Appendix B

Air Quality Worksheets and Calculations

ESA

AQ-1 Assumptions

Cadiz Pipeline - Pump Stations

defaults are in blue

PROJECT CHARACTERISTICS

Location	Cadiz (Mojave Desert)	
Climate Zone		
Land Use Setting	Rural	
Start of Construction	1/1/2026	
End of Construction	9/30/2026	*Assumed 9 month construction per pump station
Utility Company	SCE	
CO2 intensity	*default*	

LAND USE

Land Use	Land Use Subtype	Unit Amt	Size Metric	Lot Ac	SF
Light Industry	General Light Industry	43.56	1000 sf	1.000	43560

CONSTRUCTION

Construction Phasing

Construction Phase	Start Date	End Date	Days/wk	Total Days
Site Preparation	1/1/2026	1/28/2026	5	*20*
Grading	1/29/2026	2/25/2026	5	*20*
Building Construction	2/26/2026	8/5/2026	5	*115*
Paving	8/6/2026	9/2/2026	5	*20*
Architectural Coating	9/3/2026	9/30/2026	5	*20*
				195

Offroad Equipment

Equipment Type	Unit Amt	Hours/Day	HP	LF	Construction Phase
Tractor/Loader/Backhoe	1	8	*default*	*default*	site prep, grading, building const
Excavator	1	8	*default*	*default*	Building const
Paving Equipment	1	8	*default*	*default*	paving
Plate compactor	1	8	*default*	*default*	paving
generator	1	8	*default*	*default*	grading
welder	1	8	*default*	*default*	building const
air compressor	1	8	*default*	*default*	arch coating
Crane	1	8	*default*	*default*	building const
Grader	1	8	*default*	*default*	grading
Paver	1	8	*default*	*default*	
concrete saw	1	8	*default*	*default*	building const
Total	***11***				

Dust from Material Movement

Phase	Material Import (cy)	Material Export (cy)	Size Metric	Acres Graded
Site Prep	0	0	cy	default
Grading	0	3300	cy	default

Grading/Site Prep

Size Metric	Unit Amt	
Haul Truck Capacity (CY)	16	*CalEEMod Default
Total Haul Amount	3300	
Grading Haul Days	20	
Daily Grading Haul Trips (In/Out)	21	

Trips & VMT

Phase Name	# of worker trips/day	# vendor trips/day	# haul trips/day	Trip length worker (mi)	trip length vendor (mi)	Trip length haul (mi)	Vehicle Class Worker	Vehicle Class Vendor	Vehicle Class Hauling
Site prep	20	10	2	*default*	*default*	*default*	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Grading	20	10	24	*default*	*default*	*default*	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Building Construction	20	10	2	*default*	*default*	*default*	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Paving	20	10	2	*default*	*default*	*default*	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
	**10 workers*	*5 vendor trucks	*Assume two one-way trips for drop off/demob of off-road equipment						

Architectural Coating

Phase	VOC for Parking Lot Paint	Parking Area
Arch Coating	*default*	*default*

MITIGATION MEASURES

Water Exposed Area

3x Per Day

Cadiz Pipeline - Pipeline Inspection

defaults are in blue

PROJECT CHARACTERISTICS

Location	Cadiz (Mojave Desert)	
Climate Zone		
Land Use Setting	Rural	
Start of Construction	1/1/2026	*Modelling purposes
Operational Year	N/A	
Utility Company	SCE	
CO2 intensity	*default*	

LAND USE

Land Use	Land Use Subtype	Unit Amt	Size Metric	Lot Ac	SF	Population
Parking	Other Non-Asphalt Surfaces	1457.28	1000 sf	33.455	1457280	0

CONSTRUCTION

Construction Phasing

Construction Phase	Start Date	End Date	Days/wk	Total Days	
Trenching	1/1/2026	6/30/2026	5	*129*	*6 months for pipeline inspection
Pipeline Rehabilitation (Building Construction)	7/1/2026	10/31/2026	5	*88*	*4 months of pipeline rehabilitation
				129	

Offroad Equipment

Equipment Type	Unit Amt	Hours/Day	HP	LF	Phase
Grader	1	8	*default*	*default*	Trenching
Excavator	1	8	*default*	*default*	Trenching
Plate compactor	1	8	*default*	*default*	Trenching
Mobile Crane	1	8	*default*	*default*	Pipeline Rehabilitation (Building Construction)
Concrete Saw	1	8	*default*	*default*	Trenching
Welder	1	8	*default*	*default*	Pipeline Rehabilitation (Building Construction)
Total	6				

