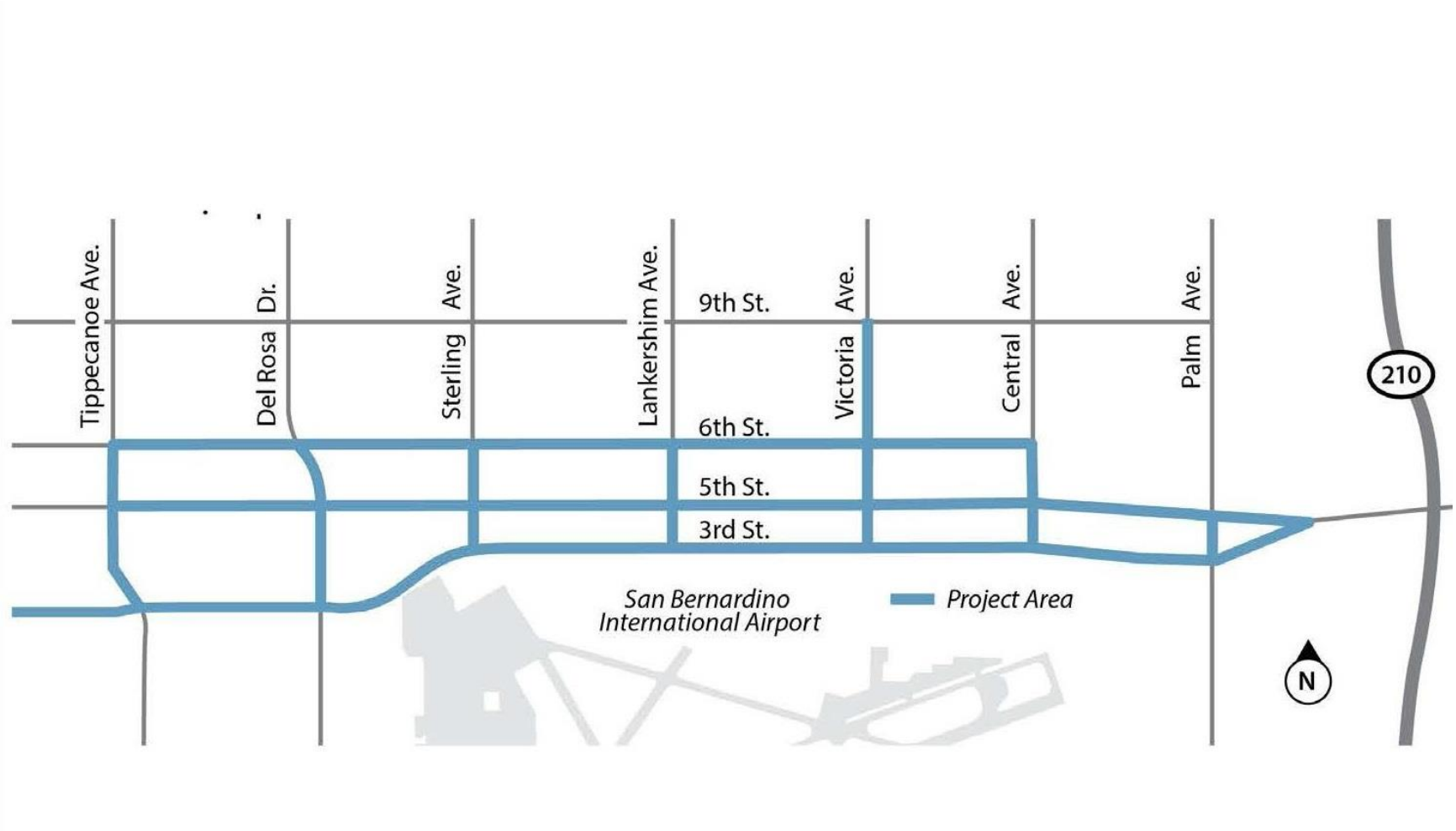
The Project is envisioned to be developed over a period of about 20 years in an incremental manner. As discussed above, the Project includes the installation of the following:

- Up to 20 miles of roadway (assumes one-lane width)
- City Creek Bypass Channel improvements
- 3.5 MG storage reservoir located in the Lower Zone
- New Well 01 in the Intermediate Zone
- Up to 5,000 feet of sewer

In order to forecast the procession for development of the above infrastructure improvements, it is assumed that in the worst-case year of construction, construction would consist of the following:

- **Project Category 1: Roadway Installation.** Construction of one mile of new roadway, lane-width assumed to be 12 feet with curb and gutter
- **Project Category 2: Channel Improvement Installation.** Installation of one third of the ultimate City Creek Bypass Channel design (length installed each year anticipated to be about one mile for a period of 3 years)
- **Project Category 3: Storage Reservoir.** Installation of a 3.5 MG storage reservoir
- **Project Category 4: Extraction Well.** Installation of a new extraction well
- **Project Category 5: Sewer Installation.** Installation of 2,500 feet of sewer

EXHIBIT 1-A: LOCATION MAP



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2 BACKGROUND

2.1 BACKGROUND ON RECOMMENDED METHODOLOGY

This HRA is based on applicable guidelines to produce conservative estimates of human health risk posed by exposure to DPM. The conservative nature of this analysis is due primarily to the following factors:

- The ARB-adopted diesel exhaust Unit Risk Factor (URF) of 300 in one million per $\mu g/m^3$ is based upon the upper 95 percentile of estimated risk for each of the epidemiological studies utilized to develop the URF. Using the 95th percentile URF represents a very conservative (health-protective) risk posed by DPM because it represents breathing rates that are high for the human body.

2.2 CONSTRUCTION HEALTH RISK ASSESSMENT

2.2.1 EMISSIONS CALCULATIONS

The emissions calculations for the construction HRA component are based on an assumed mix of construction equipment and hauling activity as presented in the *Inland Valley Infrastructure Corridor Air Quality Impact Analysis* ("technical study") prepared by Urban Crossroads, Inc. (3).

Construction related DPM emissions are expected to occur primarily as a function of the operation of heavy-duty construction equipment.

As discussed in the technical study, construction is anticipated to begin in September 2024 and last through September 2025. The construction duration by phase is shown on Table 2-1. A detailed summary of construction equipment assumptions by construction activity is provided at Table 2-2. The CalEEMod emissions outputs are presented in Appendix 2.1. The modeled emission sources for construction activity are illustrated on Exhibit 2-A.

TABLE 2-1: CONSTRUCTION DURATION

Category	Construction Activity	Start Date	End Date	Days
Roadway Installation	Demolition	1/7/2025	3/17/2025	50
	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
	Linear, Grading & Excavation	4/16/2025	8/20/2025	90
	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
	Linear, Paving	11/14/2025	12/26/2025	30
Channel Improvement Installation	Demolition	1/7/2025	3/17/2025	50
	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
	Linear, Grading & Excavation	4/16/2025	8/20/2025	90
	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
	Linear, Paving	11/14/2025	12/26/2025	30

Category	Construction Activity	Start Date	End Date	Days
Storage Reservoir	Site Preparation	1/7/2025	1/8/2025	2
	Grading	1/9/2025	1/22/2025	10
	Foundation Construction	1/23/2025	2/26/2025	25
	Reservoir Construction	2/27/2025	8/13/2025	120
Extraction Well	Demolition	1/7/2025	1/7/2025	1
	Grading	1/8/2025	1/8/2025	1
	Site Preparation	1/9/2025	1/10/2025	2
	Building Construction	1/11/2025	3/17/2025	46
	Paving	3/18/2025	3/24/2025	5
	Architectural Coating	3/25/2025	3/31/2025	5
Sewer Installation	Demolition	1/7/2025	3/17/2025	50
	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
	Linear, Grading & Excavation	4/16/2025	8/20/2025	90
	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
	Linear, Paving	11/14/2025	12/26/2025	30

TABLE 2-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

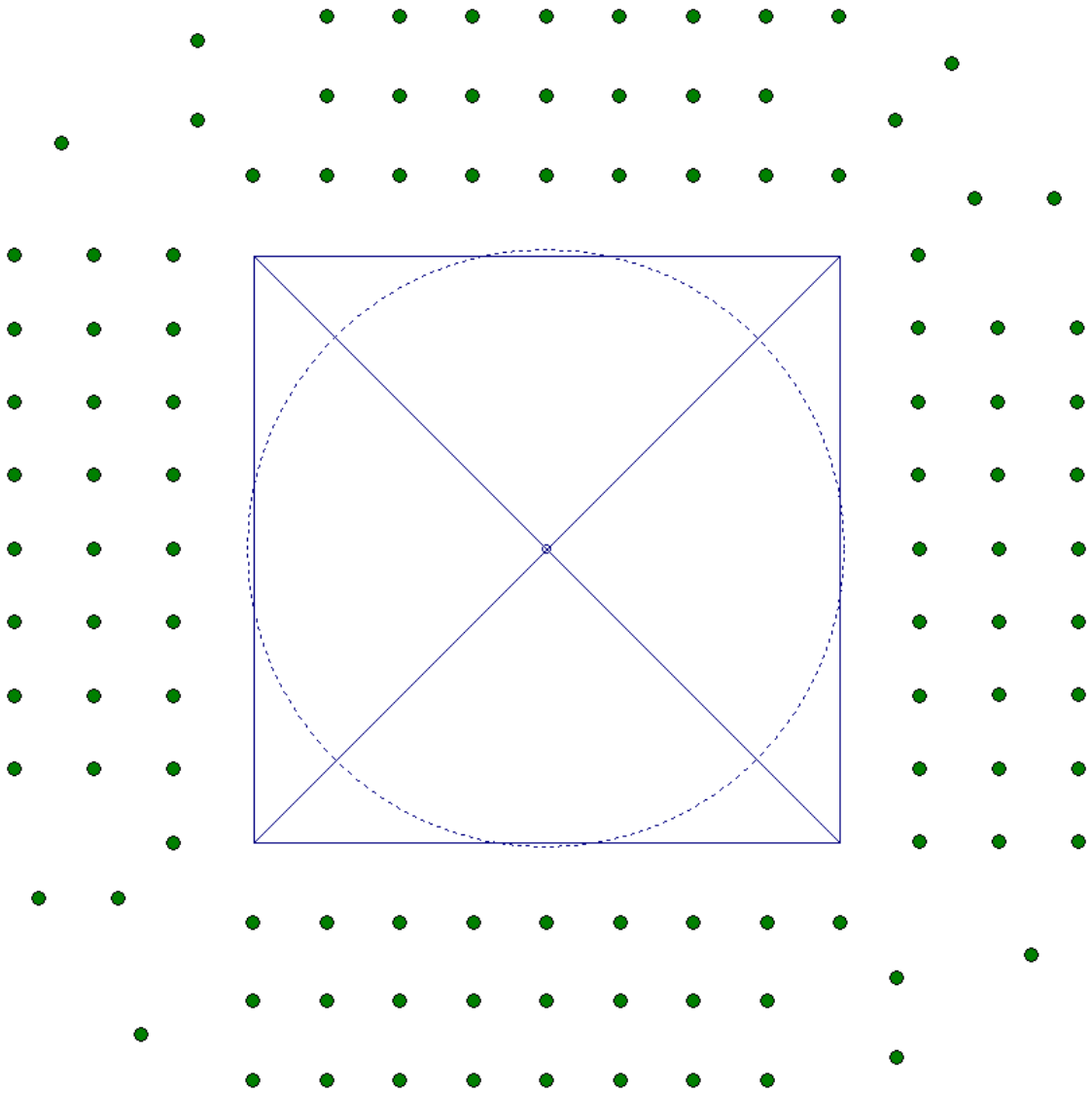
Construction Activity	Equipment	CalEEMod Equivalent	Amount	Hours Per Day
Roadway Installation				
Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	1	6
	Excavators	Excavators	1	6
	Rubber Tired Dozers	Rubber Tired Dozers	1	6
	Crushing/Proc. Equipment	Other Construction Equipment	1	6
Linear, Grubbing & Land Clearing	Backhoe	Tractors/Loaders/Backhoes	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Grading & Excavation	Excavator	Excavator	1	4
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
	Compaction Equipment	Plate Compactor	1	2

Construction Activity	Equipment	CalEEMod Equivalent	Amount	Hours Per Day
Linear, Drainage, Utilities, & Sub-Grade	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Paving	Paver	Paver	1	2
	Roller	Roller	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Channel Improvement Installation				
Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	1	6
	Excavators	Excavators	1	6
	Rubber Tired Dozers	Rubber Tired Dozers	1	6
	Crushing/Proc. Equipment	Crushing/Proc. Equipment	1	6
Channel Improvement Installation				
Linear, Grubbing & Land Clearing	Backhoe	Tractors/Loaders/Backhoes	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Grading & Excavation	Excavator	Excavator	1	4
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Drainage, Utilities, & Sub-Grade	Compaction Equipment	Plate Compactor	1	2
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Paving	Paver	Paver	1	2
	Roller	Roller	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4

Construction Activity	Equipment	CalEEMod Equivalent	Amount	Hours Per Day
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Storage Reservoir				
Site Preparation	Bulldozers	Rubber Tired Dozers	1	6
	Front End Loaders	Crawler Tractors	1	6
Grading	Bulldozers	Rubber Tired Dozers	1	6
	Front End Loaders	Crawler Tractors	2	6
	Water Truck	Off-Highway Trucks	1	4
	Scrapers	Scrapers	1	6
	Excavators	Excavators	1	6
	Dump Haul Trucks	Off-Highway Trucks	1	6
	Delivery Trucks	Off-Highway Trucks	10	6
Storage Reservoir				
Foundation Construction	-	Cement and Mortar Mixers	4	6
	-	Pavers	1	7
	-	Rollers	1	7
	-	Tractors/Loaders/Backhoes	1	7
	-	Off-Highway Trucks	10	6
Reservoir Construction	-	Cranes	1	4
	-	Forklifts	2	6
	-	Tractors/Loaders/Backhoes	2	8
	-	Off-Highway Trucks	10	6
Extraction Well				
Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	1	8
	Excavators	Excavators	3	8
	Rubber Tired Dozers	Rubber Tired Dozers	2	8
Site Preparation	Rubber Tired Dozers	Rubber Tired Dozers	3	8
	Crawler Tractors	Crawler Tractors	4	8
Grading	Excavators	Excavators	2	8
	Graders	Graders	1	8
	Rubber Tired Dozers	Rubber Tired Dozers	1	8
	Scrapers	Scrapers	2	8
	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	2	8
Building Construction	Cranes	Cranes	1	8
	Forklifts	Forklifts	3	8
	Generator Sets	Generator Sets	1	8

Construction Activity	Equipment	CalEEMod Equivalent	Amount	Hours Per Day
	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	3	8
	Welders	Welders	1	8
	Dump/Delivery Trucks	Off-Highway Trucks	8	8
Paving	Pavers	Pavers	2	8
	Paving Equipment	Paving Equipment	2	8
	Rollers	Rollers	2	8
Extraction Well				
Architectural Coating	Air Compressor	Air Compressor	1	8
Sewer Installation				
Demolition	Concrete/Industrial Saws	Concrete/Industrial Saws	1	6
	Excavators	Excavators	1	6
	Rubber Tired Dozers	Rubber Tired Dozers	1	6
	Crushing/Proc. Equipment	Crushing/Proc. Equipment	1	6
Linear, Grubbing & Land Clearing	Backhoe	Tractors/Loaders/Backhoes	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Grubbing & Excavation	Excavator	Excavator	1	4
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
Linear, Grubbing & Excavation	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Drainage, Utilities, & Sub-Grade	Compaction Equipment	Plate Compactor	1	2
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6
Linear, Paving	Paver	Paver	1	2
	Roller	Roller	1	6
	Pickup Trucks	Off-Highway Trucks	2	6
	Water Truck	Off-Highway Trucks	1	4
	Traffic Control Signage and Devices	Signal Boards	1	6
	Dump/Delivery Trucks	Off-Highway Trucks	10	6

EXHIBIT 2-A: MODELED CONSTRUCTION EMISSION SOURCES



2.3 EXPOSURE QUANTIFICATION

The analysis herein has been conducted in accordance with the guidelines in the Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (1). The Environmental Protection Agency's (U.S. EPA's) AERMOD model has been utilized. For purposes of this analysis, the Lakes AERMOD View (Version 12.0.0) was used to calculate annual average particulate concentrations associated with site operations. Lakes AERMOD View was utilized to incorporate the U.S. EPA's latest AERMOD Version 23132 (4).

Because the precise locations where construction activities would occur are not known at this time, modeling was performed using a single volume source covering an area of two acres. Consistent with the localized significance threshold analysis performed in the Project air study (3), it was assumed that construction activities would occur over an approximately two-acre site at any given time. As such, construction emissions were modeled using a two-acre sized volume source with a release height of 5 meters and an initial vertical dimension of 1.4 meters, consistent with SCAQMD's localized significance threshold modeling methodology.

Additionally, because specific construction locations are not known at this time, the analysis considered a worst-case scenario where sensitive receptors were placed surrounding the construction area at a distance of 40 feet in order to account for varying wind speeds and directions in the Project area.

Model parameters are presented in Table 2-5 (5). The model requires additional input parameters including emission data and local meteorology. Meteorological data from the SCAQMD's Redlands monitoring station was used to represent local weather conditions and prevailing winds (6).

TABLE 2-5: AERMOD MODEL PARAMETERS

Dispersion Coefficient (Urban/Rural)	Urban (population 2,035,210)
Terrain (Flat/Elevated)	Flat
Averaging Time	Period (5-year Meteorological Data Set)
Receptor Height	0 meters (Regulatory Default)

Universal Transverse Mercator (UTM) coordinates for World Geodetic System (WGS) 84 were used to locate the Project site boundaries, each volume source location, and receptor locations in the Project vicinity. The AERMOD dispersion model summary output files for the Project are presented in Appendix 2.2. Modeled sensitive receptors were placed at residential and non-residential locations.

Receptors may be placed at applicable structure locations for residential property and not necessarily the boundaries of the properties containing these uses because the human receptors spend a majority of their time at the residence's building, and not on the property line. It should be noted that the primary purpose of receptor placement is focused on long-term exposure. Notwithstanding, as a conservative measure, receptors were placed at either the outdoor living area or the building façade, whichever is closer to the Project site.

For purposes of this HRA, receptors include residential land uses in the vicinity of the Project. These receptors are included in the HRA since residents may be exposed at these locations over the course of Project construction. This methodology is consistent with SCAQMD and OEHHA recommended guidance.

Any impacts to residents or workers located further away from the Project site than the modeled residential and workers would have a lesser impact than what has already been disclosed in the HRA at the MEIR and MEIW because concentrations dissipate with distance.

Because the specific locations at which construction activities would occur are not known at this time, the flat terrain option was utilized in AERMOD. However, due to the relatively flat terrain in the vicinity of the Project site, it is not anticipated that this would significantly alter the results compared to the use of the elevated terrain option.

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Table 2-6 summarizes the exposure parameters for Residents based on 2015 OEHHA Guidelines. Appendix 2.3 includes detailed risk calculations.

TABLE 2-6: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK

Scenario	Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
Category 1	0 to 2	1,090	10	0.97	1.00	254	8
Category 2	0 to 2	1,090	10	0.97	1.00	254	8
Category 3	0 to 2	1,090	10	0.60	1.00	157	8
Category 4	0 to 2	1,090	10	0.23	1.00	60	8
Category 5	0 to 2	1,090	10	0.97	1.00	254	8

2.4 CARCINOGENIC CHEMICAL RISK

Excess cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time.

Guidance from CARB and the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) recommends a refinement to the standard point estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of

inverse dose expressed in milligrams per kilogram per day (mg/kg/day)$^{-1}$ to derive the cancer risk estimate. Therefore, to assess exposures, the following dose algorithm was utilized.

$$DOSE_{AIR} = \left(C_{AIR} \times \frac{BR}{BW} \times A \times EF\right) \times (1 \times 10^{-6})$$

Where:

$DOSE_{AIR}$	=	chronic daily intake (mg/kg/day)
C_{AIR}	=	concentration of contaminant in air (µg/m^3)
$\frac{BR}{BW}$	=	daily breathing rate normalized to body weight (L/kg BW-day)
A	=	inhalation absorption factor
EF	=	exposure frequency (days/365 days)
BW	=	body weight (kg)
1×10^{-6}	=	conversion factors (µg to mg, L to m^3)

$$RISK_{AIR} = DOSE_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

Where:

$DOSE_{AIR}$	=	chronic daily intake (mg/kg/day)
CPF	=	cancer potency factor
ASF	=	age sensitivity factor
FAH	=	fraction of time at home
ED	=	number of years within particular age group
AT	=	averaging time

2.5 NON-CARCINOGENIC EXPOSURES

An evaluation of the potential noncarcinogenic effects of chronic exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). The REL for diesel particulates was obtained from OEHHA for this analysis. The chronic reference exposure level (REL) for DPM was established by OEHHA as 5 µg/m^3 (7).

Non-cancer health effects are expressed as a hazard index (HI), which is calculated using the following equation:

$$HI_{DPM} = \frac{C_{DPM}}{REL_{DPM}}$$

Where:

HI_{DPM}	=	Hazard index (unitless)
C_{DPM}	=	Annual average DPM concentration (µg/m^3)
REL_{DPM}	=	REL for DPM (the DPM concentration at which no adverse health effects are anticipated).

2.6 POTENTIAL PROJECT DPM-SOURCE CANCER AND NON-CANCER RISKS

CONSTRUCTION IMPACTS

Without Mitigation

Without implementation of MM AQ-1, the maximum incremental cancer risk during roadway installation, channel improvement installation, and sewer installation would exceed the SCAQMD significance threshold of 10 in one million. Under all construction activities, without implementation of MM AQ-1, non-cancer risks would not exceed the applicable significance threshold of 1.0.

With Mitigation

With implementation of MM AQ-1, the maximum incremental cancer risk would remain below the SCAQMD significance threshold of 10 in one million during all construction activities. Additionally, with implementation of MM AQ-1, non-cancer risks would not exceed the applicable significance threshold of 1.0 during all construction activities.

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3 REFERENCES

1. **South Coast Air Quality Managment District.** Mobile Source Toxics Analysis. [Online] 2003. http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html.

2. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. [Cited: June 6, 2019.] http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf?sfvrsn=2.

3. **Urban Crossroads, Inc.** *Inland Valley Infrastructure Corridor Air Quality Impact Analysis.* 2024.

4. **Environmental Protection Agency.** User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] October 2023. https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_userguide.pdf.

5. —. User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] April 2018. https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf.

6. **South Coast Air Quality Management District.** Data for AERMOD. [Online] [Cited: May 9, 2022.] https://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/data-for-aermod.

7. **Office of Environmental Health Hazard Assessment.** Chemical Toxicity Database. [Online] https://oehha.ca.gov/chemicals.

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4 CERTIFICATIONS

The contents of this health risk assessment represent an accurate depiction of the impacts to sensitive receptors associated with the proposed Inland Valley Infrastructure Corridor Project. The information contained in this health risk assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me at (949) 660-1994.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
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PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Professionals
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June 2013
Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

CALEEMOD OUTPUTS AND EMISSION CALCULATIONS

IVIC (Sewer Installation - Demolition) Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	IVIC (Sewer Installation - Demolition)
Construction Start Date	1/7/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	15.0	1000sqft	0.34	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.39	1.12	10.7	10.4	0.02	0.44	0.73	1.16	0.40	0.14	0.54	—	2,257	2,257	0.13	0.11	0.04	2,293
Mit.	0.28	0.22	2.75	9.75	0.02	0.04	0.73	0.76	0.04	0.14	0.18	—	2,257	2,257	0.13	0.11	0.04	2,293
% Reduced	80%	80%	74%	6%	—	92%	—	34%	91%	—	68%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	0.15	1.46	1.42	< 0.005	0.06	0.10	0.16	0.06	0.02	0.07	—	309	309	0.02	0.02	0.10	314
Mit.	0.04	0.03	0.38	1.34	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	—	309	309	0.02	0.02	0.10	314
% Reduced	80%	80%	74%	6%	—	92%	—	34%	91%	—	68%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.03	0.27	0.26	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	51.2	51.2	< 0.005	< 0.005	0.02	52.1
Mit.	0.01	0.01	0.07	0.24	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	51.2	51.2	< 0.005	< 0.005	0.02	52.1
% Reduced	80%	80%	74%	6%	—	92%	—	34%	91%	—	68%	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.39	1.12	10.7	10.4	0.02	0.44	0.73	1.16	0.40	0.14	0.54	—	2,257	2,257	0.13	0.11	0.04	2,293
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.19	0.15	1.46	1.42	< 0.005	0.06	0.10	0.16	0.06	0.02	0.07	—	309	309	0.02	0.02	0.10	314
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.03	0.03	0.27	0.26	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	51.2	51.2	< 0.005	< 0.005	0.02	52.1

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.28	0.22	2.75	9.75	0.02	0.04	0.73	0.76	0.04	0.14	0.18	—	2,257	2,257	0.13	0.11	0.04	2,293
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.04	0.03	0.38	1.34	< 0.005	< 0.005	0.10	0.10	< 0.005	0.02	0.02	—	309	309	0.02	0.02	0.10	314
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.01	0.01	0.07	0.24	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	51.2	51.2	< 0.005	< 0.005	0.02	52.1

3. Construction Emissions Details

3.1. Demolition (2025) - 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	1.27	1.07	9.91	9.38	0.02	0.43	—	0.43	0.39	—	0.39	—	1,563	1,563	0.06	0.01	—	1,569
Demolition	—	—	—	—	—	—	0.45	0.45	—	0.07	0.07	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.15	1.36	1.29	< 0.005	0.06	—	0.06	0.05	—	0.05	—	214	214	0.01	< 0.005	—	215
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
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	0.03	0.03	0.25	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.5	35.5	< 0.005	< 0.005	—	35.6

Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.01	0.71	0.38	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	564	564	0.06	0.09	0.03	594
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.03	18.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.3	77.3	0.01	0.01	0.07	81.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.97	2.97	< 0.005	< 0.005	0.01	3.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.01	13.5

3.2. Demolition (2025) - Mitigated

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	0.16	0.16	2.00	8.78	0.02	0.03	—	0.03	0.03	—	0.03	—	1,563	1,563	0.06	0.01	—	1,569
Demolition	—	—	—	—	—	—	0.45	0.45	—	0.07	0.07	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.27	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	214	214	0.01	< 0.005	—	215
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
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	0.05	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	35.5	35.5	< 0.005	< 0.005	—	35.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.01	0.71	0.38	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	564	564	0.06	0.09	0.03	594
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.03	18.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.3	77.3	0.01	0.01	0.07	81.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.97	2.97	< 0.005	< 0.005	0.01	3.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.01	13.5

4. Operations Emissions Details

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	1/7/2025	3/17/2025	5.00	50.0	—

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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Demolition	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Demolition	Other Construction Equipment	Diesel	Average	1.00	6.00	82.0	0.42

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Final	1.00	6.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	6.00	367	0.40
Demolition	Excavators	Diesel	Tier 4 Final	1.00	6.00	36.0	0.38

Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	6.00	82.0	0.42

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	8.16	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	8.16	20.0	HHDT
Demolition	Onsite truck	—	—	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,630	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	0.34	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7

Drinking Water	62.7
Lead Risk Housing	39.3
Pesticides	0.00
Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301

Employed	9.136404466
Median HI	25.00962402
Education	—
Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—
2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8

Asthma ER Admissions	7.3
High Blood Pressure	59.9
Cancer (excluding skin)	82.6
Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8
Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3

Foreign-born	60.2
Outdoor Workers	39.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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	Demolition anticipated to take 50 days
Construction: Off-Road Equipment	Equipment based on equipment used for similar projects

IVIC (Sewer Installation) Detailed Report

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5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	IVIC (Sewer Installation)
Construction Start Date	3/18/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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
User Defined Linear	0.47	Mile	1.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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.	1.30	1.08	6.97	8.77	0.03	0.24	0.26	0.50	0.22	0.06	0.29	—	3,411	3,411	0.15	0.08	1.55	3,439
Mit.	0.72	0.62	3.65	13.4	0.03	0.12	0.26	0.38	0.12	0.06	0.18	—	3,411	3,411	0.15	0.08	1.55	3,439
% Reduced	45%	43%	48%	-52%	—	49%	—	24%	47%	—	37%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.30	1.08	7.16	8.52	0.03	0.26	0.26	0.50	0.24	0.06	0.29	—	3,395	3,395	0.15	0.08	0.04	3,422
Mit.	0.71	0.61	4.04	13.1	0.03	0.12	0.26	0.38	0.12	0.06	0.18	—	3,395	3,395	0.15	0.08	0.04	3,422
% Reduced	45%	43%	44%	-54%	—	53%	—	24%	51%	—	37%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.66	0.55	3.54	3.90	0.02	0.12	0.08	0.20	0.11	0.02	0.13	—	1,723	1,723	0.08	0.04	0.27	1,737
Mit.	0.36	0.30	2.01	6.37	0.02	0.06	0.08	0.15	0.06	0.02	0.08	—	1,723	1,723	0.08	0.04	0.27	1,737
% Reduced	46%	44%	43%	-63%	—	47%	—	28%	46%	—	39%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.10	0.65	0.71	< 0.005	0.02	0.02	0.04	0.02	< 0.005	0.02	—	285	285	0.01	0.01	0.04	288
Mit.	0.06	0.06	0.37	1.16	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	285	285	0.01	0.01	0.04	288
% Reduced	46%	44%	43%	-63%	—	47%	—	28%	46%	—	39%	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.30	1.08	6.97	8.77	0.03	0.24	0.26	0.50	0.22	0.06	0.29	—	3,411	3,411	0.15	0.08	1.55	3,439
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.30	1.08	7.16	8.52	0.03	0.26	0.26	0.50	0.24	0.06	0.29	—	3,395	3,395	0.15	0.08	0.04	3,422
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.66	0.55	3.54	3.90	0.02	0.12	0.08	0.20	0.11	0.02	0.13	—	1,723	1,723	0.08	0.04	0.27	1,737
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.12	0.10	0.65	0.71	< 0.005	0.02	0.02	0.04	0.02	< 0.005	0.02	—	285	285	0.01	0.01	0.04	288

