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# **OIL AND GAS DRILLING ORDINANCE SECOND ERRATA TO INITIAL STUDY / MITIGATED NEGATIVE DECLARATION**

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## **Introduction**

The City of Los Angeles (City) prepared an Initial Study and a Mitigated Negative Declaration (IS/MND) for the proposed Oil and Gas Drilling Ordinance (Oil Ordinance), Case No. ENV-2022-4865-MND. The IS/MND was prepared in accordance with CEQA (Public Resources Code §21000 et seq.) and the State CEQA Guidelines (Title 14, California Code of Regulations, §15000 et seq.).

The 30-day circulation period for public review and comment on the IS/MND was from September 15, 2022 to October 17, 2022. The IS/MND evaluates the impacts associated with the proposed Oil Ordinance (“Project”) that would ban any new drilling and deem all existing oil and gas extraction a non-conforming use citywide within a 20-year amortization period.

On October 13, 2022, an Errata (Errata No. 1) was prepared to revise and/or correct certain information contained within the project description as well as data regarding the number and location of wells cited in the IS/MND. In response to public comment, the City has identified areas of additional amplification and clarification. Accordingly, these Errata (Errata No. 2) identify and document all necessary revisions to the IS/MND to add a new mitigation measure that will serve to further reduce air quality impacts referenced in the IS/MND. These Errata have been prepared by the City to fulfill its responsibility as the lead agency pursuant to California Environmental Quality Act (CEQA).

## **STATUTORY BACKGROUND (CEQA REQUIREMENTS)**

The City of Los Angeles is the CEQA lead agency responsible for the Project. State CEQA Guidelines §15073.5(a) requires that a lead agency re-circulate a negative declaration “when the document must be substantially revised.” A “substantial revision” includes: (1) identification of a new, avoidable significant effect requiring mitigation measures or project revisions and/or (2) determination that proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required. Recirculation is not required when new information is added to the negative declaration which merely clarifies, amplifies, or makes insignificant modifications to the negative declaration.

In response to the City’s desire to maintain the intent of the Oil Ordinance while ensuring that air quality impacts remain less than significant during the abandonment of oil and gas wells, the changes identified below have been made to the Initial Study and

incorporated as part of the IS/MND. The IS/MND did not identify any significant air quality impacts. As such, the addition of the proposed mitigation measures is not required to reduce air quality impacts to less than significant. The mitigation measure is added only as an additional protection of the public health. The imposition of the proposed mitigation measures is not a change that modifies the analysis of environmental effects, the conclusion of the analysis, or the determination of the document that the proposed Project would not have a significant effect on the environment as it relates to air quality. None of the changes constitute substantial revisions that would require recirculation of the environmental document, as described in State CEQA Guidelines §15073.5.

## CHANGES TO THE IS/MND

The following text changes are made to the Initial Study and incorporated as part of the IS/MND. The following changes are made to clarify the IS/MND based on comments received on the Project during the 30-day public review period and review of such comments by the lead agency. These changes further substantiate conclusions and/or clarify aspects of the previously circulated document. Recirculation of the IS/MND is not required as none of these changes reflect a determination of a new or more significant environmental impact than disclosed in the previously circulated IS/MND. Changes to the text are noted with underline and **bold** for added text.

The following text is inserted onto page 41 of the IS/MND and page 42 of the Project's Air Quality and GHG Technical Report (included as Appendix A to the IS/MND):

**While no mitigation is required to reduce air quality impacts to less than significant, the City has determined the use of Tier 4 engines as stated in Mitigation Measure AQ-1 would reduce air quality emissions during abandonment, further protecting public health. As shown in Table 1 below, MM AQ-1 would serve to substantially reduce air quality emissions during abandonment, including particulate matter exhaust emissions. Specifically, particulate matter exhaust emissions would be reduced by approximately 68%. Tier 4 engines are currently in use on many construction sites and as older equipment is phased out over the 20-year amortization period, Tier 4 equipment will be more readily available for use during abandonment of wells. Furthermore, the use of Tier 4 engines is considered feasible and it has been included for many projects in the City and throughout the state. The SCAQMD has also recommended projects use Tier 4 equipment to reduce air quality emissions from off-road sources.**

**MM AQ-1 Emissions Standards for Off-Road Construction Equipment Greater than 50 Horsepower. All off-road diesel-powered construction equipment equal to or greater than 50 horsepower shall meet the U.S. Environmental Protection Agency's (USEPA) Tier 4 Final emission standards during abandonment of wells. Operators shall maintain records of all offroad equipment to document that each piece of equipment used meets these emission standards.**

**Table 1**  
**Oil & Gas Well Abandonment Emissions (Per Well) – Pounds Per Day –**  
**With Tier 4 Equipment**

Source	ROG	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
Off-Road Equipment Emissions (Tier 4)	0.26	1.89	5.75	0.01	0.06	0.06
Off-Road Equipment Emissions (Draft IS/MND)	0.51	4.69	5.79	0.01	0.19	0.17
Emissions Reduction Due to Tier 4 (%)	49%	60%	0.7%	0%	68%	65%

Source: Impact Sciences, November 2022. See **Attachment 1** to this Errata for calculation data.

## CONCLUSION

Mitigation Measure AQ-1 is not required to reduce air quality impacts to less than significant and it does not change the original analysis in the IS/MND which found the Ordinance will not cause any foreseeable significant air quality impacts.