Dust from Material Movement

Phase	Material Import (cy)	Material Export (cy)	Size Metric	Acres Graded	
Trenching	0	323,840	cy	default	*Dust movement (no hauling)

Trenching

Size Metric	Unit Amt
Width (ft)	6
Depth (ft)	6
Length per day (mi)	3
Total Length (mi)	46
Length (ft)	242880
Total (cubic feet)	8743680
Total (cubic yards)	323840.00

Trips & VMT

Phase Name	# of worker trips/day	# vendor trips/day	# haul trips (total per phase)	Trip length worker (mi)	trip length vendor (mi)	Trip length haul (mi)	Vehicle Class Worker	Vehicle Class Vendor	Vehicle Class Hauling
Trenching	20	10	2.00	*default*	*default*	*default*	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Pipeline Rehabilitation (Building Construction)	20	10	2.00	*default*	*default*	*default*	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
	*10 workers	*5 vendor trucks	*Assume two one-way trips for drop off/demob of off-road equipment						

Architectural Coating

Phase	VOC for Parking Lot Paint	Parking Area
Arch Coating	*default*	*default*

MITIGATION MEASURES

Water Exposed Area

3x Per Day

Cadiz Pipeline - ARAVBO Valves

defaults are in blue

PROJECT CHARACTERISTICS

Location	Cadiz (Mojave Desert)	
Climate Zone		
Land Use Setting	Rural	
Start of Construction		1/1/2026
Operational Year		1/7/2026
Utility Company	SCE	
CO2 intensity	*default*	

LAND USE

Land Use	Land Use Subtype	Unit Amt	Size Metric	Lot Ac	SF	Population	
Parking	Other Asphalt Surfaces	0.05	1000 sf	0.001	50	0	*model for 1 valve

Valve Unit	Phase 1	Phase 2
# AR/AV	50	100
# BO	50	100

CONSTRUCTION

Construction Phasing

Construction Phase	Start Date	End Date	Days/wk	Total Days
Trenching	1/1/2026	1/2/2026	5	*2*
Building Construction	1/3/2026	1/7/2026	5	*3*
				5

Offroad Equipment

Equipment Type	Unit Amt	Hours/Day	HP	LF	Phase
Excavator	1	8 *default*	*default*	*default*	Trenching
Grader	1	8 *default*	*default*	*default*	Trenching
Plate compactor	1	8 *default*	*default*	*default*	Trenching
Concrete Saws	1	8 *default*	*default*	*default*	Building Construction
Generators	1	8 *default*	*default*	*default*	Building Construction
Welders	1	8 *default*	*default*	*default*	Building Construction
Total	6				

Dust from Material Movement

Phase	Material Import (cy)	Material Export (cy)	Size Metric	Acres Graded	
Trenching	0	44.44	cy	default	*Contained onsite and used for infill

Trenching

Size Metric	Unit Amt
Width (ft)	10
Depth (ft)	6
Length per site (ft)	20
Total (cubic feet)	1200
Total (cubic yards)	44.44

Building Construction

Size Metric	Unit Amt
Valve area (ft2)	50
Elevation (ft)	4
Total number of AR/AV Valves	100
Total number of BO	200

Trips & VMT

Phase Name	# of worker trips/day	# vendor trips/day	# haul trips/day	Trip length worker (mi)	trip length vendor (mi)	Trip length haul (mi)	Vehicle Class Worker	Vehicle Class Vendor	Vehicle Class Hauling
Trenching	10	10	2	*default*	*default*	25	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Building Construction	10	10	2	*default*	*default*	25	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
	*5 workers	*5 vendor trucks	*Assume two one-way trips for drop off/demob of off-road equipment						

Architectural Coating

Phase	VOC for Parking Lot Paint	Parking Area
Arch Coating	*default*	*default*

MITIGATION MEASURES

Water Exposed Area

3x Per Day

Cadiz Pipeline - Cathodic Protection Repair

defaults are in blue

PROJECT CHARACTERISTICS

Location	Cadiz (Mojave Desert)
Climate Zone	
Land Use Setting	Rural
Start of Construction	7/1/2026
End of Construction	10/31/2026
Utility Company	SCE
CO2 intensity	*default*

LAND USE

Land Use	Land Use Subtype	Unit Amt	Size Metric	Lot Ac	SF	Population
Parking	Other Asphalt Surfaces	2.5	1000 sf	0.200	2500	0
				Notes	Based on 1 50ftx50ft plant footprint	

CONSTRUCTION

Construction Phasing

Construction Phase	Start Date	End Date	Days/wk	Total Days	
Building Construction	7/1/2026	10/31/2026	5	*88*	*Assumed construction occuring concurrently with pipeline rehabilitation
				88	