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.72	0.62	3.65	13.4	0.03	0.12	0.26	0.38	0.12	0.06	0.18	—	3,411	3,411	0.15	0.08	1.55	3,439
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.71	0.61	4.04	13.1	0.03	0.12	0.26	0.38	0.12	0.06	0.18	—	3,395	3,395	0.15	0.08	0.04	3,422
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.36	0.30	2.01	6.37	0.02	0.06	0.08	0.15	0.06	0.02	0.08	—	1,723	1,723	0.08	0.04	0.27	1,737
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.06	0.06	0.37	1.16	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	285	285	0.01	0.01	0.04	288

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2025) - 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	1.20	1.01	6.57	7.57	0.03	0.24	—	0.24	0.22	—	0.22	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.20	1.01	6.57	7.57	0.03	0.24	—	0.24	0.22	—	0.22	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.36	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	160	160	0.01	< 0.005	—	160
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.5	26.5	< 0.005	< 0.005	—	26.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.07	0.06	0.06	1.01	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	183	183	0.01	0.01	0.68	186
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.02	170
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.33	9.33	< 0.005	< 0.005	0.02	9.46
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.9	16.9	< 0.005	< 0.005	0.02	17.7
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
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	2.93
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

3.2. Linear, Grubbing & Land Clearing (2025) - Mitigated

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	0.62	0.55	3.25	12.2	0.03	0.12	—	0.12	0.11	—	0.11	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.55	3.25	12.2	0.03	0.12	—	0.12	0.11	—	0.11	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.18	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	—	160	160	0.01	< 0.005	—	160
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.01	0.01	0.03	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.5	26.5	< 0.005	< 0.005	—	26.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.07	0.06	0.06	1.01	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	183	183	0.01	0.01	0.68	186

Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.02	170
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.33	9.33	< 0.005	< 0.005	0.02	9.46
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.9	16.9	< 0.005	< 0.005	0.02	17.7
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
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	2.93
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. Linear, Grading & Excavation (2025) - 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	1.12	0.94	5.89	6.43	0.03	0.21	—	0.21	0.19	—	0.19	—	2,735	2,735	0.11	0.02	—	2,744

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.28	0.23	1.45	1.58	0.01	0.05	—	0.05	0.05	—	0.05	—	674	674	0.03	0.01	—	677
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.05	0.04	0.27	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	112	112	< 0.005	< 0.005	—	112
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.1	76.1	0.01	0.01	0.09	79.8
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	13.2
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

3.4. Linear, Grading & Excavation (2025) - Mitigated

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	0.57	0.50	3.20	10.9	0.03	0.11	—	0.11	0.10	—	0.10	—	2,735	2,735	0.11	0.02	—	2,744
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.14	0.12	0.79	2.69	0.01	0.03	—	0.03	0.02	—	0.02	—	674	674	0.03	0.01	—	677
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	0.02	0.14	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	112	112	< 0.005	< 0.005	—	112
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.1	76.1	0.01	0.01	0.09	79.8

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	13.2
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. Linear, Drainage, Utilities, & Sub-Grade (2025) - 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	1.12	0.94	5.81	6.20	0.03	0.21	—	0.21	0.19	—	0.19	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	5.81	6.20	0.03	0.21	—	0.21	0.19	—	0.19	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	0.95	1.02	< 0.005	0.03	—	0.03	0.03	—	0.03	—	445	445	0.02	< 0.005	—	447
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	0.03	0.17	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.7	73.7	< 0.005	< 0.005	—	74.0
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.07	0.06	0.06	1.01	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	183	183	0.01	0.01	0.68	186
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.02	170
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.05	28.4
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	50.7	50.7	< 0.005	0.01	0.06	53.2
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	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.70
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.40	8.40	< 0.005	< 0.005	0.01	8.80
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

3.6. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

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	0.61	0.54	3.20	10.7	0.03	0.12	—	0.12	0.11	—	0.11	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.54	3.20	10.7	0.03	0.12	—	0.12	0.11	—	0.11	—	2,710	2,710	0.11	0.02	—	2,719

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.53	1.76	< 0.005	0.02	—	0.02	0.02	—	0.02	—	445	445	0.02	< 0.005	—	447
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.02	0.02	0.10	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	73.7	73.7	< 0.005	< 0.005	—	74.0
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.07	0.06	0.06	1.01	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	183	183	0.01	0.01	0.68	186
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.06	0.06	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.02	170
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.05	28.4
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	50.7	50.7	< 0.005	0.01	0.06	53.2
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	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.70
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.40	8.40	< 0.005	< 0.005	0.01	8.80
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

3.7. Linear, Paving (2025) - 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	1.27	1.07	6.81	7.40	0.03	0.26	—	0.26	0.24	—	0.24	—	2,886	2,886	0.12	0.02	—	2,896
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	0.09	0.56	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	237	237	0.01	< 0.005	—	238
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	0.02	0.02	0.10	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.3	39.3	< 0.005	< 0.005	—	39.4
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.4	25.4	< 0.005	< 0.005	0.03	26.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.40
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

3.8. Linear, Paving (2025) - Mitigated

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	0.62	0.55	3.68	11.9	0.03	0.12	—	0.12	0.11	—	0.11	—	2,886	2,886	0.12	0.02	—	2,896
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.30	0.98	< 0.005	0.01	—	0.01	0.01	—	0.01	—	237	237	0.01	< 0.005	—	238
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	0.01	0.01	0.06	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.3	39.3	< 0.005	< 0.005	—	39.4
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.4	25.4	< 0.005	< 0.005	0.03	26.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.40
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

4.10. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	5.00	20.0	—
Linear, Grading & Excavation	Linear, Grading & Excavation	4/16/2025	8/20/2025	5.00	90.0	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	5.00	60.0	—
Linear, Paving	Linear, Paving	11/14/2025	12/26/2025	5.00	30.0	—

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
Linear, Grubbing & Land Clearing	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Grading & Excavation	Excavators	Diesel	Average	1.00	4.00	36.0	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38

Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Paving	Pavers	Diesel	Average	1.00	2.00	81.0	0.42
Linear, Paving	Rollers	Diesel	Average	1.00	6.00	36.0	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Paving	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Grading & Excavation	Excavators	Diesel	Tier 4 Final	1.00	4.00	36.0	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38

Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Paving	Pavers	Diesel	Tier 4 Final	1.00	2.00	81.0	0.42
Linear, Paving	Rollers	Diesel	Tier 4 Final	1.00	6.00	36.0	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Paving	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	13.0	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	0.00	18.5	LDA,LDT1,LDT2

Linear, Grading & Excavation	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	13.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	10.0	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	10.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	13.0	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	0.00	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—

Linear, Drainage, Utilities, & Sub-Grade	Worker	13.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	10.0	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	10.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	—	—	1.00	0.00	—
Linear, Grading & Excavation	—	—	1.00	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	1.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7
Drinking Water	62.7
Lead Risk Housing	39.3
Pesticides	0.00
Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00

Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301
Employed	9.136404466
Median HI	25.00962402
Education	—
Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—

2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8
Asthma ER Admissions	7.3
High Blood Pressure	59.9
Cancer (excluding skin)	82.6
Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8

Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3
Foreign-born	60.2
Outdoor Workers	39.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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: Off-Road Equipment	Equipment based on equipment used for similar projects
Construction: Trips and VMT	Dump/Delivery Trucks modeled as Vendor Trips

IVIC (New Roadway - Demolition) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	IVIC (New Roadway - Demolition)
Construction Start Date	1/7/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	63.4	1000sqft	1.45	63,360	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.64	1.16	13.1	11.7	0.03	0.46	2.76	3.23	0.43	0.51	0.94	—	4,179	4,179	0.33	0.42	0.15	4,314
Mit.	0.69	0.39	9.25	11.0	0.03	0.19	2.76	2.96	0.18	0.51	0.69	—	4,179	4,179	0.33	0.42	0.15	4,314
% Reduced	58%	66%	29%	6%	—	58%	—	8%	57%	—	26%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	0.16	1.80	1.60	< 0.005	0.06	0.38	0.44	0.06	0.07	0.13	—	573	573	0.05	0.06	0.34	591
Mit.	0.09	0.05	1.27	1.51	< 0.005	0.03	0.38	0.40	0.03	0.07	0.09	—	573	573	0.05	0.06	0.34	591
% Reduced	58%	66%	29%	6%	—	58%	—	8%	57%	—	26%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.03	0.33	0.29	< 0.005	0.01	0.07	0.08	0.01	0.01	0.02	—	94.8	94.8	0.01	0.01	0.06	97.9
Mit.	0.02	0.01	0.23	0.27	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.02	—	94.8	94.8	0.01	0.01	0.06	97.9
% Reduced	58%	66%	29%	6%	—	58%	—	8%	57%	—	26%	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.64	1.16	13.1	11.7	0.03	0.46	2.76	3.23	0.43	0.51	0.94	—	4,179	4,179	0.33	0.42	0.15	4,314
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	0.16	1.80	1.60	< 0.005	0.06	0.38	0.44	0.06	0.07	0.13	—	573	573	0.05	0.06	0.34	591
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.04	0.03	0.33	0.29	< 0.005	0.01	0.07	0.08	0.01	0.01	0.02	—	94.8	94.8	0.01	0.01	0.06	97.9

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.69	0.39	9.25	11.0	0.03	0.19	2.76	2.96	0.18	0.51	0.69	—	4,179	4,179	0.33	0.42	0.15	4,314
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.09	0.05	1.27	1.51	< 0.005	0.03	0.38	0.40	0.03	0.07	0.09	—	573	573	0.05	0.06	0.34	591
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.02	0.01	0.23	0.27	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.02	—	94.8	94.8	0.01	0.01	0.06	97.9

3. Construction Emissions Details

3.1. Demolition (2025) - 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	1.27	1.07	9.91	9.38	0.02	0.43	—	0.43	0.39	—	0.39	—	1,563	1,563	0.06	0.01	—	1,569
Demolition	—	—	—	—	—	—	1.97	1.97	—	0.30	0.30	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.15	1.36	1.29	< 0.005	0.06	—	0.06	0.05	—	0.05	—	214	214	0.01	< 0.005	—	215
Demolition	—	—	—	—	—	—	0.27	0.27	—	0.04	0.04	—	—	—	—	—	—	—
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	0.03	0.03	0.25	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.5	35.5	< 0.005	< 0.005	—	35.6

Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.31	0.05	3.11	1.68	0.02	0.03	0.67	0.70	0.03	0.18	0.21	—	2,486	2,486	0.26	0.41	0.14	2,614
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.03	18.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.43	0.23	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	340	340	0.04	0.06	0.31	358
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.97	2.97	< 0.005	< 0.005	0.01	3.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	56.4	56.4	0.01	0.01	0.05	59.3

3.2. Demolition (2025) - Mitigated

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	0.32	0.30	6.10	8.70	0.02	0.16	—	0.16	0.15	—	0.15	—	1,563	1,563	0.06	0.01	—	1,569
Demolition	—	—	—	—	—	—	1.97	1.97	—	0.30	0.30	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.83	1.19	< 0.005	0.02	—	0.02	0.02	—	0.02	—	214	214	0.01	< 0.005	—	215
Demolition	—	—	—	—	—	—	0.27	0.27	—	0.04	0.04	—	—	—	—	—	—	—
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	0.01	0.01	0.15	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	35.5	35.5	< 0.005	< 0.005	—	35.6
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.31	0.05	3.11	1.68	0.02	0.03	0.67	0.70	0.03	0.18	0.21	—	2,486	2,486	0.26	0.41	0.14	2,614
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.03	18.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.43	0.23	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	340	340	0.04	0.06	0.31	358
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.97	2.97	< 0.005	< 0.005	0.01	3.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	56.4	56.4	0.01	0.01	0.05	59.3

4. Operations Emissions Details

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	1/7/2025	3/17/2025	5.00	50.0	—

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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Demolition	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Demolition	Other Construction Equipment	Diesel	Average	1.00	6.00	82.0	0.42

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Interim	1.00	6.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	6.00	367	0.40
Demolition	Excavators	Diesel	Tier 4 Interim	1.00	6.00	36.0	0.38

Demolition	Other Construction Equipment	Diesel	Average	1.00	6.00	82.0	0.42

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	35.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	35.9	20.0	HHDT
Demolition	Onsite truck	—	—	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	7,185	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	1.45	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7

Drinking Water	62.7
Lead Risk Housing	39.3
Pesticides	0.00
Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301

Employed	9.136404466
Median HI	25.00962402
Education	—
Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—
2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8

Asthma ER Admissions	7.3
High Blood Pressure	59.9
Cancer (excluding skin)	82.6
Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8
Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3

Foreign-born	60.2
Outdoor Workers	39.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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	Demolition anticipated to take 50 days
Construction: Off-Road Equipment	Equipment based on equipment used for similar projects

IVIC (New Roadway) 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	IVIC (New Roadway)
Construction Start Date	3/18/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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
Road Construction	1.00	Mile	1.45	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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.	1.31	1.09	6.98	8.93	0.03	0.24	0.28	0.52	0.22	0.07	0.29	—	3,439	3,439	0.15	0.08	1.65	3,467
Mit.	0.73	0.63	3.66	13.5	0.03	0.12	0.28	0.41	0.12	0.07	0.19	—	3,439	3,439	0.15	0.08	1.65	3,467
% Reduced	45%	42%	48%	-51%	—	49%	—	22%	47%	—	36%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.38	1.14	7.24	8.64	0.03	0.26	0.28	0.54	0.24	0.07	0.31	—	3,421	3,421	0.15	0.08	0.04	3,448
Mit.	0.73	0.63	4.11	13.2	0.03	0.12	0.28	0.41	0.12	0.07	0.19	—	3,421	3,421	0.15	0.08	0.04	3,448
% Reduced	47%	45%	43%	-53%	—	53%	—	25%	51%	—	40%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.69	0.57	3.57	4.24	0.02	0.12	0.15	0.27	0.11	0.04	0.15	—	1,794	1,794	0.08	0.04	0.39	1,809
Mit.	0.38	0.33	2.04	6.70	0.02	0.06	0.15	0.22	0.06	0.04	0.10	—	1,794	1,794	0.08	0.04	0.39	1,809
% Reduced	45%	43%	43%	-58%	—	47%	—	21%	46%	—	34%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13	0.10	0.65	0.77	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	297	297	0.01	0.01	0.06	299
Mit.	0.07	0.06	0.37	1.22	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	297	297	0.01	0.01	0.06	299
% Reduced	45%	43%	43%	-58%	—	47%	—	21%	46%	—	34%	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.31	1.09	6.98	8.93	0.03	0.24	0.28	0.52	0.22	0.07	0.29	—	3,439	3,439	0.15	0.08	1.65	3,467
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.38	1.14	7.24	8.64	0.03	0.26	0.28	0.54	0.24	0.07	0.31	—	3,421	3,421	0.15	0.08	0.04	3,448
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.69	0.57	3.57	4.24	0.02	0.12	0.15	0.27	0.11	0.04	0.15	—	1,794	1,794	0.08	0.04	0.39	1,809
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.13	0.10	0.65	0.77	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	297	297	0.01	0.01	0.06	299

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.73	0.63	3.66	13.5	0.03	0.12	0.28	0.41	0.12	0.07	0.19	—	3,439	3,439	0.15	0.08	1.65	3,467
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.73	0.63	4.11	13.2	0.03	0.12	0.28	0.41	0.12	0.07	0.19	—	3,421	3,421	0.15	0.08	0.04	3,448
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.38	0.33	2.04	6.70	0.02	0.06	0.15	0.22	0.06	0.04	0.10	—	1,794	1,794	0.08	0.04	0.39	1,809
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.07	0.06	0.37	1.22	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	297	297	0.01	0.01	0.06	299

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2025) - 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	1.20	1.01	6.57	7.57	0.03	0.24	—	0.24	0.22	—	0.22	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.20	1.01	6.57	7.57	0.03	0.24	—	0.24	0.22	—	0.22	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.36	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	160	160	0.01	< 0.005	—	160
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.5	26.5	< 0.005	< 0.005	—	26.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.08	0.07	0.07	1.17	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	196
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.9	16.9	< 0.005	< 0.005	0.02	17.7
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.78	1.78	< 0.005	< 0.005	< 0.005	1.81
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	2.93
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

3.2. Linear, Grubbing & Land Clearing (2025) - Mitigated

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	0.62	0.55	3.25	12.2	0.03	0.12	—	0.12	0.11	—	0.11	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.55	3.25	12.2	0.03	0.12	—	0.12	0.11	—	0.11	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.18	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	—	160	160	0.01	< 0.005	—	160
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.01	0.01	0.03	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.5	26.5	< 0.005	< 0.005	—	26.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.08	0.07	0.07	1.17	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215

Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	196
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.9	16.9	< 0.005	< 0.005	0.02	17.7
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.78	1.78	< 0.005	< 0.005	< 0.005	1.81
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	2.93
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. Linear, Grading & Excavation (2025) - 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	1.12	0.94	5.89	6.43	0.03	0.21	—	0.21	0.19	—	0.19	—	2,735	2,735	0.11	0.02	—	2,744

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.28	0.23	1.45	1.58	0.01	0.05	—	0.05	0.05	—	0.05	—	674	674	0.03	0.01	—	677
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.05	0.04	0.27	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	112	112	< 0.005	< 0.005	—	112
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.08	0.07	0.07	1.17	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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	0.02	0.02	0.02	0.23	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	48.5	48.5	< 0.005	< 0.005	0.08	49.1
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.1	76.1	0.01	0.01	0.09	79.8
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.02	8.02	< 0.005	< 0.005	0.01	8.14
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	13.2
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

3.4. Linear, Grading & Excavation (2025) - Mitigated

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	0.57	0.50	3.20	10.9	0.03	0.11	—	0.11	0.10	—	0.10	—	2,735	2,735	0.11	0.02	—	2,744
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.14	0.12	0.79	2.69	0.01	0.03	—	0.03	0.02	—	0.02	—	674	674	0.03	0.01	—	677
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	0.02	0.14	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	112	112	< 0.005	< 0.005	—	112
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.08	0.07	0.07	1.17	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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	0.02	0.02	0.02	0.23	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	48.5	48.5	< 0.005	< 0.005	0.08	49.1
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.1	76.1	0.01	0.01	0.09	79.8

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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.02	8.02	< 0.005	< 0.005	0.01	8.14
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	13.2
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. Linear, Drainage, Utilities, & Sub-Grade (2025) - 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	1.12	0.94	5.81	6.20	0.03	0.21	—	0.21	0.19	—	0.19	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	5.81	6.20	0.03	0.21	—	0.21	0.19	—	0.19	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	0.95	1.02	< 0.005	0.03	—	0.03	0.03	—	0.03	—	445	445	0.02	< 0.005	—	447
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	0.03	0.17	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.7	73.7	< 0.005	< 0.005	—	74.0
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.08	0.07	0.07	1.17	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	196
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.3	32.3	< 0.005	< 0.005	0.06	32.8
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	50.7	50.7	< 0.005	0.01	0.06	53.2
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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.35	5.35	< 0.005	< 0.005	0.01	5.42
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.40	8.40	< 0.005	< 0.005	0.01	8.80
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

3.6. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

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	0.61	0.54	3.20	10.7	0.03	0.12	—	0.12	0.11	—	0.11	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.54	3.20	10.7	0.03	0.12	—	0.12	0.11	—	0.11	—	2,710	2,710	0.11	0.02	—	2,719

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.53	1.76	< 0.005	0.02	—	0.02	0.02	—	0.02	—	445	445	0.02	< 0.005	—	447
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.02	0.02	0.10	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	73.7	73.7	< 0.005	< 0.005	—	74.0
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.08	0.07	0.07	1.17	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	196
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.3	32.3	< 0.005	< 0.005	0.06	32.8
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	50.7	50.7	< 0.005	0.01	0.06	53.2
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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.35	5.35	< 0.005	< 0.005	0.01	5.42
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.40	8.40	< 0.005	< 0.005	0.01	8.80
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

3.7. Linear, Paving (2025) - 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	1.27	1.07	6.81	7.40	0.03	0.26	—	0.26	0.24	—	0.24	—	2,886	2,886	0.12	0.02	—	2,896
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	0.09	0.56	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	237	237	0.01	< 0.005	—	238
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	0.02	0.02	0.10	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.3	39.3	< 0.005	< 0.005	—	39.4
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	196
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.4	25.4	< 0.005	< 0.005	0.03	26.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.40
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

3.8. Linear, Paving (2025) - Mitigated

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	0.62	0.55	3.68	11.9	0.03	0.12	—	0.12	0.11	—	0.11	—	2,886	2,886	0.12	0.02	—	2,896
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.30	0.98	< 0.005	0.01	—	0.01	0.01	—	0.01	—	237	237	0.01	< 0.005	—	238
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	0.01	0.01	0.06	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.3	39.3	< 0.005	< 0.005	—	39.4
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	196
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323

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	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.4	25.4	< 0.005	< 0.005	0.03	26.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.40
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

4.10. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	5.00	20.0	—
Linear, Grading & Excavation	Linear, Grading & Excavation	4/16/2025	8/20/2025	5.00	90.0	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	5.00	60.0	—
Linear, Paving	Linear, Paving	11/14/2025	12/26/2025	5.00	30.0	—

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
Linear, Grubbing & Land Clearing	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Grading & Excavation	Excavators	Diesel	Average	1.00	4.00	36.0	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38

Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Paving	Pavers	Diesel	Average	1.00	2.00	81.0	0.42
Linear, Paving	Rollers	Diesel	Average	1.00	6.00	36.0	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Paving	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Grading & Excavation	Excavators	Diesel	Tier 4 Final	1.00	4.00	36.0	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38

Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Paving	Pavers	Diesel	Tier 4 Final	1.00	2.00	81.0	0.42
Linear, Paving	Rollers	Diesel	Tier 4 Final	1.00	6.00	36.0	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Paving	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	15.0	18.5	LDA,LDT1,LDT2

Linear, Grading & Excavation	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	10.0	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	10.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—

Linear, Drainage, Utilities, & Sub-Grade	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	10.0	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	10.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	—	—	1.45	0.00	—
Linear, Grading & Excavation	—	—	1.45	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	1.45	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	1.45	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7
Drinking Water	62.7
Lead Risk Housing	39.3
Pesticides	0.00
Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00

Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301
Employed	9.136404466
Median HI	25.00962402
Education	—
Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—

2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8
Asthma ER Admissions	7.3
High Blood Pressure	59.9
Cancer (excluding skin)	82.6
Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8

Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3
Foreign-born	60.2
Outdoor Workers	39.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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: Off-Road Equipment	Equipment based on equipment used for similar projects
Construction: Trips and VMT	Dump/Delivery Trucks modeled as Vendor Trips

IVIC (Storage Reservoir) Detailed Report

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4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	IVIC (Storage Reservoir)
Construction Start Date	1/7/2025
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	1.00	Acre	1.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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.	0.71	0.58	5.54	8.06	0.01	0.22	0.24	0.46	0.20	0.06	0.27	—	1,782	1,782	0.08	0.06	1.50	1,805
Mit.	0.22	0.19	1.04	9.22	0.01	0.03	0.24	0.27	0.03	0.06	0.09	—	1,782	1,782	0.08	0.06	1.50	1,805
% Reduced	70%	68%	81%	-14%	—	87%	—	42%	86%	—	66%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.28	6.94	59.5	53.1	0.15	2.45	4.25	6.69	2.25	1.53	3.78	—	16,452	16,452	0.68	0.18	0.04	16,523
Mit.	1.80	1.77	10.1	90.8	0.17	0.34	4.25	4.59	0.34	1.53	1.87	—	18,450	18,450	0.76	0.20	0.04	18,528
% Reduced	78%	74%	83%	-71%	-12%	86%	—	31%	85%	—	50%	—	-12%	-12%	-12%	-9%	—	-12%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.52	0.44	3.88	4.56	0.01	0.16	0.23	0.39	0.15	0.07	0.22	—	1,138	1,138	0.05	0.03	0.28	1,149

Mit.	0.14	0.14	0.81	5.98	0.01	0.02	0.23	0.25	0.02	0.07	0.10	—	1,193	1,193	0.05	0.03	0.28	1,203
% Reduced	72%	69%	79%	-31%	—	85%	—	35%	84%	—	56%	—	-5%	-5%	-4%	—	—	-5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.08	0.71	0.83	< 0.005	0.03	0.04	0.07	0.03	0.01	0.04	—	188	188	0.01	0.01	0.05	190
Mit.	0.03	0.03	0.15	1.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.02	—	197	197	0.01	0.01	0.05	199
% Reduced	72%	69%	79%	-31%	-5%	85%	—	35%	84%	—	56%	—	-5%	-5%	-4%	-1%	—	-5%

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.71	0.58	5.54	8.06	0.01	0.22	0.24	0.46	0.20	0.06	0.27	—	1,782	1,782	0.08	0.06	1.50	1,805
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	8.28	6.94	59.5	53.1	0.15	2.45	4.25	6.69	2.25	1.53	3.78	—	16,452	16,452	0.68	0.18	0.04	16,523
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.52	0.44	3.88	4.56	0.01	0.16	0.23	0.39	0.15	0.07	0.22	—	1,138	1,138	0.05	0.03	0.28	1,149
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.09	0.08	0.71	0.83	< 0.005	0.03	0.04	0.07	0.03	0.01	0.04	—	188	188	0.01	0.01	0.05	190

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	0.19	1.04	9.22	0.01	0.03	0.24	0.27	0.03	0.06	0.09	—	1,782	1,782	0.08	0.06	1.50	1,805
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.80	1.77	10.1	90.8	0.17	0.34	4.25	4.59	0.34	1.53	1.87	—	18,450	18,450	0.76	0.20	0.04	18,528
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.14	0.14	0.81	5.98	0.01	0.02	0.23	0.25	0.02	0.07	0.10	—	1,193	1,193	0.05	0.03	0.28	1,203
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.03	0.03	0.15	1.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.02	—	197	197	0.01	0.01	0.05	199

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.	0.00	0.01	0.00	0.00	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.01	0.00	0.00	0.00	0.00	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 (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.01	0.00	0.00	0.00	0.00	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 (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	0.01	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.6. Operations Emissions by Sector, Mitigated

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	0.01	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	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. Construction Emissions Details

3.1. Site Preparation (2025) - 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	2.24	1.88	17.5	15.0	0.02	0.87	—	0.87	0.80	—	0.80	—	2,590	2,590	0.11	0.02	—	2,599
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.2	14.2	< 0.005	< 0.005	—	14.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
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	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.35	2.35	< 0.005	< 0.005	—	2.36
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157

Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.77
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	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
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

3.2. Site Preparation (2025) - Mitigated

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	0.24	0.24	1.27	13.8	0.02	0.05	—	0.05	0.05	—	0.05	—	2,590	2,590	0.11	0.02	—	2,599
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.2	14.2	< 0.005	< 0.005	—	14.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
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	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.35	2.35	< 0.005	< 0.005	—	2.36
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.77

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	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
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. Grading (2025) - 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	8.19	6.88	59.0	52.3	0.15	2.44	—	2.44	2.25	—	2.25	—	15,988	15,988	0.65	0.13	—	16,043
Dust From Material Movement	—	—	—	—	—	—	4.00	4.00	—	1.47	1.47	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.62	1.43	< 0.005	0.07	—	0.07	0.06	—	0.06	—	438	438	0.02	< 0.005	—	440
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—

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	0.04	0.03	0.30	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	72.5	72.5	< 0.005	< 0.005	—	72.8
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.31	4.31	< 0.005	< 0.005	0.01	4.37
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.45	8.45	< 0.005	< 0.005	0.01	8.86
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	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.72
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.40	1.40	< 0.005	< 0.005	< 0.005	1.47
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

3.4. Grading (2025) - Mitigated

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	1.71	1.71	9.73	89.9	0.17	0.34	—	0.34	0.34	—	0.34	—	17,986	17,986	0.73	0.15	—	18,048
Dust From Material Movement	—	—	—	—	—	—	4.00	4.00	—	1.47	1.47	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.27	2.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	493	493	0.02	< 0.005	—	494
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
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	0.01	0.01	0.05	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	81.6	81.6	< 0.005	< 0.005	—	81.9

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.31	4.31	< 0.005	< 0.005	0.01	4.37
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.45	8.45	< 0.005	< 0.005	0.01	8.86
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	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.72
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.40	1.40	< 0.005	< 0.005	< 0.005	1.47
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. Reservoir Construction (2025) - 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	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.69	2.28	< 0.005	0.07	—	0.07	0.07	—	0.07	—	429	429	0.02	< 0.005	—	430
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	0.04	0.03	0.31	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	71.0	71.0	< 0.005	< 0.005	—	71.3
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	0.06	0.06	0.05	0.93	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	169	169	0.01	0.01	0.63	172
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.7	51.7	< 0.005	< 0.005	0.09	52.4
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	101	101	0.01	0.02	0.12	106
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.56	8.56	< 0.005	< 0.005	0.01	8.68
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	16.8	16.8	< 0.005	< 0.005	0.02	17.6
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

3.6. Reservoir Construction (2025) - Mitigated

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	0.12	0.12	0.64	8.10	0.01	0.02	—	0.02	0.02	—	0.02	—	1,305	1,305	0.05	0.01	—	1,309
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.12	0.64	8.10	0.01	0.02	—	0.02	0.02	—	0.02	—	1,305	1,305	0.05	0.01	—	1,309
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.21	2.66	< 0.005	0.01	—	0.01	0.01	—	0.01	—	429	429	0.02	< 0.005	—	430
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	0.01	0.01	0.04	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	71.0	71.0	< 0.005	< 0.005	—	71.3
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	0.06	0.06	0.05	0.93	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	169	169	0.01	0.01	0.63	172
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.7	51.7	< 0.005	< 0.005	0.09	52.4
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	101	101	0.01	0.02	0.12	106

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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.56	8.56	< 0.005	< 0.005	0.01	8.68
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	16.8	16.8	< 0.005	< 0.005	0.02	17.6
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

