



## Technical Memorandum

To: Jim Guthrie, Guthrie Companies

From: Eliza Laws, Senior Environmental Analyst  
Monica Tobias, Associate Environmental Analyst

Date: September 16, 2024

Re: Air Quality Analysis for Soil Hauling at 6500 Hawarden Avenue, City of Riverside, California

---

The following air quality assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of soil hauling would cause exceedances of the South Coast Air Quality Management District's (SCAQMD) significance thresholds for air quality in the Project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 *et seq.*). The methodology follows the *CEQA Air Quality Handbook* prepared by the SCAQMD for quantification of emissions and evaluation of potential impacts to air resources. As recommended by SCAQMD staff, the **California Emissions Estimator Model®** version 2022.1 (CalEEMod) was used to quantify Project-related emissions.

The proposed Project evaluated herein is associated with a grading exception permit and consists of soil export operations on approximately two acres at 6500 Hawarden Avenue within portions of APNs 241-210-0011 and -013 in the Hawarden Hills area of the City of Riverside, California. Approximately 9,000 cubic yards of soil will be exported.

### Regional Significance Thresholds

The thresholds contained in the *SCAQMD CEQA Air Quality Handbook*<sup>1</sup> (SCAQMD 1993) and posted in a supplemental table as mass daily thresholds on SCAQMD's website<sup>2</sup> are considered regional thresholds and are shown in **Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds**, below. These regional thresholds were developed for criteria pollutants based on the SCAQMD's treatment of a major stationary source.

**Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds**

Emission Threshold	Units	VOC	NOx	CO	SOx	PM-10	PM-2.5
Construction	lbs/day	75	100	550	150	150	55
Operation	lbs/day	55	55	550	150	150	55

<sup>1</sup> South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)

<sup>2</sup> <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

Air quality impacts can be described in a short- and long-term perspective. Short-term impacts occur during site grading and Project construction and consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Long-term air quality impacts occur once the Project is in operation. The Project activities analyzed herein are limited to short-term impacts from soil export.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, including but not limited to application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 or more acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of this Project's total disturbance area (approximately two acres), a Fugitive Dust Control Plan or a Large Operation Notification Form will not be required.

## Short-Term Analysis

Short-term emissions from the Project's soil hauling were evaluated using the CalEEMod version 2022.1 program. The estimated soil hauling period for the proposed Project is anticipated to begin no sooner than November 2024. The default parameters within CalEEMod were used and these default values reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions. In addition to the default values used, assumptions relevant to model inputs for short-term construction emission estimates used are:

- Soil hauling is anticipated to begin no earlier than November 1, 2024. The soil hauling is conservatively anticipated to occur over a 15-day period, as shown below:

Construction Activity	Start Date	End Date	Total Working Days
Soul Hauling	November 1, 2024	November 21, 2024	15 Days

- No off-road equipment usage is included.
- Approximately 9,000 cubic feet (CY) of soil export is required. Based on the CalEEMod default truck capacity of 16 cubic yards, approximately 75 one-way truck trips per day would occur, or approximately 37 truckloads per day of soil would be exported. The export site is currently unknown. Therefore, the CalEEMod default was utilized which assumes a hauling trip length of 20 miles per trip.

The results of this analysis are summarized below.

**Table 2 – Estimated Unmitigated Maximum Daily Construction Emissions**

Activity	Peak Daily Emissions (lb/day) <sup>1</sup>					
	VOC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM-10	PM-2.5
SCAQMD Daily Thresholds	75	100	550	150	150	55
2024	0.08	6.19	1.46	0.03	1.49	0.48
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: See the detailed model output reports attached herewith.

As shown in **Table 2**, above, the emissions from proposed soil hauling are below the SCAQMD daily construction thresholds for all the criteria pollutants.

#### ■ Conclusion

The conclusion of this analysis indicates that hauling activities from the proposed Project will not exceed criteria pollutant thresholds established by SCAQMD. No mitigation is required. Should you have any questions, please contact me at (951) 686-1070.

## **CALEEMOD OUTPUT FILES**

# Hawarden Dr Hauling Detailed Report

## Table of Contents

### 1. Basic Project Information

#### 1.1. Basic Project Information

#### 1.2. Land Use Types

#### 1.3. User Selected Emission Reduction Measures by Emissions Sector

### 2. Emissions Summary

#### 2.1. Construction Emissions Compared Against Thresholds

#### 2.2. Construction Emissions by Year, Unmitigated

### 3. Construction Emissions Details

#### 3.1. Grading (2024) - Unmitigated

#### 4. Operations Emissions Details

#### 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

### 5. Activity Data

- 5.1. Construction Schedule
- 5.2. Off-Road Equipment
  - 5.2.1. Unmitigated
- 5.3. Construction Vehicles
  - 5.3.1. Unmitigated
- 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. Biomass Cover Type
    - 5.18.1.1. Unmitigated

- 5.18.2. Sequestration
  - 5.18.2.1. Unmitigated
- 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	Hawarden Dr Hauling
Construction Start Date	11/1/2024
Lead Agency	City of Riverside
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	10.0
Location	33.92709877496095, -117.37205469354964
County	Riverside-South Coast
City	Riverside
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5409
EDFZ	11
Electric Utility	City of Riverside
Gas Utility	Southern California Gas
App Version	2022.1.1.28

  