Offroad Equipment

Equipment Type	Unit Amt	Hours/Day	HP	LF	Construction Phase
Excavator	1	*default*	*default*	*default*	site prep & grading
Grader	1	*default*	*default*	*default*	grading
Plate compactor	1	*default*	*default*	*default*	site prep and grading and building const
Welder	1	*default*	*default*	*default*	grading
Total	***4***				

Trips & VMT truck hauling capacity 14 cy

Phase Name	# of worker trips/day	# vendor trips/day	# haul trips/day	Trip length worker (mi)	trip length vendor (mi)	Trip length haul (mi)	Vehicle Class Worker	Vehicle Class Vendor	Vehicle Class Hauling
Building Construction	10	10	2	*default*	*default*	25	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
	*5 workers	*5 vendor trucks	*Assume two one-way trips for drop off/demob of off-road equipment						

Architectural Coating

Phase	VOC for Parking Lot Paint	Parking Area
Arch Coating	*default*	*default*

AQ-2 Construction Air Quality Calculations and Modeling

Cadiz Northern Pipeline
Air Quality Construction Analysis - Summary Construction
Unmitigated

Regional Maximums Source	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
					lb/day					
Pipeline Inspection & Rehabilitation	1.40	11.20	14.83	0.03	0.41	0.96	1.37	0.38	0.21	0.59
AR/AV & BO Installation (1 Unit)	0.92	7.65	9.71	0.02	0.27	0.64	0.91	0.25	0.14	0.39
Cathodic Protection Repair	0.66	5.37	7.23	0.01	0.22	0.25	0.47	0.20	0.06	0.26
Pump Station (7 Stations)	10.37	9.48	11.70	0.02	0.31	0.90	1.13	0.29	0.21	0.42
Northern Pipeline Daily Maximum Emissions	**13.35**	**33.70**	**43.47**	**0.09**	**1.21**	**2.76**	**3.89**	**1.11**	**0.62**	**1.67**
FIER Mitigated Daily Emissions from the Final EIR (see EIR Table 4.3-5)	**52.00**	**396.00**	**474.00**	**-**	**-**	**-**	**78.00**	**-**	**-**	**19.00**
Northern Pipeline + Final EIR Construction Emissions	**65.35**	**429.70**	**517.47**	**0.09**	**1.21**	**2.76**	**81.89**	**1.11**	**0.62**	**20.67**
MDAQMD Thresholds of Significance	**137.00**	**137.00**	**548.00**	**137.00**	**-**	**-**	**82.00**	**-**	**-**	**65.00**
Exceed Threshold (Y/N)?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Cadiz Northern Pipeline

Air Quality Construction Analysis - Facility Modifications

Unmitigated

Regional Maximum Source	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
					lb/day					
3.1 Site Preparation (2026) - Unmitigated	0.301	2.651	5.015	0.009	0.08	0.38	0.46	0.07	0.09	0.17
3.3 Grading (2026) - Unmitigated	0.596	6.231	7.313	0.022	0.23	0.90	1.13	0.21	0.21	0.42
3.5 Building Construction (2026) - Unmitigated	1.121	9.479	11.704	0.024	0.31	0.38	0.69	0.29	0.09	0.38
3.7 Paving (2026) - Unmitigated	0.361	3.236	5.690	0.009	0.13	0.38	0.51	0.12	0.09	0.21
3.9 Architectural Coating (2026) - Unmitigated	10.369	1.690	3.219	0.006	0.04	0.38	0.42	0.04	0.09	0.13
Northern Pipeline Facility Modifications Daily Maximum Emissions	**10.37**	**9.48**	**11.70**	**0.02**	**0.31**	**0.90**	**1.13**	**0.29**	**0.21**	**0.42**
AVAQMD & MDAQMD Threshold	**137.0**	**137.0**	**548.0**	**137.0**	**N/A**	**N/A**	**82.0**	**N/A**	**N/A**	**65.0**
Exceed Threshold (Y/N)?	**No**	**No**	**No**	**No**	**N/A**	**N/A**	**No**	**N/A**	**N/A**	**No**

GHG per Pump Station	Onsite	Offsite
3.1 Site Preparation (2026) - Unmitigated	5.286338	6.619517
3.3 Grading (2026) - Unmitigated	8.128324	19.953933
3.5 Building Construction (2026) - Unmitigated	103.5038	38.062222
3.7 Paving (2026) - Unmitigated	5.586403	6.619517
3.9 Architectural Coating (2026) - Unmitigated	1.620387	8.2399038
Total	203.6203455	
Total GHG for 7 Pump Stations	1221.722073	