3.7. Foundation Construction (2025) - 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	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.36	< 0.005	0.01	—	0.01	0.01	—	0.01	—	56.4	56.4	< 0.005	< 0.005	—	56.6
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.34	9.34	< 0.005	< 0.005	—	9.37

Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.1	21.1	< 0.005	< 0.005	0.03	22.2
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.78	1.78	< 0.005	< 0.005	< 0.005	1.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.50	3.50	< 0.005	< 0.005	< 0.005	3.67
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

3.8. Foundation Construction (2025) - Mitigated

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	0.27	0.23	2.09	5.55	0.01	0.06	—	0.06	0.06	—	0.06	—	823	823	0.03	0.01	—	826
Paving	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	56.4	56.4	< 0.005	< 0.005	—	56.6
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.34	9.34	< 0.005	< 0.005	—	9.37
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.70	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	155	155	0.01	0.01	0.02	157
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.1	21.1	< 0.005	< 0.005	0.03	22.2
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.78	1.78	< 0.005	< 0.005	< 0.005	1.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.50	3.50	< 0.005	< 0.005	< 0.005	3.67
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

4.1.2. Mitigated

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

4.2.2. Electricity Emissions By Land Use - Mitigated

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

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

4.3.1. 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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipme	0.00	0.00	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	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3.2. Mitigated

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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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

4.4.1. 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
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

4.4.2. Mitigated

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

4.5. Waste Emissions by Land Use

4.5.1. 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
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

4.5.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.6.2. Mitigated

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

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

4.7.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	1/7/2025	1/8/2025	5.00	2.00	—
Grading	Grading	1/9/2025	1/22/2025	5.00	10.0	—
Reservoir Construction	Building Construction	2/27/2025	8/13/2025	5.00	120	—
Foundation Construction	Paving	1/23/2025	2/26/2025	5.00	25.0	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	6.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	2.00	6.00	87.0	0.43

Grading	Rubber Tired Dozers	Diesel	Average	2.00	6.00	367	0.40
Grading	Crawler Tractors	Diesel	Average	2.00	6.00	87.0	0.43
Grading	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Grading	Scrapers	Diesel	Average	6.00	6.00	423	0.48
Grading	Excavators	Diesel	Average	2.00	6.00	36.0	0.38
Grading	Off-Highway Trucks	Diesel	Average	4.00	6.00	376	0.38
Reservoir Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Reservoir Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Reservoir Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Foundation Construction	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Foundation Construction	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Foundation Construction	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Foundation Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	6.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Tier 4 Final	2.00	6.00	87.0	0.43
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	6.00	367	0.40
Grading	Crawler Tractors	Diesel	Tier 4 Final	2.00	6.00	87.0	0.43
Grading	Off-Highway Trucks	Diesel	Tier 4 Final	4.00	4.00	376	0.38
Grading	Scrapers	Diesel	Tier 4 Final	6.00	6.00	423	0.48
Grading	Excavators	Diesel	Tier 4 Final	2.00	6.00	36.0	0.38
Grading	Off-Highway Trucks	Diesel	Tier 4 Final	4.00	6.00	376	0.38

Reservoir Construction	Cranes	Diesel	Tier 4 Final	1.00	4.00	367	0.29
Reservoir Construction	Forklifts	Diesel	Tier 4 Final	2.00	6.00	82.0	0.20
Reservoir Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Foundation Construction	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Foundation Construction	Pavers	Diesel	Tier 4 Final	1.00	7.00	81.0	0.42
Foundation Construction	Rollers	Diesel	Tier 4 Final	1.00	7.00	36.0	0.38
Foundation Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	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
Site Preparation	—	—	—	—
Site Preparation	Worker	12.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	10.0	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	12.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	10.0	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Reservoir Construction	—	—	—	—
Reservoir Construction	Worker	12.0	18.5	LDA,LDT1,LDT2

Reservoir Construction	Vendor	10.0	10.2	HHDT,MHDT
Reservoir Construction	Hauling	0.00	20.0	HHDT
Reservoir Construction	Onsite truck	—	—	HHDT
Foundation Construction	—	—	—	—
Foundation Construction	Worker	12.0	18.5	LDA,LDT1,LDT2
Foundation Construction	Vendor	10.0	10.2	HHDT,MHDT
Foundation Construction	Hauling	0.00	20.0	HHDT
Foundation Construction	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	12.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	10.0	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	12.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	10.0	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Reservoir Construction	—	—	—	—
Reservoir Construction	Worker	12.0	18.5	LDA,LDT1,LDT2
Reservoir Construction	Vendor	10.0	10.2	HHDT,MHDT
Reservoir Construction	Hauling	0.00	20.0	HHDT
Reservoir Construction	Onsite truck	—	—	HHDT
Foundation Construction	—	—	—	—

Foundation Construction	Worker	12.0	18.5	LDA,LDT1,LDT2
Foundation Construction	Vendor	10.0	10.2	HHDT,MHDT
Foundation Construction	Hauling	0.00	20.0	HHDT
Foundation Construction	Onsite truck	—	—	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	3.00	0.00	—
Grading	—	—	60.0	0.00	—
Foundation Construction	0.00	0.00	0.00	0.00	1.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	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

5.9.2. Mitigated

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

5.10.1.2. Mitigated

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	2,614

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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	349	0.0330	0.0040	0.00

5.11.2. Mitigated

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	349	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	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—

5.13.2. Mitigated

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

5.14.2. Mitigated

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

5.15.2. Mitigated

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

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7
Drinking Water	62.7
Lead Risk Housing	39.3

Pesticides	0.00
Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301
Employed	9.136404466
Median HI	25.00962402

Education	—
Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—
2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8
Asthma ER Admissions	7.3
High Blood Pressure	59.9

Cancer (excluding skin)	82.6
Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8
Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3
Foreign-born	60.2
Outdoor Workers	39.1

Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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 anticipated to be completed in 2025
Construction: Off-Road Equipment	Equipment based on equipment used for similar projects
Construction: Trips and VMT	Trips based on information provided in the Project Descriptions

IVIC (Channel Installation - Demolition) 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	IVIC (Channel Installation - Demolition)
Construction Start Date	1/7/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	79.2	1000sqft	1.82	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.72	1.17	13.8	12.1	0.04	0.47	3.42	3.89	0.43	0.63	1.07	—	4,800	4,800	0.40	0.53	0.18	4,967
Mit.	0.61	0.27	5.93	11.5	0.04	0.07	3.42	3.49	0.07	0.63	0.70	—	4,800	4,800	0.40	0.53	0.18	4,967
% Reduced	65%	77%	57%	5%	—	85%	—	10%	84%	—	34%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.16	1.90	1.66	< 0.005	0.06	0.47	0.53	0.06	0.09	0.15	—	658	658	0.05	0.07	0.42	681
Mit.	0.08	0.04	0.82	1.58	< 0.005	0.01	0.47	0.48	0.01	0.09	0.10	—	658	658	0.05	0.07	0.42	681
% Reduced	65%	77%	57%	5%	—	85%	—	10%	84%	—	34%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.03	0.35	0.30	< 0.005	0.01	0.09	0.10	0.01	0.02	0.03	—	109	109	0.01	0.01	0.07	113
Mit.	0.02	0.01	0.15	0.29	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	109	109	0.01	0.01	0.07	113
% Reduced	65%	77%	57%	5%	—	85%	—	10%	84%	—	34%	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.72	1.17	13.8	12.1	0.04	0.47	3.42	3.89	0.43	0.63	1.07	—	4,800	4,800	0.40	0.53	0.18	4,967
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.24	0.16	1.90	1.66	< 0.005	0.06	0.47	0.53	0.06	0.09	0.15	—	658	658	0.05	0.07	0.42	681
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.04	0.03	0.35	0.30	< 0.005	0.01	0.09	0.10	0.01	0.02	0.03	—	109	109	0.01	0.01	0.07	113

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.61	0.27	5.93	11.5	0.04	0.07	3.42	3.49	0.07	0.63	0.70	—	4,800	4,800	0.40	0.53	0.18	4,967
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.08	0.04	0.82	1.58	< 0.005	0.01	0.47	0.48	0.01	0.09	0.10	—	658	658	0.05	0.07	0.42	681
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.02	0.01	0.15	0.29	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	109	109	0.01	0.01	0.07	113

3. Construction Emissions Details

3.1. Demolition (2025) - 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	1.27	1.07	9.91	9.38	0.02	0.43	—	0.43	0.39	—	0.39	—	1,563	1,563	0.06	0.01	—	1,569
Demolition	—	—	—	—	—	—	2.46	2.46	—	0.37	0.37	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.15	1.36	1.29	< 0.005	0.06	—	0.06	0.05	—	0.05	—	214	214	0.01	< 0.005	—	215
Demolition	—	—	—	—	—	—	0.34	0.34	—	0.05	0.05	—	—	—	—	—	—	—
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	0.03	0.03	0.25	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.5	35.5	< 0.005	< 0.005	—	35.6

Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.39	0.06	3.89	2.10	0.02	0.04	0.83	0.87	0.04	0.23	0.27	—	3,107	3,107	0.33	0.51	0.17	3,267
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.03	18.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.01	0.54	0.29	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	426	426	0.04	0.07	0.39	448
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.97	2.97	< 0.005	< 0.005	0.01	3.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	70.5	70.5	0.01	0.01	0.06	74.1

3.2. Demolition (2025) - Mitigated

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	0.16	0.16	2.00	8.78	0.02	0.03	—	0.03	0.03	—	0.03	—	1,563	1,563	0.06	0.01	—	1,569
Demolition	—	—	—	—	—	—	2.46	2.46	—	0.37	0.37	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.27	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	214	214	0.01	< 0.005	—	215
Demolition	—	—	—	—	—	—	0.34	0.34	—	0.05	0.05	—	—	—	—	—	—	—
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	0.05	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	35.5	35.5	< 0.005	< 0.005	—	35.6
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.39	0.06	3.89	2.10	0.02	0.04	0.83	0.87	0.04	0.23	0.27	—	3,107	3,107	0.33	0.51	0.17	3,267
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.03	18.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.01	0.54	0.29	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	426	426	0.04	0.07	0.39	448
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.97	2.97	< 0.005	< 0.005	0.01	3.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	70.5	70.5	0.01	0.01	0.06	74.1

4. Operations Emissions Details

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	1/7/2025	3/17/2025	5.00	50.0	—

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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Demolition	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Demolition	Other Construction Equipment	Diesel	Average	1.00	6.00	82.0	0.42

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Final	1.00	6.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	6.00	367	0.40
Demolition	Excavators	Diesel	Tier 4 Final	1.00	6.00	36.0	0.38

Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	6.00	82.0	0.42

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	44.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	44.9	20.0	HHDT
Demolition	Onsite truck	—	—	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	8,981	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	1.82	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7

Drinking Water	62.7
Lead Risk Housing	39.3
Pesticides	0.00
Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301

Employed	9.136404466
Median HI	25.00962402
Education	—
Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—
2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8

Asthma ER Admissions	7.3
High Blood Pressure	59.9
Cancer (excluding skin)	82.6
Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8
Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3

Foreign-born	60.2
Outdoor Workers	39.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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	Demolition anticipated to take 50 days
Construction: Off-Road Equipment	Equipment based on equipment used for similar projects

IVIC (Channel Installation) 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	IVIC (Channel Installation)
Construction Start Date	3/18/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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
Road Construction	1.00	Mile	1.82	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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.	1.30	1.08	6.97	8.77	0.03	0.24	0.26	0.50	0.22	0.06	0.29	—	3,411	3,411	0.15	0.08	1.55	3,439
Mit.	0.72	0.62	3.65	13.4	0.03	0.12	0.26	0.38	0.12	0.06	0.18	—	3,411	3,411	0.15	0.08	1.55	3,439
% Reduced	45%	43%	48%	-52%	—	49%	—	24%	47%	—	37%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.38	1.14	7.24	8.52	0.03	0.26	0.28	0.54	0.24	0.07	0.31	—	3,395	3,395	0.15	0.08	0.04	3,422
Mit.	0.73	0.63	4.11	13.1	0.03	0.12	0.28	0.40	0.12	0.07	0.19	—	3,395	3,395	0.15	0.08	0.04	3,422
% Reduced	47%	45%	43%	-54%	—	53%	—	25%	51%	—	40%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	0.56	3.56	4.13	0.02	0.12	0.13	0.25	0.11	0.03	0.14	—	1,772	1,772	0.08	0.04	0.35	1,786
Mit.	0.37	0.32	2.03	6.60	0.02	0.06	0.13	0.20	0.06	0.03	0.09	—	1,772	1,772	0.08	0.04	0.35	1,786
% Reduced	45%	43%	43%	-60%	—	47%	—	23%	46%	—	36%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.10	0.65	0.75	< 0.005	0.02	0.02	0.05	0.02	0.01	0.03	—	293	293	0.01	0.01	0.06	296
Mit.	0.07	0.06	0.37	1.20	< 0.005	0.01	0.02	0.04	0.01	0.01	0.02	—	293	293	0.01	0.01	0.06	296
% Reduced	45%	43%	43%	-60%	—	47%	—	23%	46%	—	36%	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.30	1.08	6.97	8.77	0.03	0.24	0.26	0.50	0.22	0.06	0.29	—	3,411	3,411	0.15	0.08	1.55	3,439
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.38	1.14	7.24	8.52	0.03	0.26	0.28	0.54	0.24	0.07	0.31	—	3,395	3,395	0.15	0.08	0.04	3,422
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.68	0.56	3.56	4.13	0.02	0.12	0.13	0.25	0.11	0.03	0.14	—	1,772	1,772	0.08	0.04	0.35	1,786
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.12	0.10	0.65	0.75	< 0.005	0.02	0.02	0.05	0.02	0.01	0.03	—	293	293	0.01	0.01	0.06	296

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.72	0.62	3.65	13.4	0.03	0.12	0.26	0.38	0.12	0.06	0.18	—	3,411	3,411	0.15	0.08	1.55	3,439
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.73	0.63	4.11	13.1	0.03	0.12	0.28	0.40	0.12	0.07	0.19	—	3,395	3,395	0.15	0.08	0.04	3,422
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.37	0.32	2.03	6.60	0.02	0.06	0.13	0.20	0.06	0.03	0.09	—	1,772	1,772	0.08	0.04	0.35	1,786
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.07	0.06	0.37	1.20	< 0.005	0.01	0.02	0.04	0.01	0.01	0.02	—	293	293	0.01	0.01	0.06	296

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2025) - 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	1.20	1.01	6.57	7.57	0.03	0.24	—	0.24	0.22	—	0.22	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.20	1.01	6.57	7.57	0.03	0.24	—	0.24	0.22	—	0.22	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.36	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	160	160	0.01	< 0.005	—	160
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.5	26.5	< 0.005	< 0.005	—	26.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.07	0.06	0.06	1.01	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	183	183	0.01	0.01	0.68	186
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.02	170
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.33	9.33	< 0.005	< 0.005	0.02	9.46
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.9	16.9	< 0.005	< 0.005	0.02	17.7
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
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	2.93
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

3.2. Linear, Grubbing & Land Clearing (2025) - Mitigated

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	0.62	0.55	3.25	12.2	0.03	0.12	—	0.12	0.11	—	0.11	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.55	3.25	12.2	0.03	0.12	—	0.12	0.11	—	0.11	—	2,919	2,919	0.12	0.02	—	2,929
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.18	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	—	160	160	0.01	< 0.005	—	160
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.01	0.01	0.03	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.5	26.5	< 0.005	< 0.005	—	26.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.07	0.06	0.06	1.01	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	183	183	0.01	0.01	0.68	186

Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.02	170
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.33	9.33	< 0.005	< 0.005	0.02	9.46
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.9	16.9	< 0.005	< 0.005	0.02	17.7
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
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	2.93
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. Linear, Grading & Excavation (2025) - 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	1.12	0.94	5.89	6.43	0.03	0.21	—	0.21	0.19	—	0.19	—	2,735	2,735	0.11	0.02	—	2,744

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.28	0.23	1.45	1.58	0.01	0.05	—	0.05	0.05	—	0.05	—	674	674	0.03	0.01	—	677
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.05	0.04	0.27	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	112	112	< 0.005	< 0.005	—	112
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.05	0.05	0.04	0.78	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.3	32.3	< 0.005	< 0.005	0.06	32.8
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.1	76.1	0.01	0.01	0.09	79.8
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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.35	5.35	< 0.005	< 0.005	0.01	5.42
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	13.2
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

3.4. Linear, Grading & Excavation (2025) - Mitigated

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	0.57	0.50	3.20	10.9	0.03	0.11	—	0.11	0.10	—	0.10	—	2,735	2,735	0.11	0.02	—	2,744
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.14	0.12	0.79	2.69	0.01	0.03	—	0.03	0.02	—	0.02	—	674	674	0.03	0.01	—	677
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	0.02	0.14	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	112	112	< 0.005	< 0.005	—	112
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.05	0.05	0.04	0.78	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.3	32.3	< 0.005	< 0.005	0.06	32.8
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.1	76.1	0.01	0.01	0.09	79.8

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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.35	5.35	< 0.005	< 0.005	0.01	5.42
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	13.2
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. Linear, Drainage, Utilities, & Sub-Grade (2025) - 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	1.12	0.94	5.81	6.20	0.03	0.21	—	0.21	0.19	—	0.19	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	5.81	6.20	0.03	0.21	—	0.21	0.19	—	0.19	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	0.95	1.02	< 0.005	0.03	—	0.03	0.03	—	0.03	—	445	445	0.02	< 0.005	—	447
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	0.03	0.17	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.7	73.7	< 0.005	< 0.005	—	74.0
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.07	0.06	0.06	1.01	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	183	183	0.01	0.01	0.68	186
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.02	170
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.05	28.4
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	50.7	50.7	< 0.005	0.01	0.06	53.2
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	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.70
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.40	8.40	< 0.005	< 0.005	0.01	8.80
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

3.6. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

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	0.61	0.54	3.20	10.7	0.03	0.12	—	0.12	0.11	—	0.11	—	2,710	2,710	0.11	0.02	—	2,719
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.54	3.20	10.7	0.03	0.12	—	0.12	0.11	—	0.11	—	2,710	2,710	0.11	0.02	—	2,719

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.53	1.76	< 0.005	0.02	—	0.02	0.02	—	0.02	—	445	445	0.02	< 0.005	—	447
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.02	0.02	0.10	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	73.7	73.7	< 0.005	< 0.005	—	74.0
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.07	0.06	0.06	1.01	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	183	183	0.01	0.01	0.68	186
Vendor	0.03	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.06	0.06	0.06	0.76	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.02	170
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.05	28.4
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	50.7	50.7	< 0.005	0.01	0.06	53.2
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	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.70
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.40	8.40	< 0.005	< 0.005	0.01	8.80
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

3.7. Linear, Paving (2025) - 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	1.27	1.07	6.81	7.40	0.03	0.26	—	0.26	0.24	—	0.24	—	2,886	2,886	0.12	0.02	—	2,896
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	0.09	0.56	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	237	237	0.01	< 0.005	—	238
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	0.02	0.02	0.10	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.3	39.3	< 0.005	< 0.005	—	39.4
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	196
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
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	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.4	25.4	< 0.005	< 0.005	0.03	26.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.40
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

3.8. Linear, Paving (2025) - Mitigated

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	0.62	0.55	3.68	11.9	0.03	0.12	—	0.12	0.11	—	0.11	—	2,886	2,886	0.12	0.02	—	2,896
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.30	0.98	< 0.005	0.01	—	0.01	0.01	—	0.01	—	237	237	0.01	< 0.005	—	238
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	0.01	0.01	0.06	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	39.3	39.3	< 0.005	< 0.005	—	39.4
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	196
Vendor	0.03	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323

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	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.4	25.4	< 0.005	< 0.005	0.03	26.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.71
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.40
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

4.10. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	5.00	20.0	—
Linear, Grading & Excavation	Linear, Grading & Excavation	4/16/2025	8/20/2025	5.00	90.0	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	5.00	60.0	—
Linear, Paving	Linear, Paving	11/14/2025	12/26/2025	5.00	30.0	—

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
Linear, Grubbing & Land Clearing	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Grading & Excavation	Excavators	Diesel	Average	1.00	4.00	36.0	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38

Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Paving	Pavers	Diesel	Average	1.00	2.00	81.0	0.42
Linear, Paving	Rollers	Diesel	Average	1.00	6.00	36.0	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	2.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	4.00	376	0.38
Linear, Paving	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Grubbing & Land Clearing	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Grading & Excavation	Excavators	Diesel	Tier 4 Final	1.00	4.00	36.0	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38

Linear, Grading & Excavation	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82
Linear, Paving	Pavers	Diesel	Tier 4 Final	1.00	2.00	81.0	0.42
Linear, Paving	Rollers	Diesel	Tier 4 Final	1.00	6.00	36.0	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	6.00	376	0.38
Linear, Paving	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	376	0.38
Linear, Paving	Signal Boards	Diesel	Average	1.00	6.00	6.00	0.82

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	13.0	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	10.0	18.5	LDA,LDT1,LDT2

Linear, Grading & Excavation	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	13.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	10.0	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	10.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	13.0	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	10.0	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	10.0	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—

Linear, Drainage, Utilities, & Sub-Grade	Worker	13.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	10.0	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	10.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	—	—	1.82	0.00	—
Linear, Grading & Excavation	—	—	1.82	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	1.82	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	1.82	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7
Drinking Water	62.7
Lead Risk Housing	39.3
Pesticides	0.00
Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00

Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301
Employed	9.136404466
Median HI	25.00962402
Education	—
Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—

2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8
Asthma ER Admissions	7.3
High Blood Pressure	59.9
Cancer (excluding skin)	82.6
Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8

Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3
Foreign-born	60.2
Outdoor Workers	39.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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: Off-Road Equipment	Equipment based on equipment used for similar projects
Construction: Trips and VMT	Dump/Delivery Trucks modeled as Vendor Trips

IVIC (Extraction Well - Demolition) 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	IVIC (Extraction Well - Demolition)
Construction Start Date	1/7/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	0.10	1000sqft	< 0.005	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.35	1.12	10.2	10.1	0.02	0.43	0.34	0.77	0.40	0.07	0.47	—	1,900	1,900	0.09	0.05	0.02	1,918
Mit.	0.24	0.21	2.31	9.51	0.02	0.03	0.34	0.37	0.03	0.07	0.10	—	1,900	1,900	0.09	0.05	0.02	1,918
% Reduced	82%	81%	77%	6%	—	93%	—	52%	92%	—	78%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.21	5.21	< 0.005	< 0.005	< 0.005	5.26
Mit.	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.21	5.21	< 0.005	< 0.005	< 0.005	5.26
% Reduced	82%	81%	77%	6%	—	93%	—	52%	92%	—	79%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
Mit.	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
% Reduced	82%	81%	77%	6%	—	93%	—	52%	92%	—	79%	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.35	1.12	10.2	10.1	0.02	0.43	0.34	0.77	0.40	0.07	0.47	—	1,900	1,900	0.09	0.05	0.02	1,918
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.21	5.21	< 0.005	< 0.005	< 0.005	5.26
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.24	0.21	2.31	9.51	0.02	0.03	0.34	0.37	0.03	0.07	0.10	—	1,900	1,900	0.09	0.05	0.02	1,918
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.21	5.21	< 0.005	< 0.005	< 0.005	5.26
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87

3. Construction Emissions Details

3.1. Demolition (2025) - 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	1.27	1.07	9.91	9.38	0.02	0.43	—	0.43	0.39	—	0.39	—	1,563	1,563	0.06	0.01	—	1,569
Demolition	—	—	—	—	—	—	0.15	0.15	—	0.02	0.02	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.28	4.28	< 0.005	< 0.005	—	4.30
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	—	0.71	0.71	< 0.005	< 0.005	—	0.71

Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	< 0.005	0.26	0.14	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	208	208	0.02	0.03	0.01	218
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	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.60
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.10

3.2. Demolition (2025) - Mitigated

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	0.16	0.16	2.00	8.78	0.02	0.03	—	0.03	0.03	—	0.03	—	1,563	1,563	0.06	0.01	—	1,569
Demolition	—	—	—	—	—	—	0.15	0.15	—	0.02	0.02	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.28	4.28	< 0.005	< 0.005	—	4.30
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	—	0.71	0.71	< 0.005	< 0.005	—	0.71
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	< 0.005	0.26	0.14	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	208	208	0.02	0.03	0.01	218
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	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.60
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.10

4. Operations Emissions Details

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	1/7/2025	1/7/2025	5.00	1.00	—

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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Demolition	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Demolition	Other Construction Equipment	Diesel	Average	1.00	6.00	82.0	0.42

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Final	1.00	6.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	6.00	367	0.40
Demolition	Excavators	Diesel	Tier 4 Final	1.00	6.00	36.0	0.38

Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	6.00	82.0	0.42

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	3.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	3.00	20.0	HHDT
Demolition	Onsite truck	—	—	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)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	11.0	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	< 0.005	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7

Drinking Water	62.7
Lead Risk Housing	39.3
Pesticides	0.00
Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301

Employed	9.136404466
Median HI	25.00962402
Education	—
Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—
2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8

Asthma ER Admissions	7.3
High Blood Pressure	59.9
Cancer (excluding skin)	82.6
Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8
Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3

Foreign-born	60.2
Outdoor Workers	39.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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	Demolition anticipated to take 50 days
Construction: Off-Road Equipment	Equipment based on equipment used for similar projects

IVIC (Extraction Well) 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	IVIC (Extraction Well)
Construction Start Date	1/7/2025
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	34.09316155822431, -117.33431482472606
County	San Bernardino-South Coast
City	San Bernardino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5350
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	0.10	1000sqft	< 0.005	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Construction	C-13	Use Low-VOC Paints for Construction

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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.87	4.08	37.8	32.9	0.06	1.93	5.80	7.73	1.78	2.72	4.50	—	6,910	6,910	0.29	0.09	0.04	6,945
Mit.	0.69	0.67	4.74	35.8	0.06	0.13	5.80	5.90	0.13	2.72	2.83	—	6,910	6,910	0.29	0.09	0.04	6,945
% Reduced	86%	84%	87%	-9%	—	93%	—	24%	93%	—	37%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.20	1.87	2.28	< 0.005	0.08	0.05	0.13	0.07	0.02	0.09	—	460	460	0.02	0.01	0.07	464
Mit.	0.06	0.06	0.50	2.57	< 0.005	0.01	0.05	0.06	0.01	0.02	0.03	—	460	460	0.02	0.01	0.07	464
% Reduced	74%	72%	73%	-13%	—	84%	—	51%	83%	—	66%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.04	0.04	0.34	0.42	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.02	—	76.2	76.2	< 0.005	< 0.005	0.01	76.8
Mit.	0.01	0.01	0.09	0.47	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	76.2	76.2	< 0.005	< 0.005	0.01	76.8
% Reduced	74%	72%	73%	-13%	—	84%	—	51%	83%	—	66%	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.87	4.08	37.8	32.9	0.06	1.93	5.80	7.73	1.78	2.72	4.50	—	6,910	6,910	0.29	0.09	0.04	6,945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.24	0.20	1.87	2.28	< 0.005	0.08	0.05	0.13	0.07	0.02	0.09	—	460	460	0.02	0.01	0.07	464
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.04	0.04	0.34	0.42	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.02	—	76.2	76.2	< 0.005	< 0.005	0.01	76.8

2.3. Construction Emissions by Year, Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.69	0.67	4.74	35.8	0.06	0.13	5.80	5.90	0.13	2.72	2.83	—	6,910	6,910	0.29	0.09	0.04	6,945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.06	0.06	0.50	2.57	< 0.005	0.01	0.05	0.06	0.01	0.02	0.03	—	460	460	0.02	0.01	0.07	464
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.01	0.01	0.09	0.47	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	76.2	76.2	< 0.005	< 0.005	0.01	76.8

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.	0.00	< 0.005	0.00	0.00	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	< 0.005	0.00	0.00	0.00	0.00	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 (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	< 0.005	0.00	0.00	0.00	0.00	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 (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	< 0.005	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.6. Operations Emissions by Sector, Mitigated

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	< 0.005	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	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. Construction Emissions Details

3.1. Demolition (2025) - 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	0.86	0.72	6.31	6.77	0.01	0.22	—	0.22	0.20	—	0.20	—	1,014	1,014	0.04	0.01	—	1,017
Demolition	—	—	—	—	—	—	0.15	0.15	—	0.02	0.02	—	—	—	—	—	—	—

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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.78	2.78	< 0.005	< 0.005	—	2.79
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	—	0.46	0.46	< 0.005	< 0.005	—	0.46
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
Hauling	0.03	< 0.005	0.26	0.14	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	208	208	0.02	0.03	0.01	218
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	—	0.68	0.68	< 0.005	< 0.005	< 0.005	0.71
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.60

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	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.12
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.10

3.2. Demolition (2025) - Mitigated

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	0.14	0.14	3.33	6.39	0.01	0.02	—	0.02	0.02	—	0.02	—	1,014	1,014	0.04	0.01	—	1,017
Demolition	—	—	—	—	—	—	0.15	0.15	—	0.02	0.02	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.78	2.78	< 0.005	< 0.005	—	2.79
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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	—	0.46	0.46	< 0.005	< 0.005	—	0.46

Demolitio	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
Hauling	0.03	< 0.005	0.26	0.14	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	208	208	0.02	0.03	0.01	218
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	—	0.68	0.68	< 0.005	< 0.005	< 0.005	0.71
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.60
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	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.12
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.10

3.3. Site Preparation (2025) - 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	4.82	4.05	37.5	32.4	0.05	1.93	—	1.93	1.78	—	1.78	—	5,528	5,528	0.22	0.04	—	5,547
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.09	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.1	15.1	< 0.005	< 0.005	—	15.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
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	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.51	2.51	< 0.005	< 0.005	—	2.52
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	—	0.18	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	—	0.68	0.68	< 0.005	< 0.005	< 0.005	0.71
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	—	0.03	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	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.12
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