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	2.00	Acre	2.00	0.00	—	—	—	—

### 1.2. Land Use Types

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.08	6.19	1.46	0.03	0.10	1.38	1.48	0.10	0.38	0.48	—	5,256	5,256	0.09	0.85	0.29
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	< 0.005	0.26	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	216	216	< 0.005	0.03	0.20
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.7	35.7	< 0.005	0.01	0.03
																	37.5

### 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.21	0.08	6.19	1.46	0.03	0.10	1.38	1.48	0.10	0.38	0.48	—	5,256	5,256	0.09	0.85	0.29
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	0.01	< 0.005	0.26	0.06	< 0.005	0.06	0.06	< 0.005	0.02	0.02	< 0.005	0.03	0.20	227	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2024	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	35.7	< 0.005	0.01	0.03	37.5

### 3. Construction Emissions Details

#### 3.1. Grading (2024) - 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	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road 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
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road 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

Dust From Material Movement	Onsite truck	Off-Road Equipment	Dust From Material Movement	Onsite truck	Offsite	Daily, Summer (Max)	Daily, Winter (Max)	Average Daily	Worker	Vendor	Hauling	Annual	Worker
—	—	—	—	—	—	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road 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
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
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
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
Hauling	0.21	0.08	6.19	1.46	0.03	0.10	1.36	1.46	0.10	0.38	0.48	—	5,256
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
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
Hauling	0.01	< 0.005	0.26	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	216
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

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hauling	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

## 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	PM2.5E	PM2.5D	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

5.1 Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	11/1/2024	11/21/2024	5.00	15.0	—

52 Off-Board Equipment

E 21 Initialization

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Grading	Graders	Diesel	Average	0.00	8.00	148	0.41

E 2 Construction Vehicles

E 21 | Inmittated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	75.0	20.0	HHDT
Grading	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)	Parking Area Coated (sq ft)
Grading	—	9,000	7.50	0.00

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	—	—	—	—	—

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	2.00	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)			
Year	kWh per Year	CO2	CH4
2024	0.00	873	0.03

### 5.18. Vegetation

#### 5.18.1. Land Use Change

##### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

#### 5.18.1. Biomass Cover Type

##### 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

#### 5.18.2. Sequestration

##### 5.18.2.1. Unmitigated

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

## 6. Climate Risk Detailed Report

### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit

Temperature and Extreme Heat	26.3	annual days of extreme heat
Extreme Precipitation	1.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	3.03	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  $\frac{3}{4}$  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	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	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	0	0	0	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	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
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	1	1	1	2

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	95.3
AQ-PM	83.8
AQ-DPM	18.3
Drinking Water	77.7
Lead Risk Housing	3.35
Pesticides	45.6
Toxic Releases	71.4

Traffic	75.5
Effect Indicators	—
CleanUp Sites	17.1
Groundwater	2.772
Haz Waste Facilities/Generators	8.76
Impaired Water Bodies	12.5
Solid Waste	52.9
Sensitive Population	—
Asthma	49.0
Cardio-vascular	47.6
Low Birth Weights	23.3
Socioeconomic Factor Indicators	—
Education	36.2
Housing	5.01
Linguistic	23.8
Poverty	3.33
Unemployment	63.4

## 7.2. Healthy Places Index Scores

The maximum Healthy 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	96.95880919
Employed	68.92082638
Median HI	98.03669996
Education	—
Bachelor's or higher	84.742271782
High school enrollment	23.59810086

Preschool enrollment	47.13204158
Transportation	—
Auto Access	95.6242782
Active commuting	21.12151931
Social	—
2-parent households	95.200082125
Voting	75.00320801
Neighborhood	—
Alcohol availability	92.69857564
Park access	7.724881304
Retail density	10.12447068
Supermarket access	13.84575901
Tree canopy	51.14846657
Housing	—
Homeownership	98.24201206
Housing habitability	99.8203516
Low-inc homeowner severe housing cost burden	92.91672013
Low-inc renter severe housing cost burden	99.08892596
Uncrowded housing	90.74810728
Health Outcomes	—
Insured adults	95.90658283
Arthritis	20.9
Asthma ER Admissions	54.3
High Blood Pressure	12.0
Cancer (excluding skin)	11.3
Asthma	76.7
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	74.0

Diagnosed Diabetes	72.3
Life Expectancy at Birth	61.7
Cognitively Disabled	74.6
Physically Disabled	95.7
Heart Attack ER Admissions	61.7
Mental Health Not Good	90.0
Chronic Kidney Disease	64.9
Obesity	65.8
Pedestrian Injuries	19.6
Physical Health Not Good	84.3
Stroke	70.4
Health Risk Behaviors	—
Binge Drinking	45.1
Current Smoker	89.7
No Leisure Time for Physical Activity	86.1
Climate Change Exposures	—
Wildfire Risk	20.1
SLR Inundation Area	0.0
Children	89.4
Elderly	25.4
English Speaking	90.0
Foreign-born	22.1
Outdoor Workers	65.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	89.4
Traffic Density	47.4
Traffic Access	50.4
Other Indices	—

Hardship	6.8
Other Decision Support	—
2016 Voting	86.4

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	35.0
Healthy Places Index Score for Project Location (b)	91.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

b: The maximum Healthy 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 Client
Construction: Off-Road Equipment	No off-road construction equipment.
Construction: Dust From Material Movement	Per Client