Cadiz Northern Pipeline

Air Quality Construction Analysis - Cathodic REPAIR

Unmitigated

Regional Maximum Source	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
					lb/day					
3.1 Building Construction (2026) - Unmitigated	0.66	5.37	7.23	0.01	0.22	0.25	0.47	0.20	0.06	0.26
Northern Pipeline Cathodic Repair Daily Maximum Emissions	**0.66**	**5.37**	**7.23**	**0.01**	**0.22**	**0.25**	**0.47**	**0.20**	**0.06**	**0.26**
AVAQMD & MDAQMD Threshold	**137.0**	**137.0**	**548.0**	**137.0**	**N/A**	**N/A**	**82.0**	**N/A**	**N/A**	**65.0**
Exceed Threshold (Y/N)?	**No**	**No**	**No**	**No**	**N/A**	**N/A**	**No**	**N/A**	**N/A**	**No**

GHG Cathodic repair	Onsite	Offsite
3.1 Building Construction (2026) - Unmitigated	36.736518	23.854126
Total GHG Cathodic repair	60.59064431	

Cadiz Northern Pipeline

Air Quality Construction Analysis - Pipeline

Unmitigated

Regional Maximum Source	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
					lb/day					
3.1 Building Construction (2026) - Unmitigated	0.65	5.34	6.42	0.02	0.18	0.38	0.57	0.17	0.09	0.26
3.3 Pipeline Inspection (2026) - Unmitigated	0.75	5.86	8.41	0.01	0.23	0.58	0.80	0.21	0.12	0.33
Northern Pipeline Pipeline Inspection and rehabilitation Daily Maximum Emissions	**1.40**	**11.20**	**14.83**	**0.03**	**0.41**	**0.96**	**1.37**	**0.38**	**0.21**	**0.59**
AVAQMD & MDAQMD Threshold	**137.0**	**137.0**	**548.0**	**137.0**	**N/A**	**N/A**	**82.0**	**N/A**	**N/A**	**65.0**
Exceed Threshold (Y/N)?	**No**	**No**	**No**	**No**	**N/A**	**N/A**	**No**	**N/A**	**N/A**	**No**

GHG for pipeline inspection and rehabilitation	Onsite	Offsite
3.1 Pipeline Rehabilitation/Building Construction (2026) - Unmitigated	48.51166	29.45685
3.3 Pipeline Inspection (2026) - Unmitigated	58.02328	42.695884
Total GHG pipeline inspection and rehabilitation	178.6876749	

Cadiz Northern Pipeline

Air Quality Construction Analysis - ARAVBO Valves

Unmitigated

Regional Maximum Source	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
					lb/day					
3.1 Building Construction (2026) - Unmitigated	0.40	3.34	4.16	0.01	0.08	0.25	0.33	0.07	0.06	0.14
3.3 Trenching (2026) - Unmitigated	0.52	4.31	5.55	0.01	0.19	0.39	0.58	0.18	0.08	0.25
Northern Pipeline Daily Maximum Emissions	**0.92**	**7.65**	**9.71**	**0.02**	**0.27**	**0.64**	**0.91**	**0.25**	**0.14**	**0.39**
AVAQMD & MDAQMD Threshold	**137.0**	**137.0**	**548.0**	**137.0**	**N/A**	**N/A**	**82.0**	**N/A**	**N/A**	**65.0**
Exceed Threshold (Y/N)?	**No**	**No**	**No**	**No**	**N/A**	**N/A**	**No**	**N/A**	**N/A**	**No**

GHG per 200 feet of pipeline construction phase	Onsite	Offsite
3.1 Building Construction (2026) - Unmitigated	0.616506	0.8132088
3.3 Trenching (2026) - Unmitigated	0.677446	0.5421392
Total GHG per 1 AR/AV/BO Valve	2.649	
Total GHG of 150 AR/AV & 150 BO Valves	397.395	

AQ-3 Operational Air Quality Calculations and Modeling

Cadiz Northern Pipline Addendum
Operational Emissions - Natural Gas Pump Engine Emissions
Air Quality and Greenhouse Gas Assessment

last updated: 3/12/2025

				Based on efficiency of 30%	Heat Rate from specs
Conversion Factors					
BTU/HP-hr	2,544.4	Energy Measurments and Conversion: https://www.extension.iastate.edu/agdm/wholefarm/html/c6-86.html		8481.44729	9125
BTU/MMBTU	1,000,000				
PM10 Fraction of Total PM	0.994	Table A - Updated CEIDARS Table with PM2.5 Fractions, INTERNAL COMBUSTION - GASEOUS FUEL			
PM2.5 Fraction of Total PM	0.992	Table A - Updated CEIDARS Table with PM2.5 Fractions, INTERNAL COMBUSTION - GASEOUS FUEL			
lbs/short ton	2,000				
GWP CH4	25	IPCC AR4	https://ww2.arb.ca.gov/ghg-gwps		
GWP N2O	298	IPCC AR4	https://ww2.arb.ca.gov/ghg-gwps		
CO2/CO2e	1	IPCC AR4	https://ww2.arb.ca.gov/ghg-gwps		