3.4. Site Preparation (2025) - Mitigated

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	0.52	0.52	2.71	30.0	0.05	0.10	—	0.10	0.10	—	0.10	—	5,528	5,528	0.22	0.04	—	5,547

Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.1	15.1	< 0.005	< 0.005	—	15.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
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	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.51	2.51	< 0.005	< 0.005	—	2.52
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	—	0.18	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	—	0.68	0.68	< 0.005	< 0.005	< 0.005	0.71
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	—	0.03	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	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.12
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 (2025) - 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	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.2	36.2	< 0.005	< 0.005	—	36.3

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
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	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.01
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	—	0.36	0.36	< 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	—	1.35	1.35	< 0.005	< 0.005	< 0.005	1.42
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	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23

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

3.6. Grading (2025) - Mitigated

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	0.64	0.64	4.43	35.3	0.06	0.12	—	0.12	0.12	—	0.12	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	2.39	2.39	—	0.95	0.95	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
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	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.01

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	—	0.36	0.36	< 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	—	1.35	1.35	< 0.005	< 0.005	< 0.005	1.42
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	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
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

3.7. Building Construction (2025) - 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	1.45	1.21	11.3	14.1	0.03	0.47	—	0.47	0.43	—	0.43	—	2,630	2,630	0.11	0.02	—	2,639
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.43	1.78	< 0.005	0.06	—	0.06	0.05	—	0.05	—	332	332	0.01	< 0.005	—	333
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	0.03	0.03	0.26	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	54.9	54.9	< 0.005	< 0.005	—	55.1
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.26	8.26	< 0.005	< 0.005	0.01	8.37
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.1	31.1	< 0.005	< 0.005	0.04	32.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.39
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.15	5.15	< 0.005	< 0.005	0.01	5.40
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

3.8. Building Construction (2025) - Mitigated

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	0.37	0.35	2.94	16.2	0.03	0.08	—	0.08	0.08	—	0.08	—	2,630	2,630	0.11	0.02	—	2,639
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.37	2.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	332	332	0.01	< 0.005	—	333
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	0.01	0.01	0.07	0.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	54.9	54.9	< 0.005	< 0.005	—	55.1

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.26	8.26	< 0.005	< 0.005	0.01	8.37
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.1	31.1	< 0.005	< 0.005	0.04	32.6
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.39
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.15	5.15	< 0.005	< 0.005	0.01	5.40
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

3.9. Paving (2025) - 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	0.94	0.79	7.15	9.94	0.01	0.33	—	0.33	0.31	—	0.31	—	1,496	1,496	0.06	0.01	—	1,501
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.5	20.5	< 0.005	< 0.005	—	20.6
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.39	3.39	< 0.005	< 0.005	—	3.40
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	—	0.90	0.90	< 0.005	< 0.005	< 0.005	0.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.38	3.38	< 0.005	< 0.005	< 0.005	3.54
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	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.59
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

3.10. Paving (2025) - Mitigated

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	0.16	0.16	1.92	10.5	0.01	0.03	—	0.03	0.03	—	0.03	—	1,496	1,496	0.06	0.01	—	1,501
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.5	20.5	< 0.005	< 0.005	—	20.6
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.39	3.39	< 0.005	< 0.005	—	3.40
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	—	0.90	0.90	< 0.005	< 0.005	< 0.005	0.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.38	3.38	< 0.005	< 0.005	< 0.005	3.54
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	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.59
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

3.11. Architectural Coating (2025) - 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	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.44	2.44	< 0.005	< 0.005	—	2.45
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	0.41
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	—	0.90	0.90	< 0.005	< 0.005	< 0.005	0.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.38	3.38	< 0.005	< 0.005	< 0.005	3.54
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	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.59
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

3.12. Architectural Coating (2025) - Mitigated

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	0.03	0.03	0.86	1.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.44	2.44	< 0.005	< 0.005	—	2.45
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	0.41
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	0.01	65.4
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
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	—	0.90	0.90	< 0.005	< 0.005	< 0.005	0.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.38	3.38	< 0.005	< 0.005	< 0.005	3.54

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	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.59
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

4.1.2. Mitigated

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

4.2.2. Electricity Emissions By Land Use - Mitigated

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

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

4.3.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3.2. Mitigated

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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	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	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipme	0.00	0.00	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	< 0.005	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

4.4.1. 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
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

4.4.2. Mitigated

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

4.5. Waste Emissions by Land Use

4.5.1. 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
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

4.5.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.6.2. Mitigated

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

4.7.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

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

Equipme 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	1/7/2025	1/7/2025	5.00	1.00	—
Site Preparation	Site Preparation	1/8/2025	1/8/2025	5.00	1.00	—
Grading	Grading	1/9/2025	1/10/2025	5.00	2.00	—
Building Construction	Building Construction	1/11/2025	3/17/2025	5.00	46.0	—
Paving	Paving	3/18/2025	3/24/2025	5.00	5.00	—
Architectural Coating	Architectural Coating	3/25/2025	3/31/2025	5.00	5.00	—

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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	1.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

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

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Final	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	1.00	367	0.40
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Tier 4 Final	4.00	8.00	87.0	0.43
Grading	Excavators	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 4 Final	2.00	8.00	423	0.48

Grading	Tractors/Loaders/Backh	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backh oes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Final	2.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	5.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	8.00	10.2	HHDT,MHDT
Demolition	Hauling	3.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	8.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—

Grading	Worker	5.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	8.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	5.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	8.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	5.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	8.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	5.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	8.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	5.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	8.00	10.2	HHDT,MHDT
Demolition	Hauling	3.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	8.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	5.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	8.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	5.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	8.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	5.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	8.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	5.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	8.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	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)
Architectural Coating	0.00	0.00	0.00	0.00	6.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	11.0	—
Site Preparation	—	—	3.50	0.00	—
Grading	—	—	6.00	0.00	—
Paving	0.00	0.00	0.00	0.00	< 0.005

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	< 0.005	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	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

5.9.2. Mitigated

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

5.10.1.2. Mitigated

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	6.00

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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	349	0.0330	0.0040	0.00

5.11.2. Mitigated

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	349	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	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—

5.13.2. Mitigated

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

5.14.2. Mitigated

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

5.15.2. Mitigated

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

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

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	27.1	annual days of extreme heat

Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	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 (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
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	98.7
AQ-PM	69.0
AQ-DPM	68.7
Drinking Water	62.7
Lead Risk Housing	39.3
Pesticides	0.00

Toxic Releases	61.7
Traffic	11.8
Effect Indicators	—
CleanUp Sites	83.0
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	85.2
Cardio-vascular	90.4
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	88.4
Housing	3.76
Linguistic	76.9
Poverty	69.8
Unemployment	11.9

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	17.41306301
Employed	9.136404466
Median HI	25.00962402
Education	—

Bachelor's or higher	5.504940331
High school enrollment	100
Preschool enrollment	32.64468112
Transportation	—
Auto Access	48.06877967
Active commuting	10.59925574
Social	—
2-parent households	28.08931092
Voting	15.11612986
Neighborhood	—
Alcohol availability	43.30809701
Park access	12.99884512
Retail density	27.84550237
Supermarket access	53.34274349
Tree canopy	19.90247658
Housing	—
Homeownership	71.67971256
Housing habitability	29.23136148
Low-inc homeowner severe housing cost burden	13.55062235
Low-inc renter severe housing cost burden	22.61003465
Uncrowded housing	13.49929424
Health Outcomes	—
Insured adults	23.32862826
Arthritis	45.8
Asthma ER Admissions	7.3
High Blood Pressure	59.9
Cancer (excluding skin)	82.6

Asthma	9.8
Coronary Heart Disease	43.7
Chronic Obstructive Pulmonary Disease	20.5
Diagnosed Diabetes	19.1
Life Expectancy at Birth	32.8
Cognitively Disabled	68.5
Physically Disabled	29.8
Heart Attack ER Admissions	6.2
Mental Health Not Good	11.0
Chronic Kidney Disease	35.4
Obesity	13.4
Pedestrian Injuries	68.6
Physical Health Not Good	12.4
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	15.5
No Leisure Time for Physical Activity	16.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	53.3
Elderly	92.1
English Speaking	34.3
Foreign-born	60.2
Outdoor Workers	39.1
Climate Change Adaptive Capacity	—

Impervious Surface Cover	49.0
Traffic Density	9.4
Traffic Access	23.0
Other Indices	—
Hardship	88.5
Other Decision Support	—
2016 Voting	19.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
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	Per the Project Description, it will take up to 60 days to complete construction
Construction: Off-Road Equipment	Equipment based on equipment used for similar projects
Construction: Trips and VMT	Trips based on information provided in the Project Description
Construction: Architectural Coatings	Rule 1113

Category 1 (New Roadway) Without Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.43	50	21.5	0.43	0.05375
Exhaust PM-10	Linear, Grubbing & Land Clearing	0.24	20	4.8	0.24	0.03
	Linear, Grading & Excavation	0.21	90	18.9	0.21	0.02625
	Linear, Drainage, Utilities, & Sub-Grade	0.21	60	12.6	0.21	0.02625
	Linear, Paving	0.26	30	7.8	0.26	0.0325
		1.35	254	65.6	0.258267717	0.032283465
Off-Site	Demolition	3.00E-02	50	1.5	0.03	0.00375
Exhaust PM-10	Linear, Grubbing & Land Clearing	5.00E-03	20	0.1	0.005	0.000625
	Linear, Grading & Excavation	5.00E-03	90	0.45	0.005	0.000625
	Linear, Drainage, Utilities, & Sub-Grade	5.00E-03	60	0.3	0.005	0.000625
	Linear, Paving	5.00E-03	30	0.15	0.005	0.000625
		5.00E-02	254	2.5	0.00984252	0.001230315

Phase	Start Date	End Date	No. Days
Demolition	1/7/2025	3/17/2025	50
Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
Linear, Grading & Excavation	4/16/2025	8/20/2025	90
Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
Linear, Paving	11/14/2025	12/26/2025	30
		Total Days of Construction	**254**

Category 1 (New Roadway) With Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.16	50	8	0.16	0.02
Exhaust PM-10	Linear, Grubbing & Land Clearing	0.12	20	2.4	0.12	0.015
	Linear, Grading & Excavation	0.11	90	9.9	0.11	0.01375
	Linear, Drainage, Utilities, & Sub-Grade	0.12	60	7.2	0.12	0.015
	Linear, Paving	0.12	30	3.6	0.12	0.015
		0.63	254	31.1	0.122440945	0.015305118
Off-Site	Demolition	3.00E-02	50	1.5	0.03	0.00375
Exhaust PM-10	Linear, Grubbing & Land Clearing	5.00E-03	20	0.1	0.005	0.000625
	Linear, Grading & Excavation	5.00E-03	90	0.45	0.005	0.000625
	Linear, Drainage, Utilities, & Sub-Grade	5.00E-03	60	0.3	0.005	0.000625
	Linear, Paving	5.00E-03	30	0.15	0.005	0.000625
		5.00E-02	254	2.5	0.00984252	0.001230315

Phase	Start Date	End Date	No. Days
Demolition	1/7/2025	3/17/2025	50
Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
Linear, Grading & Excavation	4/16/2025	8/20/2025	90
Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
Linear, Paving	11/14/2025	12/26/2025	30
		Total Days of Construction	**254**

Category 2 (Channel Improvement Installation) Without Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.43	50	21.5	0.43	0.05375
Exhaust PM-10	Linear, Grubbing & Land Clearing	0.24	20	4.8	0.24	0.03
	Linear, Grading & Excavation	0.21	90	18.9	0.21	0.02625
	Linear, Drainage, Utilities, & Sub-Grade	0.21	60	12.6	0.21	0.02625
	Linear, Paving	0.26	30	7.8	0.26	0.0325
		1.35	254	65.6	0.258267717	0.032283465
Off-Site	Demolition	4.00E-02	50	2	0.04	0.005
Exhaust PM-10	Linear, Grubbing & Land Clearing	5.00E-03	20	0.1	0.005	0.000625
	Linear, Grading & Excavation	5.00E-03	90	0.45	0.005	0.000625
	Linear, Drainage, Utilities, & Sub-Grade	5.00E-03	60	0.3	0.005	0.000625
	Linear, Paving	5.00E-03	30	0.15	0.005	0.000625
		6.00E-02	254	3	0.011811024	0.001476378

Phase	Start Date	End Date	No. Days
Demolition	1/7/2025	3/17/2025	50
Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
Linear, Grading & Excavation	4/16/2025	8/20/2025	90
Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
Linear, Paving	11/14/2025	12/26/2025	30
		Total Days of Construction	**254**

Category 2 (Channel Improvement Installation) With Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.03	50	1.5	0.03	0.00375
Exhaust PM-10	Linear, Grubbing & Land Clearing	0.12	20	2.4	0.12	0.015
	Linear, Grading & Excavation	0.11	90	9.9	0.11	0.01375
	Linear, Drainage, Utilities, & Sub-Grade	0.12	60	7.2	0.12	0.015
	Linear, Paving	0.12	30	3.6	0.12	0.015
		0.50	254	24.6	0.096850394	0.012106299
Off-Site	Demolition	4.00E-02	50	2	0.04	0.005
Exhaust PM-10	Linear, Grubbing & Land Clearing	5.00E-03	20	0.1	0.005	0.000625
	Linear, Grading & Excavation	5.00E-03	90	0.45	0.005	0.000625
	Linear, Drainage, Utilities, & Sub-Grade	5.00E-03	60	0.3	0.005	0.000625
	Linear, Paving	5.00E-03	30	0.15	0.005	0.000625
		6.00E-02	254	3	0.011811024	0.001476378

Phase	Start Date	End Date	No. Days
Demolition	1/7/2025	3/17/2025	50
Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
Linear, Grading & Excavation	4/16/2025	8/20/2025	90
Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
Linear, Paving	11/14/2025	12/26/2025	30
		Total Days of Construction	**254**

Category 3 (Storage Reservoir) Without Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Site Preparation	0.87	2	1.74	0.87	0.10875
Exhaust PM-10	Grading	2.44	10	24.4	2.44	0.305
	Reservoir Construction	0.22	120	26.4	0.22	0.0275
	Foundation Construction	0.19	25	4.75	0.19	0.02375
		3.72	157	57.29	0.364904459	0.045613057
Off-Site	Site Preparation	5.00E-03	2	0.01	0.005	0.000625
Exhaust PM-10	Grading	5.00E-03	10	0.05	0.005	0.000625
	Reservoir Construction	5.00E-03	120	0.6	0.005	0.000625
	Foundation Construction	5.00E-03	25	0.125	0.005	0.000625
		2.00E-02	157	0.785	0.005	0.000625

Phase	Start Date	End Date	No. Days
Site Preparation	1/7/2025	1/8/2025	2
Grading	1/9/2025	1/22/2025	10
Reservoir Construction	2/27/2025	8/13/2025	120
Foundation Construction	1/23/2025	2/26/2025	25
		Total Days of Construction	**157**

Category 3 (Storage Reservoir) With Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Site Preparation	0.05	2	0.1	0.05	0.00625
Exhaust PM-10	Grading	0.34	10	3.4	0.34	0.0425
	Reservoir Construction	0.02	120	2.4	0.02	0.0025
	Foundation Construction	0.06	25	1.5	0.06	0.0075
		0.47	157	7.4	0.047133758	0.00589172
Off-Site	Site Preparation	5.00E-03	2	0.01	0.005	0.000625
Exhaust PM-10	Grading	5.00E-03	10	0.05	0.005	0.000625
	Reservoir Construction	5.00E-03	120	0.6	0.005	0.000625
	Foundation Construction	5.00E-03	25	0.125	0.005	0.000625
		2.00E-02	157	0.785	0.005	0.000625

Phase	Start Date	End Date	No. Days
Site Preparation	1/7/2025	1/8/2025	2
Grading	1/9/2025	1/22/2025	10
Reservoir Construction	2/27/2025	8/13/2025	120
Foundation Construction	1/23/2025	2/26/2025	25
		Total Days of Construction	**157**

Category 4 (Extraction Well) Without Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.22	1	0.22	0.22	0.0275
Exhaust PM-10	Site Preparation	1.93	1	1.93	1.93	0.24125
	Grading	1.23	2	2.46	1.23	0.15375
	Building Construction	0.47	46	21.62	0.47	0.05875
	Paving	0.33	5	1.65	0.33	0.04125
	Architectural Coating	0.04	5	0.2	0.04	0.005
		4.22	60	28.08	0.468	0.0585
Off-Site	Demolition	1.00E-02	1	0.01	0.01	0.00125
Exhaust PM-10	Site Preparation	5.00E-03	1	0.005	0.005	0.000625
	Grading	5.00E-03	2	0.01	0.005	0.000625
	Building Construction	5.00E-03	46	0.23	0.005	0.000625
	Paving	5.00E-03	5	0.025	0.005	0.000625
	Architectural Coating	5.00E-03	5	0.025	0.005	0.000625
		3.50E-02	60	0.305	0.005083333	0.000635417

Phase	Start Date	End Date	No. Days
Demolition	1/7/2025	1/7/2025	1
Site Preparation	1/8/2025	1/8/2025	1
Grading	1/9/2025	1/10/2025	2
Building Construction	1/11/2025	3/17/2025	46
Paving	3/18/2025	3/24/2025	5
Architectural Coating	3/25/2025	3/31/2025	5
		Total Days of Construction	**60**

Category 4 (Extraction Well) With Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.02	1	0.02	0.02	0.0025
Exhaust PM-10	Site Preparation	0.10	1	0.1	0.1	0.0125
	Grading	0.12	2	0.24	0.12	0.015
	Building Construction	0.08	46	3.68	0.08	0.01
	Paving	0.03	5	0.15	0.03	0.00375
	Architectural Coating	0.01	5	0.025	0.005	0.000625
		0.36	60	4.215	0.07025	0.00878125
Off-Site	Demolition	1.00E-02	1	0.01	0.01	0.00125
Exhaust PM-10	Site Preparation	5.00E-03	1	0.005	0.005	0.000625
	Grading	5.00E-03	2	0.01	0.005	0.000625
	Building Construction	5.00E-03	46	0.23	0.005	0.000625
	Paving	5.00E-03	5	0.025	0.005	0.000625
	Architectural Coating	5.00E-03	5	0.025	0.005	0.000625
		3.50E-02	60	0.305	0.005083333	0.000635417

Phase	Start Date	End Date	No. Days
Demolition	1/7/2025	1/7/2025	1
Site Preparation	1/8/2025	1/8/2025	1
Grading	1/9/2025	1/10/2025	2
Building Construction	1/11/2025	3/17/2025	46
Paving	3/18/2025	3/24/2025	5
Architectural Coating	3/25/2025	3/31/2025	5
		Total Days of Construction	**60**

Category 5 (Sewer Installation) Without Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.43	50	21.5	0.43	0.05375
Exhaust PM-10	Linear, Grubbing & Land Clearing	0.24	20	4.8	0.24	0.03
	Linear, Grading & Excavation	0.21	90	18.9	0.21	0.02625
	Linear, Drainage, Utilities, & Sub-Grade	0.21	60	12.6	0.21	0.02625
	Linear, Paving	0.26	30	7.8	0.26	0.0325
		1.35	254	65.6	0.258267717	0.032283465
Off-Site	Demolition	5.00E-03	50	0.25	0.005	0.000625
Exhaust PM-10	Linear, Grubbing & Land Clearing	5.00E-03	20	0.1	0.005	0.000625
	Linear, Grading & Excavation	5.00E-03	90	0.45	0.005	0.000625
	Linear, Drainage, Utilities, & Sub-Grade	5.00E-03	60	0.3	0.005	0.000625
	Linear, Paving	5.00E-03	30	0.15	0.005	0.000625
		2.50E-02	254	1.25	0.00492126	0.000615157

Phase	Start Date	End Date	No. Days
Demolition	1/7/2025	3/17/2025	50
Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
Linear, Grading & Excavation	4/16/2025	8/20/2025	90
Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
Linear, Paving	11/14/2025	12/26/2025	30
		Total Days of Construction	**254**

Category 5 (Sewer Installation) With Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Demolition	0.03	50	1.5	0.03	0.00375
Exhaust PM-10	Linear, Grubbing & Land Clearing	0.12	20	2.4	0.12	0.015
	Linear, Grading & Excavation	0.11	90	9.9	0.11	0.01375
	Linear, Drainage, Utilities, & Sub-Grade	0.12	60	7.2	0.12	0.015
	Linear, Paving	0.12	30	3.6	0.12	0.015
		0.50	254	24.6	0.096850394	0.012106299
Off-Site	Demolition	5.00E-03	50	0.25	0.005	0.000625
Exhaust PM-10	Linear, Grubbing & Land Clearing	5.00E-03	20	0.1	0.005	0.000625
	Linear, Grading & Excavation	5.00E-03	90	0.45	0.005	0.000625
	Linear, Drainage, Utilities, & Sub-Grade	5.00E-03	60	0.3	0.005	0.000625
	Linear, Paving	5.00E-03	30	0.15	0.005	0.000625
		2.50E-02	254	1.25	0.00492126	0.000615157

Phase	Start Date	End Date	No. Days
Demolition	1/7/2025	3/17/2025	50
Linear, Grubbing & Land Clearing	3/18/2025	4/15/2025	20
Linear, Grading & Excavation	4/16/2025	8/20/2025	90
Linear, Drainage, Utilities, & Sub-Grade	8/21/2025	11/13/2025	60
Linear, Paving	11/14/2025	12/26/2025	30
		Total Days of Construction	**254**

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APPENDIX 2.2:

AERMOD MODEL INPUT/OUTPUT

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\15935 Cat1
Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat1 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0040676482     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
```

```
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 Cat1 Cons HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat1 Cons HRA.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**

```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\15935 Cat1 Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat1 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0040676482     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

```
     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 Cat1 Cons HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat1 Cons 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:39:21

                              PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

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

 ** Model Options Selected:
```

```
257         * Model Allows User-Specified Options
258         * Model Is Setup For Calculation of Average CONCentration Values.
259         * NO GAS DEPOSITION Data Provided.
260         * NO PARTICLE DEPOSITION Data Provided.
261         * Model Uses NO DRY DEPLETION. DDPLETE  =  F
262         * Model Uses NO WET DEPLETION. WETDPLT  =  F
263         * Stack-tip Downwash.
264         * Model Assumes Receptors on FLAT Terrain.
265         * Use Calms Processing Routine.
266         * Use Missing Data Processing Routine.
267         * No Exponential Decay.
268         * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
269           for Total of    1 Urban Area(s):
270       Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
271         * Urban Roughness Length of 1.0 Meter Used.
272         * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
273         * TEMP_Sub - Meteorological data includes TEMP substitutions
274         * Model Assumes No FLAGPOLE Receptor Heights.
275         * The User Specified a Pollutant Type of: DPM
276
277     **Model Calculates PERIOD Averages Only
278
279     **This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)
280
281                   with:       0 POINT(s), including
282                               0 POINTCAP(s) and      0 POINTHOR(s)
283                    and:       1 VOLUME source(s)
284                    and:       0 AREA type source(s)
285                    and:       0 LINE source(s)
286                    and:       0 RLINE/RLINEXT source(s)
287                    and:       0 OPENPIT source(s)
288                    and:       0 BUOYANT LINE source(s) with a total of     0 line(s)
289                    and:       0 SWPOINT source(s)
290
291
292     **Model Set To Continue RUNning After the Setup Testing.
293
294     **The AERMET Input Meteorological Data Version Date:  16216
295
296     **Output Options Selected:
297             Model Outputs Tables of PERIOD Averages by Receptor
298             Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
299             Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
300
301     **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
302                                                                     m for Missing Hours
303                                                                     b for Both Calm and
                                                                        Missing Hours
304
305     **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef.
        =    0.000     ;  Rot. Angle =     0.0
306                       Emission Units = GRAMS/SEC                                ;  Emission
                          Rate Unit Factor =   0.10000E+07
307                       Output Units   = MICROGRAMS/M**3
308
309     **Approximate Storage Requirements of Model =      3.5 MB of RAM.
310
311     **Input Runstream File:
        aermod.inp

312     **Output Print File:
        aermod.out

313
314     **Detailed Error/Message File:   15935 Cat1 Cons
        HRA.err
```

```
315   **File for Summary of Results:   15935 Cat1 Cons
      HRA.sum
316   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
317    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:39:21
318
                                  PAGE   2
319    *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
320
321
322                                                  *** VOLUME SOURCE DATA ***
323
324                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                    INIT.   URBAN  EMISSION RATE   AIRCRAFT
325       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
          SZ     SOURCE  SCALAR VARY
326         ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
            (METERS)              BY
327    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - -
328
329    VOL1             0   0.40676E-02  478061.6 3775094.4   481.0     5.00    20.92
       1.40     YES   HRDOW            NO
330   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
331    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:39:21
332
                                  PAGE   3
333    *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
334
335
336                                        *** SOURCE IDs DEFINING SOURCE GROUPS ***
337
338    SRCGROUP ID                                          SOURCE IDs
339    -----------                                          ----------
340
341
342     ALL        VOL1        ,
343   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
344    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:39:21
345
                                  PAGE   4
346    *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
347
348
349                                       *** SOURCE IDs DEFINED AS URBAN SOURCES ***
350
351     URBAN ID   URBAN POP                                 SOURCE IDs
352     --------   ---------                                 ----------
353
354
355                 2035210.   VOL1        ,
356   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
357    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:39:21
358
                                  PAGE   5
```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:39:21
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                    (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
 ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6, 3775151.6,     481.0,     481.0,       0.0);
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                        ***        10:39:21

                              PAGE   7
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

                                              *** DISCRETE CARTESIAN RECEPTORS ***
                                            (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                            (METERS)

 ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1, 3775151.6,     481.0,     481.0,       0.0);
 ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5, 3775151.6,     481.0,     481.0,       0.0);
 ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9, 3775163.8,     481.0,     481.0,       0.0);
 ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3, 3775163.8,     481.0,     481.0,       0.0);
 ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8, 3775163.8,     481.0,     481.0,       0.0);
 ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3, 3775163.8,     481.0,     481.0,       0.0);
 ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2, 3775156.7,     481.0,     481.0,       0.0);
 ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1, 3775176.0,     481.0,     481.0,       0.0);
 ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6, 3775176.0,     481.0,     481.0,       0.0);
 ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1, 3775176.0,     481.0,     481.0,       0.0);
 ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5, 3775176.0,     481.0,     481.0,       0.0);
 ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5, 3775139.5,     481.0,     481.0,       0.0);
 ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6, 3775049.4,     481.0,     481.0,       0.0);
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                        ***        10:39:21

                              PAGE   8
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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
```

```
468             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
469             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
470
471                 NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                    IS INCLUDED IN THE DATA FILE.
472
473
474
475                                 *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                    CATEGORIES ***
476                                                      (METERS/SEC)
477
478                                                 1.54,   3.09,   5.14,   8.23,  10.80,
479  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
480   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:39:21
481
                                  PAGE   9
482   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
483
484                                 *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                    ***
485
486       Surface file:
          RDLD_V9_ADJU\RDLD_v9.SFC
          Met Version:  16216
487       Profile file:
          RDLD_V9_ADJU\RDLD_v9.PFL
488       Surface format:
          FREE

489       Profile format:
          FREE

490       Surface station no.:     3171                  Upper air station no.:     3190
491                       Name: UNKNOWN                                  Name:
                          UNKNOWN
492                       Year:   2012                                   Year:   2012
493
494    First 24 hours of scalar data
495    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
496   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
497    12 01 01   1 01  -10.6  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30  110.    9.1  285.4    5.5
498    12 01 01   1 02   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  130.    9.1  284.5    5.5
499    12 01 01   1 03   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  100.    9.1  285.0    5.5
500    12 01 01   1 04   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  107.    9.1  284.6    5.5
501    12 01 01   1 05  -10.7  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30   98.    9.1  284.9    5.5
502    12 01 01   1 06   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   86.    9.1  284.5    5.5
503    12 01 01   1 07   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   91.    9.1  284.0    5.5
504    12 01 01   1 08   -4.0  0.102 -9.000 -9.000 -999.   78.     22.9  0.32   3.22   0.54
       0.90  107.    9.1  285.0    5.5
505    12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33
       2.10   81.   10.1  289.1    5.5
506    12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:39:21
531
                                PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                      X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.05720                     478118.76
              3775128.23         0.07182
544           478118.78    3775116.98        0.08645                     478118.80
              3775105.73         0.09786
545           478118.82    3775094.47        0.10264                     478118.85
              3775083.22         0.09928
546           478118.87    3775071.97        0.08933                     478118.89
```