The imposition of AQ-1 does not constitute a substantial change that would require major revision to the previously published IS/MND due to new or increased impacts as they do not substantially change the Project. In fact, with the addition of the MM AQ-1, as shown in Table 1 above, air quality emissions associated with short-term and temporary abandonment related activities would be reduced even further.

As such, none of these changes substantially modify the analysis or conclusions of the document, but instead further substantiate conclusions and/or clarify aspects of the previously circulated document.

### Attachments

Attachment 1 - Oil and Gas Well Abandonment Emissions with Tier 4, Model Output

# City of LA Oil & Gas - Abandonment Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	City of LA Oil & Gas - Abandonment
Lead Agency	Los Angeles
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	16.8
Location	34.0545406568893, -118.24387235523815
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4039
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas

## 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 Industrial	1.00	User Defined Unit	1.00	0.00	0.00	—	—	—

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

No measures selected

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.42	0.35	2.30	7.39	0.01	0.06	0.32	0.38	0.06	0.08	0.14	—	1,355	1,355	0.06	0.05	1.61	1,374
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.06	0.20	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.8	36.8	< 0.005	< 0.005	0.02	37.3
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	< 0.005	< 0.005	0.01	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.10	6.10	< 0.005	< 0.005	< 0.005	6.18

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.42	0.35	2.30	7.39	0.01	0.06	0.32	0.38	0.06	0.08	0.14	—	1,355	1,355	0.06	0.05	1.61	1,374
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.01	0.01	0.06	0.20	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.8	36.8	< 0.005	< 0.005	0.02	37.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	< 0.005	< 0.005	0.01	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.10	6.10	< 0.005	< 0.005	< 0.005	6.18

### 3. Construction Emissions Details

#### 3.1. Demolition (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	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.26	1.89	5.75	0.01	0.06	—	0.06	0.06	—	0.06	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	—	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	0.01	0.01	0.05	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Demolition	—	—	—	—	—	—	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	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.87	3.87	< 0.005	< 0.005	—	3.88
Demolition	—	—	—	—	—	—	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	0.10	0.09	0.10	1.51	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	282	282	0.01	0.01	1.11	287
Vendor	0.02	0.01	0.31	0.14	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	221	221	0.01	0.04	0.50	232
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	7.44	7.44	< 0.005	< 0.005	0.01	7.54
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.05	6.05	< 0.005	< 0.005	0.01	6.36
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	0.00	0.00	—	1.23	1.23	< 0.005	< 0.005	< 0.005	1.25
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.00	1.00	< 0.005	< 0.005	< 0.005	1.05
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Abandonment	Demolition	6/1/2024	6/14/2024	5.00	10.0	—

### 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
Abandonment	Bore/Drill Rigs	Diesel	Average	1.00	8.00	33.0	0.73
Abandonment	Pumps	Diesel	Tier 4 Final	1.00	1.00	367	0.40
Abandonment	Welders	Diesel	Tier 4 Final	1.00	6.00	84.0	0.37
Abandonment	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	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
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Abandonment	—	—	—	—
Abandonment	Worker	20.0	18.5	LDA,LDT1,LDT2
Abandonment	Vendor	6.00	10.2	HHDT
Abandonment	Hauling	0.00	20.0	HHDT
Abandonment	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)
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## 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)
Abandonment	0.00	0.00	0.00	—	—

### 5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	0.00	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	690	0.05	0.01

## 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
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### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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## 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	9.52	annual days of extreme heat
Extreme Precipitation	6.15	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

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

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	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	N/A	N/A	N/A	N/A
Air Quality	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	1	1	1	2
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	N/A	N/A	N/A	N/A
Air Quality	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	53.7

AQ-PM	91.9
AQ-DPM	98.4
Drinking Water	92.5
Lead Risk Housing	—
Pesticides	29.8
Toxic Releases	79.6
Traffic	86.0
Effect Indicators	—
CleanUp Sites	92.5
Groundwater	86.1
Haz Waste Facilities/Generators	93.1
Impaired Water Bodies	66.7
Solid Waste	96.0
Sensitive Population	—
Asthma	26.3
Cardio-vascular	35.9
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	46.2
Housing	—
Linguistic	91.2
Poverty	60.5
Unemployment	88.4

## 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
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Economic	—
Above Poverty	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—
Health Outcomes	—

Insured adults	—
Arthritis	42.6
Asthma ER Admissions	76.4
High Blood Pressure	4.9
Cancer (excluding skin)	96.9
Asthma	13.4
Coronary Heart Disease	3.9
Chronic Obstructive Pulmonary Disease	0.8
Diagnosed Diabetes	1.8
Life Expectancy at Birth	0.0
Cognitively Disabled	0.1
Physically Disabled	0.1
Heart Attack ER Admissions	89.4
Mental Health Not Good	0.4
Chronic Kidney Disease	14.8
Obesity	0.1
Pedestrian Injuries	0.0
Physical Health Not Good	0.1
Stroke	2.6
Health Risk Behaviors	—
Binge Drinking	65.1
Current Smoker	0.0
No Leisure Time for Physical Activity	1.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	99.4

Elderly	84.2
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	6.2
Traffic Density	0.0
Traffic Access	87.4
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	90.0
Healthy Places Index Score for Project Location (b)	—
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
Land Use	1 acre per well site
Construction: Construction Phases	abandonment to last approximately 10 days per well.
Construction: Off-Road Equipment	equipment for abandonment
Construction: Trips and VMT	trips/deliveries per abandonment needs