	3775060.72	0.07601		
547	478118.91	3775049.46	0.06224	478127.35
	3775148.11	0.04065		
548	478115.16	3775160.28	0.03767	478130.95
	3775128.25	0.05372		
549	478130.97	3775117.00	0.06211	478130.99
	3775105.75	0.06837		
550	478131.01	3775094.50	0.07111	478131.04
	3775083.24	0.06973		
551	478131.06	3775071.99	0.06477	478131.08
	3775060.74	0.05749		
552	478131.10	3775049.49	0.04929	478139.54
	3775148.13	0.03309		
553	478123.77	3775168.91	0.02784	478143.14
	3775128.28	0.04144		
554	478143.16	3775117.02	0.04665	478143.18
	3775105.77	0.05048		
555	478143.20	3775094.52	0.05225	478143.23
	3775083.27	0.05170		
556	478143.25	3775072.01	0.04902	478143.27
	3775060.76	0.04478		
557	478143.29	3775049.51	0.03966	478106.72
	3775037.25	0.05885		
558	478095.46	3775037.25	0.06891	478084.19
	3775037.25	0.07821		
559	478072.93	3775037.25	0.08407	478061.67
	3775037.25	0.08449		
560	478050.41	3775037.25	0.07916	478039.15
	3775037.25	0.06957		
561	478027.88	3775037.25	0.05810	478016.62
	3775037.25	0.04702		
562	478115.35	3775028.64	0.04283	478095.46
	3775025.06	0.04855		
563	478084.19	3775025.06	0.05262	478072.93
	3775025.06	0.05485		
564	478061.67	3775025.06	0.05463	478050.41
	3775025.06	0.05192		
565	478039.15	3775025.06	0.04718	478027.88
	3775025.06	0.04125		
566	478016.62	3775025.06	0.03506	478115.35
	3775016.45	0.03288		
567	478136.17	3775032.24	0.03475	478095.46
	3775012.87	0.03514		
568	478084.19	3775012.87	0.03699	478072.93
	3775012.87	0.03787		
569	478061.67	3775012.87	0.03757	478050.41
	3775012.87	0.03607		
570	478039.15	3775012.87	0.03352	478027.88
	3775012.87	0.03023		
571	478016.62	3775012.87	0.02660	478004.43
	3775049.44	0.04692		
572	478004.43	3775060.69	0.05777	478004.43
	3775071.94	0.06878		
573	478004.43	3775083.20	0.07743	478004.43
	3775094.45	0.08077		
574	478004.43	3775105.70	0.07742	478004.43
	3775116.96	0.06876		
575	478004.43	3775128.21	0.05777	478004.43
	3775139.46	0.04697		
576	477995.81	3775040.82	0.03291	477992.24
	3775060.69	0.04095		
577	477992.24	3775071.94	0.04655	477992.24
	3775083.20	0.05063		
578	477992.24	3775094.45	0.05214	477992.24
	3775105.70	0.05062		
579	477992.24	3775116.96	0.04653	477992.24

```
            3775128.21        0.04094
580         477992.24    3775139.46        0.03495                        477983.62
            3775040.82        0.02554
581         477999.38    3775020.01        0.02416                        477980.05
            3775060.69        0.02996
582         477980.05    3775071.94        0.03302                        477980.05
            3775083.20        0.03514
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:39:21
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.03590                        477980.05
            3775105.70        0.03513
598         477980.05    3775116.96        0.03300                        477980.05
            3775128.21        0.02995
599         477980.05    3775139.46        0.02647                        478016.62
            3775151.65        0.04716
600         478027.86    3775151.65        0.05816                        478039.10
            3775151.65        0.06936
601         478050.34    3775151.65        0.07825                        478061.58
            3775151.65        0.08201
602         478072.83    3775151.65        0.07957                        478084.07
            3775151.65        0.07246
603         478095.31    3775151.65        0.06300                        478106.55
            3775151.65        0.05318
604         478008.00    3775160.27        0.03313                        478027.86
            3775163.84        0.04146
605         478039.10    3775163.84        0.04724                        478050.34
            3775163.84        0.05152
606         478061.58    3775163.84        0.05329                        478072.83
            3775163.84        0.05217
607         478084.07    3775163.84        0.04872                        478095.31
            3775163.84        0.04391
608         478008.00    3775172.46        0.02584                        477987.19
            3775156.70        0.02420
609         478027.86    3775176.03        0.03052                        478039.10
            3775176.03        0.03372
610         478050.34    3775176.03        0.03599                        478061.58
            3775176.03        0.03691
611         478072.83    3775176.03        0.03633                        478084.07
            3775176.03        0.03447
612         478095.31    3775176.03        0.03179                        478106.55
            3775176.03        0.02873
613         478016.62    3775139.46        0.06379                        478106.55
            3775139.46        0.07399
614         478106.72    3775049.44        0.07956                        478016.62
            3775049.44        0.06374
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID	NETWORK AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.10264 AT (478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.09928 AT (478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.09786 AT (478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.08933 AT (478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.08645 AT (478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.08449 AT (478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.08407 AT (478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.08201 AT (478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.08077 AT (478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.07957 AT (478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA Mit\15935
Cat1 Cons HRA Mit.ADI
**
**************************************
**
**
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** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat1 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0019284124     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
```

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     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT1 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat1 Cons HRA Mit.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA Mit\15935 Cat1 Cons HRA Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat1 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0019284124     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

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     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT1 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat1 Cons HRA 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:41:07

                              PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

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

 ** Model Options Selected:
```

```
257         * Model Allows User-Specified Options
258         * Model Is Setup For Calculation of Average CONCentration Values.
259         * NO GAS DEPOSITION Data Provided.
260         * NO PARTICLE DEPOSITION Data Provided.
261         * Model Uses NO DRY DEPLETION. DDPLETE  =  F
262         * Model Uses NO WET DEPLETION. WETDPLT  =  F
263         * Stack-tip Downwash.
264         * Model Assumes Receptors on FLAT Terrain.
265         * Use Calms Processing Routine.
266         * Use Missing Data Processing Routine.
267         * No Exponential Decay.
268         * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
269           for Total of    1 Urban Area(s):
270       Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
271         * Urban Roughness Length of 1.0 Meter Used.
272         * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
273         * TEMP_Sub - Meteorological data includes TEMP substitutions
274         * Model Assumes No FLAGPOLE Receptor Heights.
275         * The User Specified a Pollutant Type of: DPM
276
277    **Model Calculates PERIOD Averages Only
278
279    **This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)
280
281                   with:      0 POINT(s), including
282                              0 POINTCAP(s) and      0 POINTHOR(s)
283                    and:      1 VOLUME source(s)
284                    and:      0 AREA type source(s)
285                    and:      0 LINE source(s)
286                    and:      0 RLINE/RLINEXT source(s)
287                    and:      0 OPENPIT source(s)
288                    and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
289                    and:      0 SWPOINT source(s)
290
291
292    **Model Set To Continue RUNning After the Setup Testing.
293
294    **The AERMET Input Meteorological Data Version Date:  16216
295
296    **Output Options Selected:
297             Model Outputs Tables of PERIOD Averages by Receptor
298             Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
299             Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
300
301    **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
302                                                                    m for Missing Hours
303                                                                    b for Both Calm and
                                                                       Missing Hours
304
305    **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef.
       =    0.000     ;  Rot. Angle =     0.0
306                     Emission Units = GRAMS/SEC                                ;  Emission
                        Rate Unit Factor =   0.10000E+07
307                     Output Units   = MICROGRAMS/M**3
308
309    **Approximate Storage Requirements of Model =      3.5 MB of RAM.
310
311    **Input Runstream File:
       aermod.inp

312    **Output Print File:
       aermod.out

313
314    **Detailed Error/Message File:   15935 Cat1 Cons HRA
       Mit.err
```

```
 **File for Summary of Results:   15935 Cat1 Cons HRA Mit.sum
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
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                                PAGE   2
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                        *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                        BASE    RELEASE    INIT.
               INIT.   URBAN  EMISSION RATE   AIRCRAFT
  SOURCE        PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
  SZ     SOURCE  SCALAR VARY
    ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 VOL1             0   0.19284E-02  478061.6 3775094.4   481.0     5.00    20.92
 1.40     YES   HRDOW            NO
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
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                                PAGE   3
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                     *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                                 SOURCE IDs
 -----------                                                 ----------


  ALL        VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
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                                PAGE   4
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                     *** SOURCE IDs DEFINED AS URBAN SOURCES ***

  URBAN ID   URBAN POP                                      SOURCE IDs
  --------   ---------                                      ----------


              2035210.   VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
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```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
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380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                    (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
      ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6, 3775151.6,     481.0,     481.0,       0.0);
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                      ***
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 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

                                                    *** DISCRETE CARTESIAN RECEPTORS ***
                                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                                  (METERS)

      ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1, 3775151.6,     481.0,     481.0,       0.0);
      ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5, 3775151.6,     481.0,     481.0,       0.0);
      ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9, 3775163.8,     481.0,     481.0,       0.0);
      ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3, 3775163.8,     481.0,     481.0,       0.0);
      ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8, 3775163.8,     481.0,     481.0,       0.0);
      ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3, 3775163.8,     481.0,     481.0,       0.0);
      ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2, 3775156.7,     481.0,     481.0,       0.0);
      ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1, 3775176.0,     481.0,     481.0,       0.0);
      ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6, 3775176.0,     481.0,     481.0,       0.0);
      ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1, 3775176.0,     481.0,     481.0,       0.0);
      ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5, 3775176.0,     481.0,     481.0,       0.0);
      ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5, 3775139.5,     481.0,     481.0,       0.0);
      ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6, 3775049.4,     481.0,     481.0,       0.0);
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                      ***
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 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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
```

```
468             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
469             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
470
471                 NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                    IS INCLUDED IN THE DATA FILE.
472
473
474
475                                 *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                    CATEGORIES ***
476                                                      (METERS/SEC)
477
478                                                  1.54,   3.09,   5.14,   8.23,  10.80,
479  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
480   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:41:07
481
                                  PAGE   9
482   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
483
484                                 *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                    ***
485
486       Surface file:
          RDLD_V9_ADJU\RDLD_v9.SFC
          Met Version:  16216
487       Profile file:
          RDLD_V9_ADJU\RDLD_v9.PFL
488       Surface format:
          FREE

489       Profile format:
          FREE

490       Surface station no.:     3171                  Upper air station no.:     3190
491                       Name: UNKNOWN                                  Name:
                          UNKNOWN
492                       Year:   2012                                   Year:   2012
493
494    First 24 hours of scalar data
495    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
496   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
497    12 01 01   1 01  -10.6  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30  110.    9.1  285.4    5.5
498    12 01 01   1 02   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  130.    9.1  284.5    5.5
499    12 01 01   1 03   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  100.    9.1  285.0    5.5
500    12 01 01   1 04   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  107.    9.1  284.6    5.5
501    12 01 01   1 05  -10.7  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30   98.    9.1  284.9    5.5
502    12 01 01   1 06   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   86.    9.1  284.5    5.5
503    12 01 01   1 07   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   91.    9.1  284.0    5.5
504    12 01 01   1 08   -4.0  0.102 -9.000 -9.000 -999.   78.     22.9  0.32   3.22   0.54
       0.90  107.    9.1  285.0    5.5
505    12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33
       2.10   81.   10.1  289.1    5.5
506    12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:41:07
531
                                PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.02712                      478118.76
              3775128.23         0.03405
544           478118.78    3775116.98        0.04098                      478118.80
              3775105.73         0.04639
545           478118.82    3775094.47        0.04866                      478118.85
              3775083.22         0.04707
546           478118.87    3775071.97        0.04235                      478118.89
```

	3775060.72	0.03603		
547	478118.91	3775049.46	0.02951	478127.35
	3775148.11	0.01927		
548	478115.16	3775160.28	0.01786	478130.95
	3775128.25	0.02547		
549	478130.97	3775117.00	0.02945	478130.99
	3775105.75	0.03241		
550	478131.01	3775094.50	0.03371	478131.04
	3775083.24	0.03306		
551	478131.06	3775071.99	0.03071	478131.08
	3775060.74	0.02726		
552	478131.10	3775049.49	0.02337	478139.54
	3775148.13	0.01569		
553	478123.77	3775168.91	0.01320	478143.14
	3775128.28	0.01964		
554	478143.16	3775117.02	0.02212	478143.18
	3775105.77	0.02393		
555	478143.20	3775094.52	0.02477	478143.23
	3775083.27	0.02451		
556	478143.25	3775072.01	0.02324	478143.27
	3775060.76	0.02123		
557	478143.29	3775049.51	0.01880	478106.72
	3775037.25	0.02790		
558	478095.46	3775037.25	0.03267	478084.19
	3775037.25	0.03708		
559	478072.93	3775037.25	0.03986	478061.67
	3775037.25	0.04006		
560	478050.41	3775037.25	0.03753	478039.15
	3775037.25	0.03298		
561	478027.88	3775037.25	0.02754	478016.62
	3775037.25	0.02229		
562	478115.35	3775028.64	0.02031	478095.46
	3775025.06	0.02302		
563	478084.19	3775025.06	0.02495	478072.93
	3775025.06	0.02600		
564	478061.67	3775025.06	0.02590	478050.41
	3775025.06	0.02461		
565	478039.15	3775025.06	0.02237	478027.88
	3775025.06	0.01956		
566	478016.62	3775025.06	0.01662	478115.35
	3775016.45	0.01559		
567	478136.17	3775032.24	0.01647	478095.46
	3775012.87	0.01666		
568	478084.19	3775012.87	0.01754	478072.93
	3775012.87	0.01795		
569	478061.67	3775012.87	0.01781	478050.41
	3775012.87	0.01710		
570	478039.15	3775012.87	0.01589	478027.88
	3775012.87	0.01433		
571	478016.62	3775012.87	0.01261	478004.43
	3775049.44	0.02225		
572	478004.43	3775060.69	0.02739	478004.43
	3775071.94	0.03261		
573	478004.43	3775083.20	0.03671	478004.43
	3775094.45	0.03829		
574	478004.43	3775105.70	0.03670	478004.43
	3775116.96	0.03260		
575	478004.43	3775128.21	0.02739	478004.43
	3775139.46	0.02227		
576	477995.81	3775040.82	0.01560	477992.24
	3775060.69	0.01941		
577	477992.24	3775071.94	0.02207	477992.24
	3775083.20	0.02401		
578	477992.24	3775094.45	0.02472	477992.24
	3775105.70	0.02400		
579	477992.24	3775116.96	0.02206	477992.24

```
            3775128.21        0.01941
580         477992.24    3775139.46        0.01657                        477983.62
            3775040.82        0.01211
581         477999.38    3775020.01        0.01145                        477980.05
            3775060.69        0.01421
582         477980.05    3775071.94        0.01565                        477980.05
            3775083.20        0.01666
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:41:07
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.01702                        477980.05
            3775105.70        0.01665
598         477980.05    3775116.96        0.01564                        477980.05
            3775128.21        0.01420
599         477980.05    3775139.46        0.01255                        478016.62
            3775151.65        0.02236
600         478027.86    3775151.65        0.02757                        478039.10
            3775151.65        0.03288
601         478050.34    3775151.65        0.03710                        478061.58
            3775151.65        0.03888
602         478072.83    3775151.65        0.03772                        478084.07
            3775151.65        0.03435
603         478095.31    3775151.65        0.02987                        478106.55
            3775151.65        0.02521
604         478008.00    3775160.27        0.01571                        478027.86
            3775163.84        0.01965
605         478039.10    3775163.84        0.02239                        478050.34
            3775163.84        0.02443
606         478061.58    3775163.84        0.02526                        478072.83
            3775163.84        0.02473
607         478084.07    3775163.84        0.02310                        478095.31
            3775163.84        0.02081
608         478008.00    3775172.46        0.01225                        477987.19
            3775156.70        0.01147
609         478027.86    3775176.03        0.01447                        478039.10
            3775176.03        0.01599
610         478050.34    3775176.03        0.01706                        478061.58
            3775176.03        0.01750
611         478072.83    3775176.03        0.01722                        478084.07
            3775176.03        0.01634
612         478095.31    3775176.03        0.01507                        478106.55
            3775176.03        0.01362
613         478016.62    3775139.46        0.03024                        478106.55
            3775139.46        0.03508
614         478106.72    3775049.44        0.03772                        478016.62
            3775049.44        0.03022
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID	NETWORK AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.04866 AT (478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.04707 AT (478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.04639 AT (478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.04235 AT (478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.04098 AT (478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.04006 AT (478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.03986 AT (478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.03888 AT (478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.03829 AT (478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.03772 AT (478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat2 Cons HRA\15935 Cat2
Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat2 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0040676482     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
```

```
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT2 CONS HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat2 Cons HRA.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**

```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat2 Cons HRA\15935 Cat2 Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat2 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0040676482     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

```
     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT2 CONS HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat2 Cons 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:42:40

                              PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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.
      * Model Assumes Receptors on FLAT Terrain.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
        for Total of    1 Urban Area(s):
  Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 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:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         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) =   481.00 ;  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 =      3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out


**Detailed Error/Message File:   15935 Cat2 Cons
HRA.err
```

```
 **File for Summary of Results:   15935 Cat2 Cons HRA.sum
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
 10:42:40

                                PAGE   2
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                        BASE    RELEASE    INIT.
               INIT.   URBAN  EMISSION RATE   AIRCRAFT
  SOURCE        PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
  SZ     SOURCE  SCALAR VARY
    ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 VOL1             0   0.40676E-02  478061.6 3775094.4   481.0     5.00    20.92
 1.40     YES   HRDOW            NO
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
 10:42:40

                                PAGE   3
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                                SOURCE IDs
 -----------                                                ----------


  ALL        VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
 10:42:40

                                PAGE   4
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                               *** SOURCE IDs DEFINED AS URBAN SOURCES ***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------


              2035210.   VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
 10:42:40

                                PAGE   5
```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:42:40
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                  (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
431       ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6,
          3775151.6,     481.0,     481.0,       0.0);
432    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
433        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:42:40
434
                                    PAGE   7
435        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
436
437                                                 *** DISCRETE CARTESIAN RECEPTORS ***
438                                                (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
439                                                             (METERS)
440
441       ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1,
          3775151.6,     481.0,     481.0,       0.0);
442       ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5,
          3775151.6,     481.0,     481.0,       0.0);
443       ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9,
          3775163.8,     481.0,     481.0,       0.0);
444       ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3,
          3775163.8,     481.0,     481.0,       0.0);
445       ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8,
          3775163.8,     481.0,     481.0,       0.0);
446       ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3,
          3775163.8,     481.0,     481.0,       0.0);
447       ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2,
          3775156.7,     481.0,     481.0,       0.0);
448       ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1,
          3775176.0,     481.0,     481.0,       0.0);
449       ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6,
          3775176.0,     481.0,     481.0,       0.0);
450       ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1,
          3775176.0,     481.0,     481.0,       0.0);
451       ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5,
          3775176.0,     481.0,     481.0,       0.0);
452       ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5,
          3775139.5,     481.0,     481.0,       0.0);
453       ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6,
          3775049.4,     481.0,     481.0,       0.0);
454    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
455        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:42:40
456
                                    PAGE   8
457        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
458
459                                                 *** METEOROLOGICAL DAYS SELECTED FOR
                                                    PROCESSING ***
460                                                                (1=YES; 0=NO)
461
462              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
463              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
464              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
465              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
466              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
467              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
```

```
              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
              1 1 1 1 1   1 1 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,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                        ***
 10:42:40

                             PAGE   9
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

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

   Surface file:
   RDLD_V9_ADJU\RDLD_v9.SFC
   Met Version:  16216
   Profile file:
   RDLD_V9_ADJU\RDLD_v9.PFL
   Surface format:
   FREE

   Profile format:
   FREE

   Surface station no.:     3171                  Upper air station no.:     3190
                  Name: UNKNOWN                                     Name:
                  UNKNOWN
                  Year:   2012                                      Year:   2012

 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
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
 12 01 01   1 01  -10.6  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
 1.30  110.    9.1  285.4    5.5
 12 01 01   1 02   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90  130.    9.1  284.5    5.5
 12 01 01   1 03   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90  100.    9.1  285.0    5.5
 12 01 01   1 04   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90  107.    9.1  284.6    5.5
 12 01 01   1 05  -10.7  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
 1.30   98.    9.1  284.9    5.5
 12 01 01   1 06   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90   86.    9.1  284.5    5.5
 12 01 01   1 07   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90   91.    9.1  284.0    5.5
 12 01 01   1 08   -4.0  0.102 -9.000 -9.000 -999.   78.     22.9  0.32   3.22   0.54
 0.90  107.    9.1  285.0    5.5
 12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33
 2.10   81.   10.1  289.1    5.5
 12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:42:40
531
                                PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                      X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.05720                     478118.76
              3775128.23         0.07182
544           478118.78    3775116.98        0.08645                     478118.80
              3775105.73         0.09786
545           478118.82    3775094.47        0.10264                     478118.85
              3775083.22         0.09928
546           478118.87    3775071.97        0.08933                     478118.89
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	3775060.72	0.07601		
547	478118.91	3775049.46	0.06224	478127.35
	3775148.11	0.04065		
548	478115.16	3775160.28	0.03767	478130.95
	3775128.25	0.05372		
549	478130.97	3775117.00	0.06211	478130.99
	3775105.75	0.06837		
550	478131.01	3775094.50	0.07111	478131.04
	3775083.24	0.06973		
551	478131.06	3775071.99	0.06477	478131.08
	3775060.74	0.05749		
552	478131.10	3775049.49	0.04929	478139.54
	3775148.13	0.03309		
553	478123.77	3775168.91	0.02784	478143.14
	3775128.28	0.04144		
554	478143.16	3775117.02	0.04665	478143.18
	3775105.77	0.05048		
555	478143.20	3775094.52	0.05225	478143.23
	3775083.27	0.05170		
556	478143.25	3775072.01	0.04902	478143.27
	3775060.76	0.04478		
557	478143.29	3775049.51	0.03966	478106.72
	3775037.25	0.05885		
558	478095.46	3775037.25	0.06891	478084.19
	3775037.25	0.07821		
559	478072.93	3775037.25	0.08407	478061.67
	3775037.25	0.08449		
560	478050.41	3775037.25	0.07916	478039.15
	3775037.25	0.06957		
561	478027.88	3775037.25	0.05810	478016.62
	3775037.25	0.04702		
562	478115.35	3775028.64	0.04283	478095.46
	3775025.06	0.04855		
563	478084.19	3775025.06	0.05262	478072.93
	3775025.06	0.05485		
564	478061.67	3775025.06	0.05463	478050.41
	3775025.06	0.05192		
565	478039.15	3775025.06	0.04718	478027.88
	3775025.06	0.04125		
566	478016.62	3775025.06	0.03506	478115.35
	3775016.45	0.03288		
567	478136.17	3775032.24	0.03475	478095.46
	3775012.87	0.03514		
568	478084.19	3775012.87	0.03699	478072.93
	3775012.87	0.03787		
569	478061.67	3775012.87	0.03757	478050.41
	3775012.87	0.03607		
570	478039.15	3775012.87	0.03352	478027.88
	3775012.87	0.03023		
571	478016.62	3775012.87	0.02660	478004.43
	3775049.44	0.04692		
572	478004.43	3775060.69	0.05777	478004.43
	3775071.94	0.06878		
573	478004.43	3775083.20	0.07743	478004.43
	3775094.45	0.08077		
574	478004.43	3775105.70	0.07742	478004.43
	3775116.96	0.06876		
575	478004.43	3775128.21	0.05777	478004.43
	3775139.46	0.04697		
576	477995.81	3775040.82	0.03291	477992.24
	3775060.69	0.04095		
577	477992.24	3775071.94	0.04655	477992.24
	3775083.20	0.05063		
578	477992.24	3775094.45	0.05214	477992.24
	3775105.70	0.05062		
579	477992.24	3775116.96	0.04653	477992.24

```
            3775128.21        0.04094
580         477992.24    3775139.46        0.03495                        477983.62
            3775040.82        0.02554
581         477999.38    3775020.01        0.02416                        477980.05
            3775060.69        0.02996
582         477980.05    3775071.94        0.03302                        477980.05
            3775083.20        0.03514
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:42:40
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.03590                        477980.05
            3775105.70        0.03513
598         477980.05    3775116.96        0.03300                        477980.05
            3775128.21        0.02995
599         477980.05    3775139.46        0.02647                        478016.62
            3775151.65        0.04716
600         478027.86    3775151.65        0.05816                        478039.10
            3775151.65        0.06936
601         478050.34    3775151.65        0.07825                        478061.58
            3775151.65        0.08201
602         478072.83    3775151.65        0.07957                        478084.07
            3775151.65        0.07246
603         478095.31    3775151.65        0.06300                        478106.55
            3775151.65        0.05318
604         478008.00    3775160.27        0.03313                        478027.86
            3775163.84        0.04146
605         478039.10    3775163.84        0.04724                        478050.34
            3775163.84        0.05152
606         478061.58    3775163.84        0.05329                        478072.83
            3775163.84        0.05217
607         478084.07    3775163.84        0.04872                        478095.31
            3775163.84        0.04391
608         478008.00    3775172.46        0.02584                        477987.19
            3775156.70        0.02420
609         478027.86    3775176.03        0.03052                        478039.10
            3775176.03        0.03372
610         478050.34    3775176.03        0.03599                        478061.58
            3775176.03        0.03691
611         478072.83    3775176.03        0.03633                        478084.07
            3775176.03        0.03447
612         478095.31    3775176.03        0.03179                        478106.55
            3775176.03        0.02873
613         478016.62    3775139.46        0.06379                        478106.55
            3775139.46        0.07399
614         478106.72    3775049.44        0.07956                        478016.62
            3775049.44        0.06374
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.10264	AT (478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.09928	AT (478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.09786	AT (478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.08933	AT (478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.08645	AT (478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.08449	AT (478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.08407	AT (478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.08201	AT (478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.08077	AT (478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.07957	AT (478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat2 Cons HRA Mit\15935
Cat2 Cons HRA Mit.ADI
**
**************************************
**
**
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** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat2 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.001525368     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
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     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT2 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat2 Cons HRA Mit.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat2 Cons HRA Mit\15935 Cat2 Cons HRA Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat2 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.001525368     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

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     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT2 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat2 Cons HRA 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:44:10

                               PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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.
      * Model Assumes Receptors on FLAT Terrain.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
        for Total of    1 Urban Area(s):
  Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 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:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         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) =   481.00 ;  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 =      3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out


**Detailed Error/Message File:   15935 Cat2 Cons HRA
Mit.err
```

```
315   **File for Summary of Results:   15935 Cat2 Cons HRA
      Mit.sum
316   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
317   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:44:10
318
                                PAGE   2
319   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
320
321
322                                                  *** VOLUME SOURCE DATA ***
323
324                NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                   INIT.   URBAN  EMISSION RATE   AIRCRAFT
325     SOURCE      PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
        SZ     SOURCE  SCALAR VARY
326       ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
          (METERS)              BY
327   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - -
328
329    VOL1             0   0.15254E-02  478061.6 3775094.4   481.0     5.00    20.92
       1.40     YES   HRDOW            NO
330   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
331   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:44:10
332
                                PAGE   3
333   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
334
335
336                                        *** SOURCE IDs DEFINING SOURCE GROUPS ***
337
338    SRCGROUP ID                                        SOURCE IDs
339    -----------                                        ----------
340
341
342     ALL        VOL1        ,
343   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
344   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:44:10
345
                                PAGE   4
346   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
347
348
349                                       *** SOURCE IDs DEFINED AS URBAN SOURCES ***
350
351     URBAN ID   URBAN POP                             SOURCE IDs
352     --------   ---------                             ----------
353
354
355                 2035210.   VOL1        ,
356   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
357   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:44:10
358
                                PAGE   5
```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:44:10
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                  (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
431       ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6,
          3775151.6,     481.0,     481.0,       0.0);
432    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
433        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:44:10
434
                                    PAGE   7
435        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
436
437                                                 *** DISCRETE CARTESIAN RECEPTORS ***
438                                                (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
439                                                             (METERS)
440
441       ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1,
          3775151.6,     481.0,     481.0,       0.0);
442       ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5,
          3775151.6,     481.0,     481.0,       0.0);
443       ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9,
          3775163.8,     481.0,     481.0,       0.0);
444       ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3,
          3775163.8,     481.0,     481.0,       0.0);
445       ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8,
          3775163.8,     481.0,     481.0,       0.0);
446       ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3,
          3775163.8,     481.0,     481.0,       0.0);
447       ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2,
          3775156.7,     481.0,     481.0,       0.0);
448       ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1,
          3775176.0,     481.0,     481.0,       0.0);
449       ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6,
          3775176.0,     481.0,     481.0,       0.0);
450       ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1,
          3775176.0,     481.0,     481.0,       0.0);
451       ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5,
          3775176.0,     481.0,     481.0,       0.0);
452       ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5,
          3775139.5,     481.0,     481.0,       0.0);
453       ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6,
          3775049.4,     481.0,     481.0,       0.0);
454    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
455        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:44:10
456
                                    PAGE   8
457        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
458
459                                                 *** METEOROLOGICAL DAYS SELECTED FOR
                                                    PROCESSING ***
460                                                                (1=YES; 0=NO)
461
462              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
463              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
464              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
465              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
466              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
467              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:44:10
531
                                PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.02145                      478118.76
              3775128.23         0.02693
544           478118.78    3775116.98        0.03242                      478118.80
              3775105.73         0.03670
545           478118.82    3775094.47        0.03849                      478118.85
              3775083.22         0.03723
546           478118.87    3775071.97        0.03350                      478118.89
```

	3775060.72	0.02850		
547	478118.91	3775049.46	0.02334	478127.35
	3775148.11	0.01524		
548	478115.16	3775160.28	0.01413	478130.95
	3775128.25	0.02015		
549	478130.97	3775117.00	0.02329	478130.99
	3775105.75	0.02564		
550	478131.01	3775094.50	0.02667	478131.04
	3775083.24	0.02615		
551	478131.06	3775071.99	0.02429	478131.08
	3775060.74	0.02156		
552	478131.10	3775049.49	0.01848	478139.54
	3775148.13	0.01241		
553	478123.77	3775168.91	0.01044	478143.14
	3775128.28	0.01554		
554	478143.16	3775117.02	0.01750	478143.18
	3775105.77	0.01893		
555	478143.20	3775094.52	0.01960	478143.23
	3775083.27	0.01939		
556	478143.25	3775072.01	0.01838	478143.27
	3775060.76	0.01679		
557	478143.29	3775049.51	0.01487	478106.72
	3775037.25	0.02207		
558	478095.46	3775037.25	0.02584	478084.19
	3775037.25	0.02933		
559	478072.93	3775037.25	0.03153	478061.67
	3775037.25	0.03169		
560	478050.41	3775037.25	0.02969	478039.15
	3775037.25	0.02609		
561	478027.88	3775037.25	0.02179	478016.62
	3775037.25	0.01763		
562	478115.35	3775028.64	0.01606	478095.46
	3775025.06	0.01821		
563	478084.19	3775025.06	0.01973	478072.93
	3775025.06	0.02057		
564	478061.67	3775025.06	0.02049	478050.41
	3775025.06	0.01947		
565	478039.15	3775025.06	0.01769	478027.88
	3775025.06	0.01547		
566	478016.62	3775025.06	0.01315	478115.35
	3775016.45	0.01233		
567	478136.17	3775032.24	0.01303	478095.46
	3775012.87	0.01318		
568	478084.19	3775012.87	0.01387	478072.93
	3775012.87	0.01420		
569	478061.67	3775012.87	0.01409	478050.41
	3775012.87	0.01353		
570	478039.15	3775012.87	0.01257	478027.88
	3775012.87	0.01133		
571	478016.62	3775012.87	0.00998	478004.43
	3775049.44	0.01760		
572	478004.43	3775060.69	0.02166	478004.43
	3775071.94	0.02579		
573	478004.43	3775083.20	0.02904	478004.43
	3775094.45	0.03029		
574	478004.43	3775105.70	0.02903	478004.43
	3775116.96	0.02579		
575	478004.43	3775128.21	0.02166	478004.43
	3775139.46	0.01761		
576	477995.81	3775040.82	0.01234	477992.24
	3775060.69	0.01535		
577	477992.24	3775071.94	0.01745	477992.24
	3775083.20	0.01899		
578	477992.24	3775094.45	0.01955	477992.24
	3775105.70	0.01898		
579	477992.24	3775116.96	0.01745	477992.24

```
            3775128.21        0.01535
580         477992.24    3775139.46        0.01311                        477983.62
            3775040.82        0.00958
581         477999.38    3775020.01        0.00906                        477980.05
            3775060.69        0.01124
582         477980.05    3775071.94        0.01238                        477980.05
            3775083.20        0.01318
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:44:10
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.01346                        477980.05
            3775105.70        0.01317
598         477980.05    3775116.96        0.01237                        477980.05
            3775128.21        0.01123
599         477980.05    3775139.46        0.00993                        478016.62
            3775151.65        0.01769
600         478027.86    3775151.65        0.02181                        478039.10
            3775151.65        0.02601
601         478050.34    3775151.65        0.02934                        478061.58
            3775151.65        0.03075
602         478072.83    3775151.65        0.02984                        478084.07
            3775151.65        0.02717
603         478095.31    3775151.65        0.02363                        478106.55
            3775151.65        0.01994
604         478008.00    3775160.27        0.01242                        478027.86
            3775163.84        0.01555
605         478039.10    3775163.84        0.01771                        478050.34
            3775163.84        0.01932
606         478061.58    3775163.84        0.01998                        478072.83
            3775163.84        0.01956
607         478084.07    3775163.84        0.01827                        478095.31
            3775163.84        0.01646
608         478008.00    3775172.46        0.00969                        477987.19
            3775156.70        0.00907
609         478027.86    3775176.03        0.01144                        478039.10
            3775176.03        0.01265
610         478050.34    3775176.03        0.01350                        478061.58
            3775176.03        0.01384
611         478072.83    3775176.03        0.01362                        478084.07
            3775176.03        0.01293
612         478095.31    3775176.03        0.01192                        478106.55
            3775176.03        0.01077
613         478016.62    3775139.46        0.02392                        478106.55
            3775139.46        0.02775
614         478106.72    3775049.44        0.02983                        478016.62
            3775049.44        0.02390
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.03849 AT	(478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.03723 AT	(478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.03670 AT	(478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.03350 AT	(478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.03242 AT	(478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.03169 AT	(478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.03153 AT	(478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.03075 AT	(478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.03029 AT	(478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.02984 AT	(478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat3 Cons HRA\15935 Cat3
Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat3 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0057471485     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
```

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     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT3 CONS HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat3 Cons HRA.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**

```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat3 Cons HRA\15935 Cat3 Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat3 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0057471485     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

```
     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT3 CONS HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat3 Cons 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:47:46

                              PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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.
      * Model Assumes Receptors on FLAT Terrain.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
        for Total of    1 Urban Area(s):
  Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 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:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         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) =   481.00 ;  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 =      3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out


**Detailed Error/Message File:   15935 Cat3 Cons
HRA.err
```

```
**File for Summary of Results:   15935 Cat3 Cons HRA.sum
 *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
*** AERMET - VERSION  16216 ***                                                                            ***         10:47:46
                                                                                                                       PAGE   2
*** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                  *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE   AIRCRAFT
  SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
    ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)               BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VOL1             0   0.57471E-02  478061.6 3775094.4   481.0     5.00    20.92     1.40     YES   HRDOW          NO
 *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
*** AERMET - VERSION  16216 ***                                                                            ***         10:47:46
                                                                                                                       PAGE   3
*** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID                                             SOURCE IDs
-----------                                             ----------


 ALL        VOL1        ,
 *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
*** AERMET - VERSION  16216 ***                                                                            ***         10:47:46
                                                                                                                       PAGE   4
*** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                         *** SOURCE IDs DEFINED AS URBAN SOURCES ***

 URBAN ID   URBAN POP                                   SOURCE IDs
 --------   ---------                                   ----------


             2035210.   VOL1        ,
 *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
*** AERMET - VERSION  16216 ***                                                                            ***         10:47:46
                                                                                                                       PAGE   5
```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:47:46
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                    (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
431       ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6,
          3775151.6,     481.0,     481.0,       0.0);
432    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
433        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:47:46
434
                                    PAGE   7
435        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
436
437                                              *** DISCRETE CARTESIAN RECEPTORS ***
438                                             (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
439                                                          (METERS)
440
441       ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1,
          3775151.6,     481.0,     481.0,       0.0);
442       ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5,
          3775151.6,     481.0,     481.0,       0.0);
443       ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9,
          3775163.8,     481.0,     481.0,       0.0);
444       ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3,
          3775163.8,     481.0,     481.0,       0.0);
445       ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8,
          3775163.8,     481.0,     481.0,       0.0);
446       ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3,
          3775163.8,     481.0,     481.0,       0.0);
447       ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2,
          3775156.7,     481.0,     481.0,       0.0);
448       ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1,
          3775176.0,     481.0,     481.0,       0.0);
449       ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6,
          3775176.0,     481.0,     481.0,       0.0);
450       ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1,
          3775176.0,     481.0,     481.0,       0.0);
451       ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5,
          3775176.0,     481.0,     481.0,       0.0);
452       ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5,
          3775139.5,     481.0,     481.0,       0.0);
453       ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6,
          3775049.4,     481.0,     481.0,       0.0);
454    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
455        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:47:46
456
                                    PAGE   8
457        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
458
459                                              *** METEOROLOGICAL DAYS SELECTED FOR
                                                 PROCESSING ***
460                                                          (1=YES; 0=NO)
461
462             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
463             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
464             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
465             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
466             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
467             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
468             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
469             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
470
471                 NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                    IS INCLUDED IN THE DATA FILE.
472
473
474
475                                 *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                    CATEGORIES ***
476                                                    (METERS/SEC)
477
478                                                 1.54,   3.09,   5.14,   8.23,  10.80,
479 FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
    IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
480  *** AERMET - VERSION  16216 ***
     ***                                                                    ***
     10:47:46
481
                                  PAGE   9
482  *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
483
484                                 *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                    ***
485
486    Surface file:
       RDLD_V9_ADJU\RDLD_v9.SFC
       Met Version:  16216
487    Profile file:
       RDLD_V9_ADJU\RDLD_v9.PFL
488    Surface format:
       FREE

489    Profile format:
       FREE

490    Surface station no.:     3171                 Upper air station no.:     3190
491                  Name: UNKNOWN                                Name:
                     UNKNOWN
492                  Year:   2012                                 Year:   2012
493
494  First 24 hours of scalar data
495  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
496 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - -
497  12 01 01   1 01  -10.6  0.149 -9.000 -999.  138.     26.7  0.32   3.22   1.00
     1.30  110.    9.1  285.4    5.5
498  12 01 01   1 02   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
     0.90  130.    9.1  284.5    5.5
499  12 01 01   1 03   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
     0.90  100.    9.1  285.0    5.5
500  12 01 01   1 04   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
     0.90  107.    9.1  284.6    5.5
501  12 01 01   1 05  -10.7  0.149 -9.000 -999.  138.     26.7  0.32   3.22   1.00
     1.30   98.    9.1  284.9    5.5
502  12 01 01   1 06   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
     0.90   86.    9.1  284.5    5.5
503  12 01 01   1 07   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
     0.90   91.    9.1  284.0    5.5
504  12 01 01   1 08   -4.0  0.102 -9.000 -999.   78.     22.9  0.32   3.22   0.54
     0.90  107.    9.1  285.0    5.5
505  12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33
     2.10   81.   10.1  289.1    5.5
506  12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:47:46
531
                                PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.08082                      478118.76
              3775128.23         0.10147
544           478118.78    3775116.98        0.12214                      478118.80
              3775105.73         0.13826
545           478118.82    3775094.47        0.14502                      478118.85
              3775083.22         0.14027
546           478118.87    3775071.97        0.12622                      478118.89
```

	3775060.72	0.10739		
547	478118.91	3775049.46	0.08795	478127.35
	3775148.11	0.05744		
548	478115.16	3775160.28	0.05322	478130.95
	3775128.25	0.07590		
549	478130.97	3775117.00	0.08776	478130.99
	3775105.75	0.09660		
550	478131.01	3775094.50	0.10047	478131.04
	3775083.24	0.09852		
551	478131.06	3775071.99	0.09151	478131.08
	3775060.74	0.08123		
552	478131.10	3775049.49	0.06964	478139.54
	3775148.13	0.04675		
553	478123.77	3775168.91	0.03933	478143.14
	3775128.28	0.05855		
554	478143.16	3775117.02	0.06592	478143.18
	3775105.77	0.07132		
555	478143.20	3775094.52	0.07383	478143.23
	3775083.27	0.07304		
556	478143.25	3775072.01	0.06926	478143.27
	3775060.76	0.06326		
557	478143.29	3775049.51	0.05603	478106.72
	3775037.25	0.08315		
558	478095.46	3775037.25	0.09737	478084.19
	3775037.25	0.11050		
559	478072.93	3775037.25	0.11879	478061.67
	3775037.25	0.11938		
560	478050.41	3775037.25	0.11185	478039.15
	3775037.25	0.09829		
561	478027.88	3775037.25	0.08208	478016.62
	3775037.25	0.06644		
562	478115.35	3775028.64	0.06052	478095.46
	3775025.06	0.06860		
563	478084.19	3775025.06	0.07435	478072.93
	3775025.06	0.07749		
564	478061.67	3775025.06	0.07719	478050.41
	3775025.06	0.07336		
565	478039.15	3775025.06	0.06667	478027.88
	3775025.06	0.05828		
566	478016.62	3775025.06	0.04953	478115.35
	3775016.45	0.04646		
567	478136.17	3775032.24	0.04909	478095.46
	3775012.87	0.04964		
568	478084.19	3775012.87	0.05226	478072.93
	3775012.87	0.05350		
569	478061.67	3775012.87	0.05308	478050.41
	3775012.87	0.05097		
570	478039.15	3775012.87	0.04736	478027.88
	3775012.87	0.04271		
571	478016.62	3775012.87	0.03759	478004.43
	3775049.44	0.06630		
572	478004.43	3775060.69	0.08162	478004.43
	3775071.94	0.09717		
573	478004.43	3775083.20	0.10940	478004.43
	3775094.45	0.11412		
574	478004.43	3775105.70	0.10938	478004.43
	3775116.96	0.09715		
575	478004.43	3775128.21	0.08162	478004.43
	3775139.46	0.06636		
576	477995.81	3775040.82	0.04650	477992.24
	3775060.69	0.05785		
577	477992.24	3775071.94	0.06576	477992.24
	3775083.20	0.07154		
578	477992.24	3775094.45	0.07367	477992.24
	3775105.70	0.07152		
579	477992.24	3775116.96	0.06574	477992.24

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            3775128.21        0.05784
580         477992.24    3775139.46        0.04938                        477983.62
            3775040.82        0.03609
581         477999.38    3775020.01        0.03414                        477980.05
            3775060.69        0.04234
582         477980.05    3775071.94        0.04665                        477980.05
            3775083.20        0.04965
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:47:46
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.05072                        477980.05
            3775105.70        0.04963
598         477980.05    3775116.96        0.04662                        477980.05
            3775128.21        0.04231
599         477980.05    3775139.46        0.03741                        478016.62
            3775151.65        0.06664
600         478027.86    3775151.65        0.08218                        478039.10
            3775151.65        0.09799
601         478050.34    3775151.65        0.11056                        478061.58
            3775151.65        0.11587
602         478072.83    3775151.65        0.11243                        478084.07
            3775151.65        0.10237
603         478095.31    3775151.65        0.08902                        478106.55
            3775151.65        0.07514
604         478008.00    3775160.27        0.04681                        478027.86
            3775163.84        0.05857
605         478039.10    3775163.84        0.06674                        478050.34
            3775163.84        0.07279
606         478061.58    3775163.84        0.07529                        478072.83
            3775163.84        0.07371
607         478084.07    3775163.84        0.06884                        478095.31
            3775163.84        0.06203
608         478008.00    3775172.46        0.03651                        477987.19
            3775156.70        0.03419
609         478027.86    3775176.03        0.04312                        478039.10
            3775176.03        0.04764
610         478050.34    3775176.03        0.05085                        478061.58
            3775176.03        0.05214
611         478072.83    3775176.03        0.05133                        478084.07
            3775176.03        0.04871
612         478095.31    3775176.03        0.04492                        478106.55
            3775176.03        0.04059
613         478016.62    3775139.46        0.09013                        478106.55
            3775139.46        0.10454
614         478106.72    3775049.44        0.11241                        478016.62
            3775049.44        0.09006
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.14502 AT	(478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.14027 AT	(478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.13826 AT	(478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.12622 AT	(478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.12214 AT	(478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.11938 AT	(478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.11879 AT	(478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.11587 AT	(478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.11412 AT	(478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.11243 AT	(478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat3 Cons HRA Mit\15935
Cat3 Cons HRA Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat3 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0007423442     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
```

```
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT3 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat3 Cons HRA Mit.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat3 Cons HRA Mit\15935 Cat3 Cons HRA Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat3 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0007423442     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

```
     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT3 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat3 Cons HRA 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:49:29

                              PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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.
      * Model Assumes Receptors on FLAT Terrain.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
        for Total of    1 Urban Area(s):
  Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 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:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         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) =   481.00 ;  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 =      3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out


**Detailed Error/Message File:   15935 Cat3 Cons HRA
Mit.err
```

```
 **File for Summary of Results:   15935 Cat3 Cons HRA Mit.sum
*** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                    ***
 10:49:29

                                PAGE   2
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                        *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                        BASE    RELEASE    INIT.
               INIT.   URBAN  EMISSION RATE   AIRCRAFT
  SOURCE        PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
  SZ     SOURCE  SCALAR VARY
    ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 VOL1             0   0.74234E-03  478061.6 3775094.4   481.0     5.00    20.92
 1.40     YES   HRDOW            NO
*** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                    ***
 10:49:29

                                PAGE   3
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                     *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                                 SOURCE IDs
 -----------                                                 ----------


  ALL        VOL1        ,
*** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                    ***
 10:49:29

                                PAGE   4
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                     *** SOURCE IDs DEFINED AS URBAN SOURCES ***

  URBAN ID   URBAN POP                                      SOURCE IDs
  --------   ---------                                      ----------


              2035210.   VOL1        ,
*** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                    ***
 10:49:29

                                PAGE   5
```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:49:29
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                    (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
431       ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6,
          3775151.6,     481.0,     481.0,       0.0);
432    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
433        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:49:29
434
                                    PAGE   7
435        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
436
437                                                 *** DISCRETE CARTESIAN RECEPTORS ***
438                                                (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
439                                                             (METERS)
440
441       ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1,
          3775151.6,     481.0,     481.0,       0.0);
442       ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5,
          3775151.6,     481.0,     481.0,       0.0);
443       ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9,
          3775163.8,     481.0,     481.0,       0.0);
444       ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3,
          3775163.8,     481.0,     481.0,       0.0);
445       ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8,
          3775163.8,     481.0,     481.0,       0.0);
446       ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3,
          3775163.8,     481.0,     481.0,       0.0);
447       ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2,
          3775156.7,     481.0,     481.0,       0.0);
448       ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1,
          3775176.0,     481.0,     481.0,       0.0);
449       ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6,
          3775176.0,     481.0,     481.0,       0.0);
450       ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1,
          3775176.0,     481.0,     481.0,       0.0);
451       ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5,
          3775176.0,     481.0,     481.0,       0.0);
452       ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5,
          3775139.5,     481.0,     481.0,       0.0);
453       ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6,
          3775049.4,     481.0,     481.0,       0.0);
454    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
455        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:49:29
456
                                    PAGE   8
457        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
458
459                                                 *** METEOROLOGICAL DAYS SELECTED FOR
                                                    PROCESSING ***
460                                                                (1=YES; 0=NO)
461
462              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
463              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
464              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
465              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
466              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
467              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
```

```
468             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
469             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
470
471                 NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                    IS INCLUDED IN THE DATA FILE.
472
473
474
475                                 *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                    CATEGORIES ***
476                                                    (METERS/SEC)
477
478                                                 1.54,   3.09,   5.14,   8.23,  10.80,
479  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
480   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:49:29
481
                                  PAGE   9
482   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
483
484                                 *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                    ***
485
486       Surface file:
          RDLD_V9_ADJU\RDLD_v9.SFC
          Met Version:  16216
487       Profile file:
          RDLD_V9_ADJU\RDLD_v9.PFL
488       Surface format:
          FREE

489       Profile format:
          FREE

490       Surface station no.:     3171                 Upper air station no.:     3190
491                       Name: UNKNOWN                                  Name:
                          UNKNOWN
492                       Year:   2012                                   Year:   2012
493
494    First 24 hours of scalar data
495    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
496   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
497    12 01 01   1 01  -10.6  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30  110.    9.1  285.4    5.5
498    12 01 01   1 02   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  130.    9.1  284.5    5.5
499    12 01 01   1 03   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  100.    9.1  285.0    5.5
500    12 01 01   1 04   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  107.    9.1  284.6    5.5
501    12 01 01   1 05  -10.7  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30   98.    9.1  284.9    5.5
502    12 01 01   1 06   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   86.    9.1  284.5    5.5
503    12 01 01   1 07   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   91.    9.1  284.0    5.5
504    12 01 01   1 08   -4.0  0.102 -9.000 -9.000 -999.   78.     22.9  0.32   3.22   0.54
       0.90  107.    9.1  285.0    5.5
505    12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33
       2.10   81.   10.1  289.1    5.5
506    12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:49:29
531
                                PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.01044                      478118.76
              3775128.23         0.01311
544           478118.78    3775116.98        0.01578                      478118.80
              3775105.73         0.01786
545           478118.82    3775094.47        0.01873                      478118.85
              3775083.22         0.01812
546           478118.87    3775071.97        0.01630                      478118.89
```

	3775060.72	0.01387		
547	478118.91	3775049.46	0.01136	478127.35
	3775148.11	0.00742		
548	478115.16	3775160.28	0.00687	478130.95
	3775128.25	0.00980		
549	478130.97	3775117.00	0.01134	478130.99
	3775105.75	0.01248		
550	478131.01	3775094.50	0.01298	478131.04
	3775083.24	0.01273		
551	478131.06	3775071.99	0.01182	478131.08
	3775060.74	0.01049		
552	478131.10	3775049.49	0.00900	478139.54
	3775148.13	0.00604		
553	478123.77	3775168.91	0.00508	478143.14
	3775128.28	0.00756		
554	478143.16	3775117.02	0.00851	478143.18
	3775105.77	0.00921		
555	478143.20	3775094.52	0.00954	478143.23
	3775083.27	0.00943		
556	478143.25	3775072.01	0.00895	478143.27
	3775060.76	0.00817		
557	478143.29	3775049.51	0.00724	478106.72
	3775037.25	0.01074		
558	478095.46	3775037.25	0.01258	478084.19
	3775037.25	0.01427		
559	478072.93	3775037.25	0.01534	478061.67
	3775037.25	0.01542		
560	478050.41	3775037.25	0.01445	478039.15
	3775037.25	0.01270		
561	478027.88	3775037.25	0.01060	478016.62
	3775037.25	0.00858		
562	478115.35	3775028.64	0.00782	478095.46
	3775025.06	0.00886		
563	478084.19	3775025.06	0.00960	478072.93
	3775025.06	0.01001		
564	478061.67	3775025.06	0.00997	478050.41
	3775025.06	0.00948		
565	478039.15	3775025.06	0.00861	478027.88
	3775025.06	0.00753		
566	478016.62	3775025.06	0.00640	478115.35
	3775016.45	0.00600		
567	478136.17	3775032.24	0.00634	478095.46
	3775012.87	0.00641		
568	478084.19	3775012.87	0.00675	478072.93
	3775012.87	0.00691		
569	478061.67	3775012.87	0.00686	478050.41
	3775012.87	0.00658		
570	478039.15	3775012.87	0.00612	478027.88
	3775012.87	0.00552		
571	478016.62	3775012.87	0.00486	478004.43
	3775049.44	0.00856		
572	478004.43	3775060.69	0.01054	478004.43
	3775071.94	0.01255		
573	478004.43	3775083.20	0.01413	478004.43
	3775094.45	0.01474		
574	478004.43	3775105.70	0.01413	478004.43
	3775116.96	0.01255		
575	478004.43	3775128.21	0.01054	478004.43
	3775139.46	0.00857		
576	477995.81	3775040.82	0.00601	477992.24
	3775060.69	0.00747		
577	477992.24	3775071.94	0.00849	477992.24
	3775083.20	0.00924		
578	477992.24	3775094.45	0.00952	477992.24
	3775105.70	0.00924		
579	477992.24	3775116.96	0.00849	477992.24

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            3775128.21        0.00747
580         477992.24    3775139.46        0.00638                        477983.62
            3775040.82        0.00466
581         477999.38    3775020.01        0.00441                        477980.05
            3775060.69        0.00547
582         477980.05    3775071.94        0.00603                        477980.05
            3775083.20        0.00641
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:49:29
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.00655                        477980.05
            3775105.70        0.00641
598         477980.05    3775116.96        0.00602                        477980.05
            3775128.21        0.00547
599         477980.05    3775139.46        0.00483                        478016.62
            3775151.65        0.00861
600         478027.86    3775151.65        0.01061                        478039.10
            3775151.65        0.01266
601         478050.34    3775151.65        0.01428                        478061.58
            3775151.65        0.01497
602         478072.83    3775151.65        0.01452                        478084.07
            3775151.65        0.01322
603         478095.31    3775151.65        0.01150                        478106.55
            3775151.65        0.00971
604         478008.00    3775160.27        0.00605                        478027.86
            3775163.84        0.00757
605         478039.10    3775163.84        0.00862                        478050.34
            3775163.84        0.00940
606         478061.58    3775163.84        0.00972                        478072.83
            3775163.84        0.00952
607         478084.07    3775163.84        0.00889                        478095.31
            3775163.84        0.00801
608         478008.00    3775172.46        0.00472                        477987.19
            3775156.70        0.00442
609         478027.86    3775176.03        0.00557                        478039.10
            3775176.03        0.00615
610         478050.34    3775176.03        0.00657                        478061.58
            3775176.03        0.00674
611         478072.83    3775176.03        0.00663                        478084.07
            3775176.03        0.00629
612         478095.31    3775176.03        0.00580                        478106.55
            3775176.03        0.00524
613         478016.62    3775139.46        0.01164                        478106.55
            3775139.46        0.01350
614         478106.72    3775049.44        0.01452                        478016.62
            3775049.44        0.01163
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.01873	AT (478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.01812	AT (478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.01786	AT (478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.01630	AT (478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.01578	AT (478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.01542	AT (478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.01534	AT (478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.01497	AT (478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.01474	AT (478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.01452	AT (478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat4 Cons HRA\15935 Cat4
Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat4 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.007370876     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
```

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     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT4 CONS HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat4 Cons HRA.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat4 Cons HRA\15935 Cat4 Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat4 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.007370876     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

```
     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT4 CONS HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat4 Cons 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:51:45

                              PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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.
      * Model Assumes Receptors on FLAT Terrain.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
        for Total of    1 Urban Area(s):
  Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 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:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         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) =   481.00 ;  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 =      3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out


**Detailed Error/Message File:   15935 Cat4 Cons
HRA.err
```

```
 **File for Summary of Results:   15935 Cat4 Cons HRA.sum
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                                 ***
 10:51:45

                                PAGE   2
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                        BASE    RELEASE    INIT.
               INIT.   URBAN  EMISSION RATE   AIRCRAFT
  SOURCE        PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
  SZ     SOURCE  SCALAR VARY
    ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)              BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 VOL1             0   0.73709E-02  478061.6 3775094.4   481.0     5.00    20.92
 1.40     YES   HRDOW            NO
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                                 ***
 10:51:45

                                PAGE   3
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                              SOURCE IDs
 -----------                                              ----------


  ALL        VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                                 ***
 10:51:45

                                PAGE   4
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                               *** SOURCE IDs DEFINED AS URBAN SOURCES ***

  URBAN ID   URBAN POP                                  SOURCE IDs
  --------   ---------                                  ----------


              2035210.   VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                                 ***
 10:51:45

                                PAGE   5
```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:51:45
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                  (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
431       ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6,
          3775151.6,     481.0,     481.0,       0.0);
432    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
433        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:51:45
434
                                    PAGE   7
435        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
436
437                                              *** DISCRETE CARTESIAN RECEPTORS ***
438                                             (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
439                                                          (METERS)
440
441       ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1,
          3775151.6,     481.0,     481.0,       0.0);
442       ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5,
          3775151.6,     481.0,     481.0,       0.0);
443       ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9,
          3775163.8,     481.0,     481.0,       0.0);
444       ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3,
          3775163.8,     481.0,     481.0,       0.0);
445       ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8,
          3775163.8,     481.0,     481.0,       0.0);
446       ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3,
          3775163.8,     481.0,     481.0,       0.0);
447       ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2,
          3775156.7,     481.0,     481.0,       0.0);
448       ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1,
          3775176.0,     481.0,     481.0,       0.0);
449       ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6,
          3775176.0,     481.0,     481.0,       0.0);
450       ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1,
          3775176.0,     481.0,     481.0,       0.0);
451       ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5,
          3775176.0,     481.0,     481.0,       0.0);
452       ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5,
          3775139.5,     481.0,     481.0,       0.0);
453       ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6,
          3775049.4,     481.0,     481.0,       0.0);
454    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
455        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:51:45
456
                                    PAGE   8
457        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
458
459                                              *** METEOROLOGICAL DAYS SELECTED FOR
                                                 PROCESSING ***
460                                                          (1=YES; 0=NO)
461
462             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
463             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
464             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
465             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
466             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
467             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
468             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
469             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
470
471                 NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                    IS INCLUDED IN THE DATA FILE.
472
473
474
475                                 *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                    CATEGORIES ***
476                                                      (METERS/SEC)
477
478                                                  1.54,   3.09,   5.14,   8.23,  10.80,
479  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
480   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:51:45
481
                                  PAGE   9
482   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
483
484                                 *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                    ***
485
486       Surface file:
          RDLD_V9_ADJU\RDLD_v9.SFC
          Met Version:  16216
487       Profile file:
          RDLD_V9_ADJU\RDLD_v9.PFL
488       Surface format:
          FREE

489       Profile format:
          FREE

490       Surface station no.:     3171                  Upper air station no.:     3190
491                       Name: UNKNOWN                                  Name:
                          UNKNOWN
492                       Year:   2012                                   Year:   2012
493
494    First 24 hours of scalar data
495    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
496   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
497    12 01 01   1 01  -10.6  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30  110.    9.1  285.4    5.5
498    12 01 01   1 02   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  130.    9.1  284.5    5.5
499    12 01 01   1 03   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  100.    9.1  285.0    5.5
500    12 01 01   1 04   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  107.    9.1  284.6    5.5
501    12 01 01   1 05  -10.7  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30   98.    9.1  284.9    5.5
502    12 01 01   1 06   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   86.    9.1  284.5    5.5
503    12 01 01   1 07   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   91.    9.1  284.0    5.5
504    12 01 01   1 08   -4.0  0.102 -9.000 -9.000 -999.   78.     22.9  0.32   3.22   0.54
       0.90  107.    9.1  285.0    5.5
505    12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33
       2.10   81.   10.1  289.1    5.5
506    12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
 0.40   72.    9.1  295.1    5.5
 12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
 3.68   78.   10.1  297.9    5.5
 12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
 1.80  333.    9.1  299.4    5.5
 12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
 1.80   72.    9.1  300.4    5.5
 12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
 1.80  277.    9.1  301.0    5.5
 12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
 2.70  243.    9.1  301.0    5.5
 12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
 1.30  274.    9.1  300.1    5.5
 12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
 0.90  252.    9.1  298.2    5.5
 12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
 0.90  116.    9.1  296.4    5.5
 12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
 2.27   79.   10.1  292.2    5.5
 12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
 0.90   95.    9.1  290.2    5.5
 12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
 0.90   99.    9.1  287.8    5.5
 12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
 0.90  110.    9.1  287.6    5.5
 12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
 1.30   89.    9.1  287.2    5.5
 12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90  105.    9.1  285.9    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
 12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:51:45

                              PAGE  10
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

                              *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                              FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     VOL1        ,

                                       *** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

       X-COORD (M)   Y-COORD (M)        CONC                      X-COORD (M)   Y-COORD
       (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
         478118.74    3775139.48        0.10365                     478118.76
         3775128.23         0.13014
         478118.78    3775116.98        0.15665                     478118.80
         3775105.73         0.17733
         478118.82    3775094.47        0.18600                     478118.85
         3775083.22         0.17990
         478118.87    3775071.97        0.16188                     478118.89
```

	3775060.72	0.13773		
547	478118.91	3775049.46	0.11279	478127.35
	3775148.11	0.07366		
548	478115.16	3775160.28	0.06826	478130.95
	3775128.25	0.09735		
549	478130.97	3775117.00	0.11255	478130.99
	3775105.75	0.12390		
550	478131.01	3775094.50	0.12886	478131.04
	3775083.24	0.12635		
551	478131.06	3775071.99	0.11737	478131.08
	3775060.74	0.10418		
552	478131.10	3775049.49	0.08932	478139.54
	3775148.13	0.05995		
553	478123.77	3775168.91	0.05044	478143.14
	3775128.28	0.07509		
554	478143.16	3775117.02	0.08454	478143.18
	3775105.77	0.09147		
555	478143.20	3775094.52	0.09469	478143.23
	3775083.27	0.09368		
556	478143.25	3775072.01	0.08883	478143.27
	3775060.76	0.08114		
557	478143.29	3775049.51	0.07186	478106.72
	3775037.25	0.10664		
558	478095.46	3775037.25	0.12488	478084.19
	3775037.25	0.14172		
559	478072.93	3775037.25	0.15235	478061.67
	3775037.25	0.15311		
560	478050.41	3775037.25	0.14345	478039.15
	3775037.25	0.12606		
561	478027.88	3775037.25	0.10527	478016.62
	3775037.25	0.08521		
562	478115.35	3775028.64	0.07762	478095.46
	3775025.06	0.08798		
563	478084.19	3775025.06	0.09536	478072.93
	3775025.06	0.09939		
564	478061.67	3775025.06	0.09900	478050.41
	3775025.06	0.09408		
565	478039.15	3775025.06	0.08550	478027.88
	3775025.06	0.07475		
566	478016.62	3775025.06	0.06353	478115.35
	3775016.45	0.05959		
567	478136.17	3775032.24	0.06296	478095.46
	3775012.87	0.06367		
568	478084.19	3775012.87	0.06703	478072.93
	3775012.87	0.06862		
569	478061.67	3775012.87	0.06808	478050.41
	3775012.87	0.06537		
570	478039.15	3775012.87	0.06074	478027.88
	3775012.87	0.05477		
571	478016.62	3775012.87	0.04821	478004.43
	3775049.44	0.08503		
572	478004.43	3775060.69	0.10468	478004.43
	3775071.94	0.12463		
573	478004.43	3775083.20	0.14031	478004.43
	3775094.45	0.14636		
574	478004.43	3775105.70	0.14029	478004.43
	3775116.96	0.12460		
575	478004.43	3775128.21	0.10468	478004.43
	3775139.46	0.08511		
576	477995.81	3775040.82	0.05963	477992.24
	3775060.69	0.07420		
577	477992.24	3775071.94	0.08434	477992.24
	3775083.20	0.09175		
578	477992.24	3775094.45	0.09448	477992.24
	3775105.70	0.09172		
579	477992.24	3775116.96	0.08431	477992.24

```
            3775128.21        0.07418
580         477992.24    3775139.46        0.06333                        477983.62
            3775040.82        0.04628
581         477999.38    3775020.01        0.04378                        477980.05
            3775060.69        0.05430
582         477980.05    3775071.94        0.05983                        477980.05
            3775083.20        0.06368
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:51:45
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.06505                        477980.05
            3775105.70        0.06365
598         477980.05    3775116.96        0.05979                        477980.05
            3775128.21        0.05427
599         477980.05    3775139.46        0.04797                        478016.62
            3775151.65        0.08546
600         478027.86    3775151.65        0.10540                        478039.10
            3775151.65        0.12568
601         478050.34    3775151.65        0.14179                        478061.58
            3775151.65        0.14861
602         478072.83    3775151.65        0.14419                        478084.07
            3775151.65        0.13130
603         478095.31    3775151.65        0.11417                        478106.55
            3775151.65        0.09636
604         478008.00    3775160.27        0.06004                        478027.86
            3775163.84        0.07512
605         478039.10    3775163.84        0.08559                        478050.34
            3775163.84        0.09336
606         478061.58    3775163.84        0.09656                        478072.83
            3775163.84        0.09454
607         478084.07    3775163.84        0.08829                        478095.31
            3775163.84        0.07956
608         478008.00    3775172.46        0.04683                        477987.19
            3775156.70        0.04385
609         478027.86    3775176.03        0.05530                        478039.10
            3775176.03        0.06111
610         478050.34    3775176.03        0.06522                        478061.58
            3775176.03        0.06688
611         478072.83    3775176.03        0.06583                        478084.07
            3775176.03        0.06247
612         478095.31    3775176.03        0.05761                        478106.55
            3775176.03        0.05205
613         478016.62    3775139.46        0.11560                        478106.55
            3775139.46        0.13408
614         478106.72    3775049.44        0.14417                        478016.62
            3775049.44        0.11551
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.18600	AT (478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.17990	AT (478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.17733	AT (478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.16188	AT (478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.15665	AT (478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.15311	AT (478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.15235	AT (478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.14861	AT (478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.14636	AT (478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.14419	AT (478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat4 Cons HRA Mit\15935
Cat4 Cons HRA Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat4 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0011064189     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
```

```
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT4 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat4 Cons HRA Mit.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat4 Cons HRA Mit\15935 Cat4 Cons HRA Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat4 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0011064189     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

```
     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT4 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat4 Cons HRA 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:54:13

                              PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

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

 ** Model Options Selected:
```

```
257         * Model Allows User-Specified Options
258         * Model Is Setup For Calculation of Average CONCentration Values.
259         * NO GAS DEPOSITION Data Provided.
260         * NO PARTICLE DEPOSITION Data Provided.
261         * Model Uses NO DRY DEPLETION. DDPLETE  =  F
262         * Model Uses NO WET DEPLETION. WETDPLT  =  F
263         * Stack-tip Downwash.
264         * Model Assumes Receptors on FLAT Terrain.
265         * Use Calms Processing Routine.
266         * Use Missing Data Processing Routine.
267         * No Exponential Decay.
268         * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
269           for Total of    1 Urban Area(s):
270       Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
271         * Urban Roughness Length of 1.0 Meter Used.
272         * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
273         * TEMP_Sub - Meteorological data includes TEMP substitutions
274         * Model Assumes No FLAGPOLE Receptor Heights.
275         * The User Specified a Pollutant Type of: DPM
276
277    **Model Calculates PERIOD Averages Only
278
279    **This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)
280
281                   with:      0 POINT(s), including
282                              0 POINTCAP(s) and      0 POINTHOR(s)
283                    and:      1 VOLUME source(s)
284                    and:      0 AREA type source(s)
285                    and:      0 LINE source(s)
286                    and:      0 RLINE/RLINEXT source(s)
287                    and:      0 OPENPIT source(s)
288                    and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
289                    and:      0 SWPOINT source(s)
290
291
292    **Model Set To Continue RUNning After the Setup Testing.
293
294    **The AERMET Input Meteorological Data Version Date:  16216
295
296    **Output Options Selected:
297             Model Outputs Tables of PERIOD Averages by Receptor
298             Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
299             Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
300
301    **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
302                                                                    m for Missing Hours
303                                                                    b for Both Calm and
                                                                       Missing Hours
304
305    **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   481.00 ;  Decay Coef.
       =    0.000     ;  Rot. Angle =     0.0
306                     Emission Units = GRAMS/SEC                                ;  Emission
                        Rate Unit Factor =   0.10000E+07
307                     Output Units   = MICROGRAMS/M**3
308
309    **Approximate Storage Requirements of Model =      3.5 MB of RAM.
310
311    **Input Runstream File:
       aermod.inp

312    **Output Print File:
       aermod.out

313
314    **Detailed Error/Message File:   15935 Cat4 Cons HRA
       Mit.err
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE INIT. PART. (GRAMS/SEC)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	X (METERS)	Y (METERS)	AIRCRAFT ELEV. (METERS)	BASE HEIGHT (METERS)	RELEASE HEIGHT (METERS)	INIT. SY
VOL1	0	0.11064E-02	HRDOW	478061.6	3775094.4	481.0	5.00	20.92	1.40

YES NO

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	VOL1 ,

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	2035210.	VOL1 ,

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:54:13
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                    (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
431       ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6,
          3775151.6,     481.0,     481.0,       0.0);
432    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
433        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:54:13
434
                                    PAGE   7
435        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
436
437                                                 *** DISCRETE CARTESIAN RECEPTORS ***
438                                                (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
439                                                             (METERS)
440
441       ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1,
          3775151.6,     481.0,     481.0,       0.0);
442       ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5,
          3775151.6,     481.0,     481.0,       0.0);
443       ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9,
          3775163.8,     481.0,     481.0,       0.0);
444       ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3,
          3775163.8,     481.0,     481.0,       0.0);
445       ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8,
          3775163.8,     481.0,     481.0,       0.0);
446       ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3,
          3775163.8,     481.0,     481.0,       0.0);
447       ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2,
          3775156.7,     481.0,     481.0,       0.0);
448       ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1,
          3775176.0,     481.0,     481.0,       0.0);
449       ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6,
          3775176.0,     481.0,     481.0,       0.0);
450       ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1,
          3775176.0,     481.0,     481.0,       0.0);
451       ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5,
          3775176.0,     481.0,     481.0,       0.0);
452       ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5,
          3775139.5,     481.0,     481.0,       0.0);
453       ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6,
          3775049.4,     481.0,     481.0,       0.0);
454    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
455        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:54:13
456
                                    PAGE   8
457        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
458
459                                                 *** METEOROLOGICAL DAYS SELECTED FOR
                                                    PROCESSING ***
460                                                                (1=YES; 0=NO)
461
462             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
463             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
464             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
465             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
466             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
467             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
               1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
               1 1 1 1 1   1 1 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,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                          ***
 10:54:13

                             PAGE   9
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

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

   Surface file:
   RDLD_V9_ADJU\RDLD_v9.SFC
   Met Version:  16216
   Profile file:
   RDLD_V9_ADJU\RDLD_v9.PFL
   Surface format:
   FREE

   Profile format:
   FREE

   Surface station no.:     3171                  Upper air station no.:     3190
                  Name: UNKNOWN                                    Name:
                  UNKNOWN
                  Year:   2012                                     Year:   2012

 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
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
 12 01 01   1 01  -10.6  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
 1.30  110.    9.1  285.4    5.5
 12 01 01   1 02   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90  130.    9.1  284.5    5.5
 12 01 01   1 03   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90  100.    9.1  285.0    5.5
 12 01 01   1 04   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90  107.    9.1  284.6    5.5
 12 01 01   1 05  -10.7  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00
 1.30   98.    9.1  284.9    5.5
 12 01 01   1 06   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90   86.    9.1  284.5    5.5
 12 01 01   1 07   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
 0.90   91.    9.1  284.0    5.5
 12 01 01   1 08   -4.0  0.102 -9.000 -9.000 -999.   78.     22.9  0.32   3.22   0.54
 0.90  107.    9.1  285.0    5.5
 12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33
 2.10   81.   10.1  289.1    5.5
 12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:54:13
531
                                  PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.01556                      478118.76
              3775128.23         0.01953
544           478118.78    3775116.98        0.02351                      478118.80
              3775105.73         0.02662
545           478118.82    3775094.47        0.02792                      478118.85
              3775083.22         0.02700
546           478118.87    3775071.97        0.02430                      478118.89
```

	3775060.72	0.02067		
547	478118.91	3775049.46	0.01693	478127.35
	3775148.11	0.01106		
548	478115.16	3775160.28	0.01025	478130.95
	3775128.25	0.01461		
549	478130.97	3775117.00	0.01689	478130.99
	3775105.75	0.01860		
550	478131.01	3775094.50	0.01934	478131.04
	3775083.24	0.01897		
551	478131.06	3775071.99	0.01762	478131.08
	3775060.74	0.01564		
552	478131.10	3775049.49	0.01341	478139.54
	3775148.13	0.00900		
553	478123.77	3775168.91	0.00757	478143.14
	3775128.28	0.01127		
554	478143.16	3775117.02	0.01269	478143.18
	3775105.77	0.01373		
555	478143.20	3775094.52	0.01421	478143.23
	3775083.27	0.01406		
556	478143.25	3775072.01	0.01333	478143.27
	3775060.76	0.01218		
557	478143.29	3775049.51	0.01079	478106.72
	3775037.25	0.01601		
558	478095.46	3775037.25	0.01875	478084.19
	3775037.25	0.02127		
559	478072.93	3775037.25	0.02287	478061.67
	3775037.25	0.02298		
560	478050.41	3775037.25	0.02153	478039.15
	3775037.25	0.01892		
561	478027.88	3775037.25	0.01580	478016.62
	3775037.25	0.01279		
562	478115.35	3775028.64	0.01165	478095.46
	3775025.06	0.01321		
563	478084.19	3775025.06	0.01431	478072.93
	3775025.06	0.01492		
564	478061.67	3775025.06	0.01486	478050.41
	3775025.06	0.01412		
565	478039.15	3775025.06	0.01283	478027.88
	3775025.06	0.01122		
566	478016.62	3775025.06	0.00954	478115.35
	3775016.45	0.00894		
567	478136.17	3775032.24	0.00945	478095.46
	3775012.87	0.00956		
568	478084.19	3775012.87	0.01006	478072.93
	3775012.87	0.01030		
569	478061.67	3775012.87	0.01022	478050.41
	3775012.87	0.00981		
570	478039.15	3775012.87	0.00912	478027.88
	3775012.87	0.00822		
571	478016.62	3775012.87	0.00724	478004.43
	3775049.44	0.01276		
572	478004.43	3775060.69	0.01571	478004.43
	3775071.94	0.01871		
573	478004.43	3775083.20	0.02106	478004.43
	3775094.45	0.02197		
574	478004.43	3775105.70	0.02106	478004.43
	3775116.96	0.01870		
575	478004.43	3775128.21	0.01571	478004.43
	3775139.46	0.01278		
576	477995.81	3775040.82	0.00895	477992.24
	3775060.69	0.01114		
577	477992.24	3775071.94	0.01266	477992.24
	3775083.20	0.01377		
578	477992.24	3775094.45	0.01418	477992.24
	3775105.70	0.01377		
579	477992.24	3775116.96	0.01266	477992.24

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            3775128.21        0.01114
580         477992.24    3775139.46        0.00951                        477983.62
            3775040.82        0.00695
581         477999.38    3775020.01        0.00657                        477980.05
            3775060.69        0.00815
582         477980.05    3775071.94        0.00898                        477980.05
            3775083.20        0.00956
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:54:13
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597           477980.05    3775094.45        0.00977                        477980.05
              3775105.70        0.00955
598           477980.05    3775116.96        0.00898                        477980.05
              3775128.21        0.00815
599           477980.05    3775139.46        0.00720                        478016.62
              3775151.65        0.01283
600           478027.86    3775151.65        0.01582                        478039.10
              3775151.65        0.01887
601           478050.34    3775151.65        0.02128                        478061.58
              3775151.65        0.02231
602           478072.83    3775151.65        0.02164                        478084.07
              3775151.65        0.01971
603           478095.31    3775151.65        0.01714                        478106.55
              3775151.65        0.01446
604           478008.00    3775160.27        0.00901                        478027.86
              3775163.84        0.01128
605           478039.10    3775163.84        0.01285                        478050.34
              3775163.84        0.01401
606           478061.58    3775163.84        0.01449                        478072.83
              3775163.84        0.01419
607           478084.07    3775163.84        0.01325                        478095.31
              3775163.84        0.01194
608           478008.00    3775172.46        0.00703                        477987.19
              3775156.70        0.00658
609           478027.86    3775176.03        0.00830                        478039.10
              3775176.03        0.00917
610           478050.34    3775176.03        0.00979                        478061.58
              3775176.03        0.01004
611           478072.83    3775176.03        0.00988                        478084.07
              3775176.03        0.00938
612           478095.31    3775176.03        0.00865                        478106.55
              3775176.03        0.00781
613           478016.62    3775139.46        0.01735                        478106.55
              3775139.46        0.02013
614           478106.72    3775049.44        0.02164                        478016.62
              3775049.44        0.01734
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02792	AT (478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.02700	AT (478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.02662	AT (478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.02430	AT (478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.02351	AT (478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.02298	AT (478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.02287	AT (478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.02231	AT (478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.02197	AT (478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.02164	AT (478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat5 Cons HRA\15935 Cat5
Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat5 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0040676482     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
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     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT5 CONS HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat5 Cons HRA.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat5 Cons HRA\15935 Cat5 Cons HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat5 Cons HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.0040676482     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

```
     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT5 CONS HRA.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat5 Cons 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:57:16

                              PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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.
      * Model Assumes Receptors on FLAT Terrain.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
        for Total of    1 Urban Area(s):
  Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 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:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         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) =   481.00 ;  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 =      3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out


**Detailed Error/Message File:   15935 Cat5 Cons
HRA.err
```

```
 **File for Summary of Results:   15935 Cat5 Cons HRA.sum
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
 10:57:16

                                PAGE   2
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                        *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                        BASE    RELEASE    INIT.
               INIT.   URBAN  EMISSION RATE   AIRCRAFT
  SOURCE        PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
  SZ     SOURCE  SCALAR VARY
    ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 VOL1             0   0.40676E-02  478061.6 3775094.4   481.0     5.00    20.92
 1.40     YES   HRDOW            NO
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
 10:57:16

                                PAGE   3
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                    *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                                SOURCE IDs
 -----------                                                ----------


  ALL        VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
 10:57:16

                                PAGE   4
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                   *** SOURCE IDs DEFINED AS URBAN SOURCES ***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------


              2035210.   VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***                                                                                        ***
 10:57:16

                                PAGE   5
```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:57:16
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                  (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
431       ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6,
          3775151.6,     481.0,     481.0,       0.0);
432    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
433        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:57:16
434
                                    PAGE   7
435        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
436
437                                              *** DISCRETE CARTESIAN RECEPTORS ***
438                                             (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
439                                                          (METERS)
440
441       ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1,
          3775151.6,     481.0,     481.0,       0.0);
442       ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5,
          3775151.6,     481.0,     481.0,       0.0);
443       ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9,
          3775163.8,     481.0,     481.0,       0.0);
444       ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3,
          3775163.8,     481.0,     481.0,       0.0);
445       ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8,
          3775163.8,     481.0,     481.0,       0.0);
446       ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3,
          3775163.8,     481.0,     481.0,       0.0);
447       ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2,
          3775156.7,     481.0,     481.0,       0.0);
448       ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1,
          3775176.0,     481.0,     481.0,       0.0);
449       ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6,
          3775176.0,     481.0,     481.0,       0.0);
450       ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1,
          3775176.0,     481.0,     481.0,       0.0);
451       ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5,
          3775176.0,     481.0,     481.0,       0.0);
452       ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5,
          3775139.5,     481.0,     481.0,       0.0);
453       ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6,
          3775049.4,     481.0,     481.0,       0.0);
454    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
455        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:57:16
456
                                    PAGE   8
457        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
458
459                                              *** METEOROLOGICAL DAYS SELECTED FOR
                                                 PROCESSING ***
460                                                          (1=YES; 0=NO)
461
462             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
463             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
464             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
465             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
466             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
467             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
468             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
469             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
470
471                 NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                    IS INCLUDED IN THE DATA FILE.
472
473
474
475                                 *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                    CATEGORIES ***
476                                                      (METERS/SEC)
477
478                                                  1.54,   3.09,   5.14,   8.23,  10.80,
479  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
480   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:57:16
481
                                  PAGE   9
482   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
483
484                                 *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                    ***
485
486       Surface file:
          RDLD_V9_ADJU\RDLD_v9.SFC
          Met Version:  16216
487       Profile file:
          RDLD_V9_ADJU\RDLD_v9.PFL
488       Surface format:
          FREE

489       Profile format:
          FREE

490       Surface station no.:     3171                  Upper air station no.:     3190
491                       Name: UNKNOWN                                  Name:
                          UNKNOWN
492                       Year:   2012                                   Year:   2012
493
494    First 24 hours of scalar data
495    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
496   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
497    12 01 01   1 01  -10.6  0.149 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30  110.    9.1  285.4    5.5
498    12 01 01   1 02   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  130.    9.1  284.5    5.5
499    12 01 01   1 03   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  100.    9.1  285.0    5.5
500    12 01 01   1 04   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90  107.    9.1  284.6    5.5
501    12 01 01   1 05  -10.7  0.149 -9.000 -999.  138.     26.7  0.32   3.22   1.00
       1.30   98.    9.1  284.9    5.5
502    12 01 01   1 06   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   86.    9.1  284.5    5.5
503    12 01 01   1 07   -5.0  0.102 -9.000 -999.   78.     17.9  0.32   3.22   1.00
       0.90   91.    9.1  284.0    5.5
504    12 01 01   1 08   -4.0  0.102 -9.000 -999.   78.     22.9  0.32   3.22   0.54
       0.90  107.    9.1  285.0    5.5
505    12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33
       2.10   81.   10.1  289.1    5.5
506    12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:57:16
531
                                PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.05720                      478118.76
              3775128.23         0.07182
544           478118.78    3775116.98        0.08645                      478118.80
              3775105.73         0.09786
545           478118.82    3775094.47        0.10264                      478118.85
              3775083.22         0.09928
546           478118.87    3775071.97        0.08933                      478118.89
```

	3775060.72	0.07601		
547	478118.91	3775049.46	0.06224	478127.35
	3775148.11	0.04065		
548	478115.16	3775160.28	0.03767	478130.95
	3775128.25	0.05372		
549	478130.97	3775117.00	0.06211	478130.99
	3775105.75	0.06837		
550	478131.01	3775094.50	0.07111	478131.04
	3775083.24	0.06973		
551	478131.06	3775071.99	0.06477	478131.08
	3775060.74	0.05749		
552	478131.10	3775049.49	0.04929	478139.54
	3775148.13	0.03309		
553	478123.77	3775168.91	0.02784	478143.14
	3775128.28	0.04144		
554	478143.16	3775117.02	0.04665	478143.18
	3775105.77	0.05048		
555	478143.20	3775094.52	0.05225	478143.23
	3775083.27	0.05170		
556	478143.25	3775072.01	0.04902	478143.27
	3775060.76	0.04478		
557	478143.29	3775049.51	0.03966	478106.72
	3775037.25	0.05885		
558	478095.46	3775037.25	0.06891	478084.19
	3775037.25	0.07821		
559	478072.93	3775037.25	0.08407	478061.67
	3775037.25	0.08449		
560	478050.41	3775037.25	0.07916	478039.15
	3775037.25	0.06957		
561	478027.88	3775037.25	0.05810	478016.62
	3775037.25	0.04702		
562	478115.35	3775028.64	0.04283	478095.46
	3775025.06	0.04855		
563	478084.19	3775025.06	0.05262	478072.93
	3775025.06	0.05485		
564	478061.67	3775025.06	0.05463	478050.41
	3775025.06	0.05192		
565	478039.15	3775025.06	0.04718	478027.88
	3775025.06	0.04125		
566	478016.62	3775025.06	0.03506	478115.35
	3775016.45	0.03288		
567	478136.17	3775032.24	0.03475	478095.46
	3775012.87	0.03514		
568	478084.19	3775012.87	0.03699	478072.93
	3775012.87	0.03787		
569	478061.67	3775012.87	0.03757	478050.41
	3775012.87	0.03607		
570	478039.15	3775012.87	0.03352	478027.88
	3775012.87	0.03023		
571	478016.62	3775012.87	0.02660	478004.43
	3775049.44	0.04692		
572	478004.43	3775060.69	0.05777	478004.43
	3775071.94	0.06878		
573	478004.43	3775083.20	0.07743	478004.43
	3775094.45	0.08077		
574	478004.43	3775105.70	0.07742	478004.43
	3775116.96	0.06876		
575	478004.43	3775128.21	0.05777	478004.43
	3775139.46	0.04697		
576	477995.81	3775040.82	0.03291	477992.24
	3775060.69	0.04095		
577	477992.24	3775071.94	0.04655	477992.24
	3775083.20	0.05063		
578	477992.24	3775094.45	0.05214	477992.24
	3775105.70	0.05062		
579	477992.24	3775116.96	0.04653	477992.24

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            3775128.21        0.04094
580         477992.24    3775139.46        0.03495                        477983.62
            3775040.82        0.02554
581         477999.38    3775020.01        0.02416                        477980.05
            3775060.69        0.02996
582         477980.05    3775071.94        0.03302                        477980.05
            3775083.20        0.03514
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:57:16
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.03590                        477980.05
            3775105.70        0.03513
598         477980.05    3775116.96        0.03300                        477980.05
            3775128.21        0.02995
599         477980.05    3775139.46        0.02647                        478016.62
            3775151.65        0.04716
600         478027.86    3775151.65        0.05816                        478039.10
            3775151.65        0.06936
601         478050.34    3775151.65        0.07825                        478061.58
            3775151.65        0.08201
602         478072.83    3775151.65        0.07957                        478084.07
            3775151.65        0.07246
603         478095.31    3775151.65        0.06300                        478106.55
            3775151.65        0.05318
604         478008.00    3775160.27        0.03313                        478027.86
            3775163.84        0.04146
605         478039.10    3775163.84        0.04724                        478050.34
            3775163.84        0.05152
606         478061.58    3775163.84        0.05329                        478072.83
            3775163.84        0.05217
607         478084.07    3775163.84        0.04872                        478095.31
            3775163.84        0.04391
608         478008.00    3775172.46        0.02584                        477987.19
            3775156.70        0.02420
609         478027.86    3775176.03        0.03052                        478039.10
            3775176.03        0.03372
610         478050.34    3775176.03        0.03599                        478061.58
            3775176.03        0.03691
611         478072.83    3775176.03        0.03633                        478084.07
            3775176.03        0.03447
612         478095.31    3775176.03        0.03179                        478106.55
            3775176.03        0.02873
613         478016.62    3775139.46        0.06379                        478106.55
            3775139.46        0.07399
614         478106.72    3775049.44        0.07956                        478016.62
            3775049.44        0.06374
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
```

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

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

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.10264	(478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.09928	(478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.09786	(478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.08933	(478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.08645	(478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.08449	(478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.08407	(478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.08201	(478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.08077	(478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.07957	(478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat5 Cons HRA Mit\15935
Cat5 Cons HRA Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat5 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.001525368     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
   DISCCART    478050.41   3775012.87
```

```
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
     DISCCART    478016.62   3775049.44
```

```
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT5 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat5 Cons HRA Mit.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 5/31/2024
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat5 Cons HRA Mit\15935 Cat5 Cons HRA Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\
   MODELOPT CONC FLAT
   AVERTIME PERIOD
   URBANOPT 2035210 San_Bernardino_County
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "15935 Cat5 Cons HRA Mit.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     478061.650  3775094.410          0.0
** Source Parameters **
   SRCPARAM VOL1         0.001525368     5.000    20.922     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
```

```
**
RE STARTING
** BEGIN OF FENCELINE GRID RECEPTORS
** Plant Boundary Name PLBN1
** Grid Spacing = 12.19
** No. of Tiers = 3
** Tier 1: Segment Distance = 12.19
** Tier 1: Tier Spacing = 12.19
** Tier 2: Segment Distance = 12.19
** Tier 2: Tier Spacing = 12.19
** Tier 3: Segment Distance = 12.19
** Tier 3: Tier Spacing = 12.19
** ----------
   DISCCART    478118.74   3775139.48
   DISCCART    478118.76   3775128.23
   DISCCART    478118.78   3775116.98
   DISCCART    478118.80   3775105.73
   DISCCART    478118.82   3775094.47
   DISCCART    478118.85   3775083.22
   DISCCART    478118.87   3775071.97
   DISCCART    478118.89   3775060.72
   DISCCART    478118.91   3775049.46
   DISCCART    478127.35   3775148.11
   DISCCART    478115.16   3775160.28
   DISCCART    478130.95   3775128.25
   DISCCART    478130.97   3775117.00
   DISCCART    478130.99   3775105.75
   DISCCART    478131.01   3775094.50
   DISCCART    478131.04   3775083.24
   DISCCART    478131.06   3775071.99
   DISCCART    478131.08   3775060.74
   DISCCART    478131.10   3775049.49
   DISCCART    478139.54   3775148.13
   DISCCART    478123.77   3775168.91
   DISCCART    478143.14   3775128.28
   DISCCART    478143.16   3775117.02
   DISCCART    478143.18   3775105.77
   DISCCART    478143.20   3775094.52
   DISCCART    478143.23   3775083.27
   DISCCART    478143.25   3775072.01
   DISCCART    478143.27   3775060.76
   DISCCART    478143.29   3775049.51
   DISCCART    478106.72   3775037.25
   DISCCART    478095.46   3775037.25
   DISCCART    478084.19   3775037.25
   DISCCART    478072.93   3775037.25
   DISCCART    478061.67   3775037.25
   DISCCART    478050.41   3775037.25
   DISCCART    478039.15   3775037.25
   DISCCART    478027.88   3775037.25
   DISCCART    478016.62   3775037.25
   DISCCART    478115.35   3775028.64
   DISCCART    478095.46   3775025.06
   DISCCART    478084.19   3775025.06
   DISCCART    478072.93   3775025.06
   DISCCART    478061.67   3775025.06
   DISCCART    478050.41   3775025.06
   DISCCART    478039.15   3775025.06
   DISCCART    478027.88   3775025.06
   DISCCART    478016.62   3775025.06
   DISCCART    478115.35   3775016.45
   DISCCART    478136.17   3775032.24
   DISCCART    478095.46   3775012.87
   DISCCART    478084.19   3775012.87
   DISCCART    478072.93   3775012.87
   DISCCART    478061.67   3775012.87
```

```
     DISCCART    478050.41   3775012.87
     DISCCART    478039.15   3775012.87
     DISCCART    478027.88   3775012.87
     DISCCART    478016.62   3775012.87
     DISCCART    478004.43   3775049.44
     DISCCART    478004.43   3775060.69
     DISCCART    478004.43   3775071.94
     DISCCART    478004.43   3775083.20
     DISCCART    478004.43   3775094.45
     DISCCART    478004.43   3775105.70
     DISCCART    478004.43   3775116.96
     DISCCART    478004.43   3775128.21
     DISCCART    478004.43   3775139.46
     DISCCART    477995.81   3775040.82
     DISCCART    477992.24   3775060.69
     DISCCART    477992.24   3775071.94
     DISCCART    477992.24   3775083.20
     DISCCART    477992.24   3775094.45
     DISCCART    477992.24   3775105.70
     DISCCART    477992.24   3775116.96
     DISCCART    477992.24   3775128.21
     DISCCART    477992.24   3775139.46
     DISCCART    477983.62   3775040.82
     DISCCART    477999.38   3775020.01
     DISCCART    477980.05   3775060.69
     DISCCART    477980.05   3775071.94
     DISCCART    477980.05   3775083.20
     DISCCART    477980.05   3775094.45
     DISCCART    477980.05   3775105.70
     DISCCART    477980.05   3775116.96
     DISCCART    477980.05   3775128.21
     DISCCART    477980.05   3775139.46
     DISCCART    478016.62   3775151.65
     DISCCART    478027.86   3775151.65
     DISCCART    478039.10   3775151.65
     DISCCART    478050.34   3775151.65
     DISCCART    478061.58   3775151.65
     DISCCART    478072.83   3775151.65
     DISCCART    478084.07   3775151.65
     DISCCART    478095.31   3775151.65
     DISCCART    478106.55   3775151.65
     DISCCART    478008.00   3775160.27
     DISCCART    478027.86   3775163.84
     DISCCART    478039.10   3775163.84
     DISCCART    478050.34   3775163.84
     DISCCART    478061.58   3775163.84
     DISCCART    478072.83   3775163.84
     DISCCART    478084.07   3775163.84
     DISCCART    478095.31   3775163.84
     DISCCART    478008.00   3775172.46
     DISCCART    477987.19   3775156.70
     DISCCART    478027.86   3775176.03
     DISCCART    478039.10   3775176.03
     DISCCART    478050.34   3775176.03
     DISCCART    478061.58   3775176.03
     DISCCART    478072.83   3775176.03
     DISCCART    478084.07   3775176.03
     DISCCART    478095.31   3775176.03
     DISCCART    478106.55   3775176.03
** END OF FENCELINE GRID RECEPTORS
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
     DISCCART    478016.62   3775139.46
     DISCCART    478106.55   3775139.46
     DISCCART    478106.72   3775049.44
```

```
   DISCCART    478016.62   3775049.44
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE RDLD_V9_ADJU\RDLD_v9.SFC
   PROFFILE RDLD_V9_ADJU\RDLD_v9.PFL
   SURFDATA 3171 2012
   UAIRDATA 3190 2012
   SITEDATA 99999 2012
   PROFBASE 481.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "15935 CAT5 CONS HRA MIT.AD\PE00GALL.PLT" 31
   SUMMFILE "15935 Cat5 Cons HRA 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     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

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

FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:58:43

                               PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  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.
      * Model Assumes Receptors on FLAT Terrain.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
        for Total of    1 Urban Area(s):
  Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

**Model Calculates PERIOD Averages Only

**This Run Includes:      1 Source(s);       1 Source Group(s); and     116 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 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:  16216

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         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) =   481.00 ;  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 =      3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out


**Detailed Error/Message File:   15935 Cat5 Cons HRA
Mit.err
```

```
 **File for Summary of Results:   15935 Cat5 Cons HRA
 Mit.sum
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:58:43

                              PAGE   2
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
               INIT.   URBAN  EMISSION RATE   AIRCRAFT
  SOURCE        PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
  SZ     SOURCE  SCALAR VARY
    ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)              BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

 VOL1             0   0.15254E-02  478061.6 3775094.4   481.0     5.00    20.92
 1.40     YES   HRDOW            NO
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:58:43

                              PAGE   3
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                      *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                          SOURCE IDs
 -----------                                          ----------


  ALL        VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:58:43

                              PAGE   4
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*


                                     *** SOURCE IDs DEFINED AS URBAN SOURCES ***

  URBAN ID   URBAN POP                                 SOURCE IDs
  --------   ---------                                 ----------


              2035210.   VOL1        ,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***
 ***                                                                    ***
 10:58:43

                              PAGE   5
```

```
359   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
360
361                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
362
363   SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
364    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
365   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
366                                                DAY OF WEEK = WEEKDAY
367      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
368      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
369     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
370                                                DAY OF WEEK = SATURDAY
371      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
372      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
373     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
374                                                DAY OF WEEK = SUNDAY
375      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
376      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
377     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
378   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
379    *** AERMET - VERSION  16216 ***
       ***                                                                    ***
       10:58:43
380
                                  PAGE   6
381   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
382
383                                          *** DISCRETE CARTESIAN RECEPTORS ***
384                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
385                                                    (METERS)
386
387       ( 478118.7, 3775139.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775128.2,     481.0,     481.0,       0.0);
388       ( 478118.8, 3775117.0,     481.0,     481.0,       0.0);         ( 478118.8,
          3775105.7,     481.0,     481.0,       0.0);
389       ( 478118.8, 3775094.5,     481.0,     481.0,       0.0);         ( 478118.8,
          3775083.2,     481.0,     481.0,       0.0);
390       ( 478118.9, 3775072.0,     481.0,     481.0,       0.0);         ( 478118.9,
          3775060.7,     481.0,     481.0,       0.0);
391       ( 478118.9, 3775049.5,     481.0,     481.0,       0.0);         ( 478127.3,
          3775148.1,     481.0,     481.0,       0.0);
392       ( 478115.2, 3775160.3,     481.0,     481.0,       0.0);         ( 478131.0,
          3775128.2,     481.0,     481.0,       0.0);
393       ( 478131.0, 3775117.0,     481.0,     481.0,       0.0);         ( 478131.0,
          3775105.8,     481.0,     481.0,       0.0);
394       ( 478131.0, 3775094.5,     481.0,     481.0,       0.0);         ( 478131.0,
          3775083.2,     481.0,     481.0,       0.0);
395       ( 478131.1, 3775072.0,     481.0,     481.0,       0.0);         ( 478131.1,
          3775060.7,     481.0,     481.0,       0.0);
396       ( 478131.1, 3775049.5,     481.0,     481.0,       0.0);         ( 478139.5,
          3775148.1,     481.0,     481.0,       0.0);
397       ( 478123.8, 3775168.9,     481.0,     481.0,       0.0);         ( 478143.1,
          3775128.3,     481.0,     481.0,       0.0);
```

```
398         ( 478143.2, 3775117.0,     481.0,     481.0,       0.0);         ( 478143.2,
            3775105.8,     481.0,     481.0,       0.0);
399         ( 478143.2, 3775094.5,     481.0,     481.0,       0.0);         ( 478143.2,
            3775083.3,     481.0,     481.0,       0.0);
400         ( 478143.2, 3775072.0,     481.0,     481.0,       0.0);         ( 478143.3,
            3775060.8,     481.0,     481.0,       0.0);
401         ( 478143.3, 3775049.5,     481.0,     481.0,       0.0);         ( 478106.7,
            3775037.2,     481.0,     481.0,       0.0);
402         ( 478095.5, 3775037.2,     481.0,     481.0,       0.0);         ( 478084.2,
            3775037.2,     481.0,     481.0,       0.0);
403         ( 478072.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478061.7,
            3775037.2,     481.0,     481.0,       0.0);
404         ( 478050.4, 3775037.2,     481.0,     481.0,       0.0);         ( 478039.1,
            3775037.2,     481.0,     481.0,       0.0);
405         ( 478027.9, 3775037.2,     481.0,     481.0,       0.0);         ( 478016.6,
            3775037.2,     481.0,     481.0,       0.0);
406         ( 478115.3, 3775028.6,     481.0,     481.0,       0.0);         ( 478095.5,
            3775025.1,     481.0,     481.0,       0.0);
407         ( 478084.2, 3775025.1,     481.0,     481.0,       0.0);         ( 478072.9,
            3775025.1,     481.0,     481.0,       0.0);
408         ( 478061.7, 3775025.1,     481.0,     481.0,       0.0);         ( 478050.4,
            3775025.1,     481.0,     481.0,       0.0);
409         ( 478039.1, 3775025.1,     481.0,     481.0,       0.0);         ( 478027.9,
            3775025.1,     481.0,     481.0,       0.0);
410         ( 478016.6, 3775025.1,     481.0,     481.0,       0.0);         ( 478115.3,
            3775016.4,     481.0,     481.0,       0.0);
411         ( 478136.2, 3775032.2,     481.0,     481.0,       0.0);         ( 478095.5,
            3775012.9,     481.0,     481.0,       0.0);
412         ( 478084.2, 3775012.9,     481.0,     481.0,       0.0);         ( 478072.9,
            3775012.9,     481.0,     481.0,       0.0);
413         ( 478061.7, 3775012.9,     481.0,     481.0,       0.0);         ( 478050.4,
            3775012.9,     481.0,     481.0,       0.0);
414         ( 478039.1, 3775012.9,     481.0,     481.0,       0.0);         ( 478027.9,
            3775012.9,     481.0,     481.0,       0.0);
415         ( 478016.6, 3775012.9,     481.0,     481.0,       0.0);         ( 478004.4,
            3775049.4,     481.0,     481.0,       0.0);
416         ( 478004.4, 3775060.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775071.9,     481.0,     481.0,       0.0);
417         ( 478004.4, 3775083.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775094.4,     481.0,     481.0,       0.0);
418         ( 478004.4, 3775105.7,     481.0,     481.0,       0.0);         ( 478004.4,
            3775117.0,     481.0,     481.0,       0.0);
419         ( 478004.4, 3775128.2,     481.0,     481.0,       0.0);         ( 478004.4,
            3775139.5,     481.0,     481.0,       0.0);
420         ( 477995.8, 3775040.8,     481.0,     481.0,       0.0);         ( 477992.2,
            3775060.7,     481.0,     481.0,       0.0);
421         ( 477992.2, 3775071.9,     481.0,     481.0,       0.0);         ( 477992.2,
            3775083.2,     481.0,     481.0,       0.0);
422         ( 477992.2, 3775094.4,     481.0,     481.0,       0.0);         ( 477992.2,
            3775105.7,     481.0,     481.0,       0.0);
423         ( 477992.2, 3775117.0,     481.0,     481.0,       0.0);         ( 477992.2,
            3775128.2,     481.0,     481.0,       0.0);
424         ( 477992.2, 3775139.5,     481.0,     481.0,       0.0);         ( 477983.6,
            3775040.8,     481.0,     481.0,       0.0);
425         ( 477999.4, 3775020.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775060.7,     481.0,     481.0,       0.0);
426         ( 477980.0, 3775071.9,     481.0,     481.0,       0.0);         ( 477980.0,
            3775083.2,     481.0,     481.0,       0.0);
427         ( 477980.0, 3775094.4,     481.0,     481.0,       0.0);         ( 477980.0,
            3775105.7,     481.0,     481.0,       0.0);
428         ( 477980.0, 3775117.0,     481.0,     481.0,       0.0);         ( 477980.0,
            3775128.2,     481.0,     481.0,       0.0);
429         ( 477980.0, 3775139.5,     481.0,     481.0,       0.0);         ( 478016.6,
            3775151.6,     481.0,     481.0,       0.0);
430         ( 478027.9, 3775151.6,     481.0,     481.0,       0.0);         ( 478039.1,
            3775151.6,     481.0,     481.0,       0.0);
```

```
431       ( 478050.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478061.6,
          3775151.6,     481.0,     481.0,       0.0);
432    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
433        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:58:43
434
                                    PAGE   7
435        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
436
437                                              *** DISCRETE CARTESIAN RECEPTORS ***
438                                             (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
439                                                          (METERS)
440
441       ( 478072.8, 3775151.6,     481.0,     481.0,       0.0);         ( 478084.1,
          3775151.6,     481.0,     481.0,       0.0);
442       ( 478095.3, 3775151.6,     481.0,     481.0,       0.0);         ( 478106.5,
          3775151.6,     481.0,     481.0,       0.0);
443       ( 478008.0, 3775160.3,     481.0,     481.0,       0.0);         ( 478027.9,
          3775163.8,     481.0,     481.0,       0.0);
444       ( 478039.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478050.3,
          3775163.8,     481.0,     481.0,       0.0);
445       ( 478061.6, 3775163.8,     481.0,     481.0,       0.0);         ( 478072.8,
          3775163.8,     481.0,     481.0,       0.0);
446       ( 478084.1, 3775163.8,     481.0,     481.0,       0.0);         ( 478095.3,
          3775163.8,     481.0,     481.0,       0.0);
447       ( 478008.0, 3775172.5,     481.0,     481.0,       0.0);         ( 477987.2,
          3775156.7,     481.0,     481.0,       0.0);
448       ( 478027.9, 3775176.0,     481.0,     481.0,       0.0);         ( 478039.1,
          3775176.0,     481.0,     481.0,       0.0);
449       ( 478050.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478061.6,
          3775176.0,     481.0,     481.0,       0.0);
450       ( 478072.8, 3775176.0,     481.0,     481.0,       0.0);         ( 478084.1,
          3775176.0,     481.0,     481.0,       0.0);
451       ( 478095.3, 3775176.0,     481.0,     481.0,       0.0);         ( 478106.5,
          3775176.0,     481.0,     481.0,       0.0);
452       ( 478016.6, 3775139.5,     481.0,     481.0,       0.0);         ( 478106.5,
          3775139.5,     481.0,     481.0,       0.0);
453       ( 478106.7, 3775049.4,     481.0,     481.0,       0.0);         ( 478016.6,
          3775049.4,     481.0,     481.0,       0.0);
454    FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
       IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
455        *** AERMET - VERSION  16216 ***
           ***                                                                    ***
           10:58:43
456
                                    PAGE   8
457        *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
458
459                                              *** METEOROLOGICAL DAYS SELECTED FOR
                                                 PROCESSING ***
460                                                          (1=YES; 0=NO)
461
462             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
463             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
464             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
465             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
466             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
467             1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 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,
FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935 IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
 *** AERMET - VERSION  16216 ***   ***                                                                      ***        10:58:43

                                                                                                              PAGE   9
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*

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

   Surface file:       RDLD_V9_ADJU\RDLD_v9.SFC                                  Met Version:  16216
   Profile file:       RDLD_V9_ADJU\RDLD_v9.PFL
   Surface format:     FREE
   Profile format:     FREE
   Surface station no.:     3171                  Upper air station no.:     3190
                Name: UNKNOWN                                    Name: UNKNOWN
                Year:   2012                                     Year:   2012

 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
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 12 01 01   1 01  -10.6  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00   1.30  110.    9.1  285.4    5.5
 12 01 01   1 02   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00   0.90  130.    9.1  284.5    5.5
 12 01 01   1 03   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00   0.90  100.    9.1  285.0    5.5
 12 01 01   1 04   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00   0.90  107.    9.1  284.6    5.5
 12 01 01   1 05  -10.7  0.149 -9.000 -9.000 -999.  138.     26.7  0.32   3.22   1.00   1.30   98.    9.1  284.9    5.5
 12 01 01   1 06   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00   0.90   86.    9.1  284.5    5.5
 12 01 01   1 07   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00   0.90   91.    9.1  284.0    5.5
 12 01 01   1 08   -4.0  0.102 -9.000 -9.000 -999.   78.     22.9  0.32   3.22   0.54   0.90  107.    9.1  285.0    5.5
 12 01 01   1 09   44.6  0.237  0.382  0.006   43.  276.    -25.6  0.15   3.22   0.33   2.10   81.   10.1  289.1    5.5
 12 01 01   1 10  134.3  0.111  0.882  0.008  176.   99.     -1.0  0.32   3.22   0.26
```

```
      0.40   72.    9.1  295.1    5.5
507   12 01 01   1 11  199.8  0.409  1.429  0.005  503.  627.    -29.4  0.15   3.22   0.23
      3.68   78.   10.1  297.9    5.5
508   12 01 01   1 12  232.3  0.300  1.889  0.005  999.  402.    -10.0  0.32   3.22   0.22
      1.80  333.    9.1  299.4    5.5
509   12 01 01   1 13  230.0  0.300  2.134  0.005 1453.  394.    -10.1  0.32   3.22   0.22
      1.80   72.    9.1  300.4    5.5
510   12 01 01   1 14  194.0  0.294  2.109  0.005 1663.  382.    -11.2  0.32   3.22   0.24
      1.80  277.    9.1  301.0    5.5
511   12 01 01   1 15  126.3  0.378  1.872  0.005 1784.  557.    -36.5  0.32   3.22   0.27
      2.70  243.    9.1  301.0    5.5
512   12 01 01   1 16   39.5  0.199  1.278  0.005 1817.  240.    -17.2  0.32   3.22   0.36
      1.30  274.    9.1  300.1    5.5
513   12 01 01   1 17   -4.7  0.101 -9.000 -9.000 -999.   85.     19.0  0.32   3.22   0.65
      0.90  252.    9.1  298.2    5.5
514   12 01 01   1 18   -4.9  0.102 -9.000 -9.000 -999.   78.     18.2  0.32   3.22   1.00
      0.90  116.    9.1  296.4    5.5
515   12 01 01   1 19  -18.8  0.204 -9.000 -9.000 -999.  220.     45.6  0.15   3.22   1.00
      2.27   79.   10.1  292.2    5.5
516   12 01 01   1 20   -5.0  0.102 -9.000 -9.000 -999.   83.     18.1  0.32   3.22   1.00
      0.90   95.    9.1  290.2    5.5
517   12 01 01   1 21   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90   99.    9.1  287.8    5.5
518   12 01 01   1 22   -5.0  0.102 -9.000 -9.000 -999.   78.     18.0  0.32   3.22   1.00
      0.90  110.    9.1  287.6    5.5
519   12 01 01   1 23  -10.6  0.149 -9.000 -9.000 -999.  138.     26.8  0.32   3.22   1.00
      1.30   89.    9.1  287.2    5.5
520   12 01 01   1 24   -5.0  0.102 -9.000 -9.000 -999.   78.     17.9  0.32   3.22   1.00
      0.90  105.    9.1  285.9    5.5
521
522
523   First hour of profile data
524   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
525   12 01 01 01    5.5 0 -999.  -99.00   285.5   99.0  -99.00  -99.00
526   12 01 01 01    9.1 1  110.    1.30  -999.0   99.0  -99.00  -99.00
527
528   F indicates top of profile (=1) or below (=0)
529   FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
      IVIC\15935 Cat1 Cons HRA\ ***       05/31/24
530   *** AERMET - VERSION  16216 ***
      ***                                                                    ***
      10:58:43
531
                                  PAGE  10
532   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
533
534                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
535                                   INCLUDING SOURCE(S):     VOL1        ,
536
537                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
538
539                                     ** CONC OF DPM      IN
                                        MICROGRAMS/M**3                          **
540
541         X-COORD (M)   Y-COORD (M)        CONC                      X-COORD (M)   Y-COORD
            (M)        CONC
542   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
543           478118.74    3775139.48        0.02145                     478118.76
              3775128.23         0.02693
544           478118.78    3775116.98        0.03242                     478118.80
              3775105.73         0.03670
545           478118.82    3775094.47        0.03849                     478118.85
              3775083.22         0.03723
546           478118.87    3775071.97        0.03350                     478118.89
```

	3775060.72	0.02850		
547	478118.91	3775049.46	0.02334	478127.35
	3775148.11	0.01524		
548	478115.16	3775160.28	0.01413	478130.95
	3775128.25	0.02015		
549	478130.97	3775117.00	0.02329	478130.99
	3775105.75	0.02564		
550	478131.01	3775094.50	0.02667	478131.04
	3775083.24	0.02615		
551	478131.06	3775071.99	0.02429	478131.08
	3775060.74	0.02156		
552	478131.10	3775049.49	0.01848	478139.54
	3775148.13	0.01241		
553	478123.77	3775168.91	0.01044	478143.14
	3775128.28	0.01554		
554	478143.16	3775117.02	0.01750	478143.18
	3775105.77	0.01893		
555	478143.20	3775094.52	0.01960	478143.23
	3775083.27	0.01939		
556	478143.25	3775072.01	0.01838	478143.27
	3775060.76	0.01679		
557	478143.29	3775049.51	0.01487	478106.72
	3775037.25	0.02207		
558	478095.46	3775037.25	0.02584	478084.19
	3775037.25	0.02933		
559	478072.93	3775037.25	0.03153	478061.67
	3775037.25	0.03169		
560	478050.41	3775037.25	0.02969	478039.15
	3775037.25	0.02609		
561	478027.88	3775037.25	0.02179	478016.62
	3775037.25	0.01763		
562	478115.35	3775028.64	0.01606	478095.46
	3775025.06	0.01821		
563	478084.19	3775025.06	0.01973	478072.93
	3775025.06	0.02057		
564	478061.67	3775025.06	0.02049	478050.41
	3775025.06	0.01947		
565	478039.15	3775025.06	0.01769	478027.88
	3775025.06	0.01547		
566	478016.62	3775025.06	0.01315	478115.35
	3775016.45	0.01233		
567	478136.17	3775032.24	0.01303	478095.46
	3775012.87	0.01318		
568	478084.19	3775012.87	0.01387	478072.93
	3775012.87	0.01420		
569	478061.67	3775012.87	0.01409	478050.41
	3775012.87	0.01353		
570	478039.15	3775012.87	0.01257	478027.88
	3775012.87	0.01133		
571	478016.62	3775012.87	0.00998	478004.43
	3775049.44	0.01760		
572	478004.43	3775060.69	0.02166	478004.43
	3775071.94	0.02579		
573	478004.43	3775083.20	0.02904	478004.43
	3775094.45	0.03029		
574	478004.43	3775105.70	0.02903	478004.43
	3775116.96	0.02579		
575	478004.43	3775128.21	0.02166	478004.43
	3775139.46	0.01761		
576	477995.81	3775040.82	0.01234	477992.24
	3775060.69	0.01535		
577	477992.24	3775071.94	0.01745	477992.24
	3775083.20	0.01899		
578	477992.24	3775094.45	0.01955	477992.24
	3775105.70	0.01898		
579	477992.24	3775116.96	0.01745	477992.24

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            3775128.21        0.01535
580         477992.24    3775139.46        0.01311                        477983.62
            3775040.82        0.00958
581         477999.38    3775020.01        0.00906                        477980.05
            3775060.69        0.01124
582         477980.05    3775071.94        0.01238                        477980.05
            3775083.20        0.01318
583  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
     IVIC\15935 Cat1 Cons HRA\ ***        05/31/24
584   *** AERMET - VERSION  16216 ***
      ***                                                                  ***
      10:58:43
585
                                  PAGE  11
586   *** MODELOPTs:    NonDFAULT  CONC  FLAT  URBAN  ADJ_U*
587
588                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP: ALL      ***
589                                   INCLUDING SOURCE(S):     VOL1        ,
590
591                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***
592
593                                             ** CONC OF DPM      IN
                                                MICROGRAMS/M**3                          **
594
595         X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
            (M)        CONC
596   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
597         477980.05    3775094.45        0.01346                        477980.05
            3775105.70        0.01317
598         477980.05    3775116.96        0.01237                        477980.05
            3775128.21        0.01123
599         477980.05    3775139.46        0.00993                        478016.62
            3775151.65        0.01769
600         478027.86    3775151.65        0.02181                        478039.10
            3775151.65        0.02601
601         478050.34    3775151.65        0.02934                        478061.58
            3775151.65        0.03075
602         478072.83    3775151.65        0.02984                        478084.07
            3775151.65        0.02717
603         478095.31    3775151.65        0.02363                        478106.55
            3775151.65        0.01994
604         478008.00    3775160.27        0.01242                        478027.86
            3775163.84        0.01555
605         478039.10    3775163.84        0.01771                        478050.34
            3775163.84        0.01932
606         478061.58    3775163.84        0.01998                        478072.83
            3775163.84        0.01956
607         478084.07    3775163.84        0.01827                        478095.31
            3775163.84        0.01646
608         478008.00    3775172.46        0.00969                        477987.19
            3775156.70        0.00907
609         478027.86    3775176.03        0.01144                        478039.10
            3775176.03        0.01265
610         478050.34    3775176.03        0.01350                        478061.58
            3775176.03        0.01384
611         478072.83    3775176.03        0.01362                        478084.07
            3775176.03        0.01293
612         478095.31    3775176.03        0.01192                        478106.55
            3775176.03        0.01077
613         478016.62    3775139.46        0.02392                        478106.55
            3775139.46        0.02775
614         478106.72    3775049.44        0.02983                        478016.62
            3775049.44        0.02390
615  FF *** AERMOD - VERSION 23132  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\15935
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*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

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

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.03849	AT (478118.82, 3775094.47, 481.00, 481.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.03723	AT (478118.85, 3775083.22, 481.00, 481.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.03670	AT (478118.80, 3775105.73, 481.00, 481.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.03350	AT (478118.87, 3775071.97, 481.00, 481.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.03242	AT (478118.78, 3775116.98, 481.00, 481.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.03169	AT (478061.67, 3775037.25, 481.00, 481.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.03153	AT (478072.93, 3775037.25, 481.00, 481.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.03075	AT (478061.58, 3775151.65, 481.00, 481.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.03029	AT (478004.43, 3775094.45, 481.00, 481.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.02984	AT (478072.83, 3775151.65, 481.00, 481.00, 0.00)	DC	

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

*** 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 388 Informational Message(s)

A Total of 43848 Hours Were Processed

```
659
660    A Total of          191 Calm Hours Identified
661
662    A Total of          197 Missing Hours Identified (  0.45 Percent)
663
664
665       ******** FATAL ERROR MESSAGES ********
666                  ***  NONE  ***
667
668
669       ********   WARNING MESSAGES   ********
670    ME W186     212       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
       used           0.50
671    ME W187     212       MEOPEN: ADJ_U* Option for Stable Low Winds used in
       AERMET
672
673       ***********************************
674       *** AERMOD Finishes Successfully ***
675       ***********************************
676
677
```

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APPENDIX 2.3:

RISK CALCULATIONS

Construction Risk - Without Mitigation

Scenario	Age Bin	DPM Conc. ($\mu g/m^3$)	Exposure Frequency (days)	Exposure Duration (years)	Inhalation Rate (L/kg-day)	Inhalation Absorption Factor	Averaging Time (years)	FAH	ASF	Cancer Risk				Non-Cancer Risk								
										URF	CPF	Dose	Risk (per million)	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	REPRO	EYES
Category 1 (Residential)	0 to 2	0.10264	254	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	7.8E-05	11.29	5.0E+00	1.4E-03	2.1E-02						
												Total	11.29			2.1E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 2 (Residential)	0 to 2	0.10264	254	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	7.8E-05	11.29	5.0E+00	1.4E-03	2.1E-02						
												Total	11.29			2.1E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 3 (Residential)	0 to 2	0.14502	157	0.60	1090	1	70	1.00	10	3.0E-04	1.1E+00	6.8E-05	6.09	5.0E+00	1.4E-03	2.9E-02						
												Total	6.09			2.9E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 4 (Residential)	0 to 2	0.18600	60	0.23	1090	1	70	1.00	10	3.0E-04	1.1E+00	3.3E-05	1.14	5.0E+00	1.4E-03	3.7E-02						
												Total	1.14			3.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 5 (Residential)	0 to 2	0.10264	254	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	7.8E-05	11.29	5.0E+00	1.4E-03	2.1E-02						
												Total	11.29			2.1E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 1 (School)	4 to 13	0.10264	180	0.97	572	1	70	1.00	3	3.0E-04	1.1E+00	2.9E-05	1.26	5.0E+00	1.4E-03	2.1E-02						
												Total	1.26			2.1E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 2 (School)	4 to 13	0.10264	180	0.97	572	1	70	1.00	3	3.0E-04	1.1E+00	2.9E-05	1.26	5.0E+00	1.4E-03	2.1E-02						
												Total	1.26			2.1E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 3 (School)	4 to 13	0.14502	157	0.60	572	1	70	1.00	3	3.0E-04	1.1E+00	3.6E-05	0.96	5.0E+00	1.4E-03	2.9E-02						
												Total	0.96			2.9E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 4 (School)	4 to 13	0.18600	60	0.23	572	1	70	1.00	3	3.0E-04	1.1E+00	1.7E-05	0.18	5.0E+00	1.4E-03	3.7E-02						
												Total	0.18			3.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 5 (School)	4 to 13	0.10264	180	0.97	572	1	70	1.00	3	3.0E-04	1.1E+00	2.9E-05	1.26	5.0E+00	1.4E-03	2.1E-02						
												Total	1.26			2.1E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Construction Risk - With Mitigation

Scenario	Age Bin	DPM Conc. ($\mu g/m^3$)	Exposure Frequency (days)	Exposure Duration (years)	Inhalation Rate (L/kg-day)	Inhalation Absorption Factor	Averaging Time (years)	FAH	ASF	Cancer Risk				Non-Cancer Risk								
										URF	CPF	Dose	Risk (per million)	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	REPRO	EYES
Category 1 (Residential)	0 to 2	0.04866	254	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	3.7E-05	5.35	5.0E+00	1.4E-03	9.7E-03						
												Total	5.35			9.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 2 (Residential)	0 to 2	0.03849	254	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	2.9E-05	4.24	5.0E+00	1.4E-03	7.7E-03						
												Total	4.24			7.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 3 (Residential)	0 to 2	0.01873	157	0.60	1090	1	70	1.00	10	3.0E-04	1.1E+00	8.8E-06	0.79	5.0E+00	1.4E-03	3.7E-03						
												Total	0.79			3.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 4 (Residential)	0 to 2	0.02792	60	0.23	1090	1	70	1.00	10	3.0E-04	1.1E+00	5.0E-06	0.17	5.0E+00	1.4E-03	5.6E-03						
												Total	0.17			5.6E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 5 (Residential)	0 to 2	0.03849	254	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	2.9E-05	4.24	5.0E+00	1.4E-03	7.7E-03						
												Total	4.24			7.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 1 (School)	4 to 13	0.04866	180	0.97	572	1	70	1.00	3	3.0E-04	1.1E+00	1.4E-05	0.60	5.0E+00	1.4E-03	9.7E-03						
												Total	0.60			9.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 2 (School)	4 to 13	0.03849	180	0.97	572	1	70	1.00	3	3.0E-04	1.1E+00	1.1E-05	0.47	5.0E+00	1.4E-03	7.7E-03						
												Total	0.47			7.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 3 (School)	4 to 13	0.01873	157	0.60	572	1	70	1.00	3	3.0E-04	1.1E+00	4.6E-06	0.12	5.0E+00	1.4E-03	3.7E-03						
												Total	0.12			3.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 4 (School)	4 to 13	0.02792	60	0.23	572	1	70	1.00	3	3.0E-04	1.1E+00	2.6E-06	0.03	5.0E+00	1.4E-03	5.6E-03						
												Total	0.03			5.6E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Category 5 (School)	4 to 13	0.03849	180	0.97	572	1	70	1.00	3	3.0E-04	1.1E+00	1.1E-05	0.47	5.0E+00	1.4E-03	7.7E-03						
												Total	0.47			7.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

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