Natural Gas Engine Pump - Total 7 pump stations 2 Centaur 40 PS, 4 Taurus 60 PS

PS information provided by client. HP rating assumes 80% efficiency

Pump Stations	**HP**	**MMBTU/hr**	**MMBTU/yr**	**Heat Rate**		
Centaur 40				9125	Btu/hp-h	
	24,919					
PS 1	7,123	18	158,766	65.00	569,377.01	MMBTU/yr
PS 5	3,601	9	80,264	32.86	287,845.94	MMBTU/yr
Taurus 60				10830	Btu/kWh	
PS 2/3	8,402	21	187,274	90.99	797,104.46	
PS 4	3,862	10	86,081	41.83	366,391.03	
PS 6	5,897	15	131,440	63.86	559,453.11	
PS 7	6,758	17	150,631	73.19	641,136.87	
Max HP:	35,643					
Centaur 40 MMBTU/HP-hr	27		239,030	97.86	857,222.94	
Taurus 60 MMBTU/HP-hr	63		555,426	269.87	2,364,085.47	
Project Total MMBTU/HP-hr	**91**		794,456	**368**	**3,221,308**	

L-Gen Units
From Mainspring PPT 1-23-25

Number of Units	Total kW Req'd	kW per Unit	Gas Consumption (MMBTu/Yr)
181	43,621	241	3,124,659

Operating Hrs.	Hrs/Year	Operating Up Time	Gas Consumption (MMBTu/kW)
8,322	8,760	0.95	0.008607545
			8607.54

Power Reqt's
PS1
PS2/3
PS4
PS5
PS6
PS7

Fuel Cell Component

Minimum kW	4,500	
kW/HP	0.746	
HP	6,032.172	
Fuel Cell MMBTU/HP-hr	**15.35**	Emissions credits applied to the most conservative emission factor (Taurus 60) engine.

Load Factor:	1.00		(CalEEMod Generator Set CNG Default Load Factor is 0.68, Appendix G, Table G-12)		
Operating Hours per Unit:	24	hours/day	(Assuming 24 hours of operation)	64.4	*0.469476*
	8,760	hours/year	(Assuiming 24 hours of operation, 365 days a year	2.544	*0.01854576*
	365	days/year			

	Taurus 60 Engine (PS 2,3,5,6)									
	Criteria Pollutants [1]						Greenhouse Gases [2]			
	VOC	**NO_x**	**CO**	**SOx**	**PM10**	**PM2.5**	**CO_2**	**CH4**	**N2O**	**CO_2e (tons/yr)**
lb/MMBTU	0.00634	0.00729	0.0111	0.0034	0.006	0.006	118.00	0.0104	0.0002	—
lbs/hr	0.40	0.4622	0.70	0.22	0.38	0.38	7,481.76	0.66	0.01	—
lb/day	**9.65**	**11.09**	**16.89**	**5.17**	**9.13**	**9.13**	**179,562.27**	**15.83**	**0.30**	—
lbs/yr	3,521.40	4,049.05	6,165.22	1,888.45	3,332.55	3,332.55	65,540,228	5,776	111	—
short tons/yr	**1.76**	**2.02**	**3.08**	**0.94**	**1.67**	**1.67**	32,770	2.89	0.06	**32,859**
metric tons/yr	—	—	—	—	—	—	**29,729**	**2.62**	**0.05**	**29,809**

	Centaur 40 Engine (PS 1 and4)									
	Criteria Pollutants [3]						Greenhouse Gases [2]			
	VOC	**NO_x**	**CO**	**SOx**	**PM10**	**PM2.5**	**CO_2**	**CH4**	**N2O**	**CO_2e (tons/yr)**
lb/MMBTU	0.00632	0.00909	0.0221	0.0034	0.006	0.006	118.00	0.0104	0.0002	—
lbs/hr	0.17	0.25	0.60	0.09	0.16	0.16	3,219.81	0.28	0.01	—
lbs/day	**4.14**	**5.95**	**14.47**	**2.23**	**3.93**	**3.93**	**77,275**	**6.81**	**0.13**	—
lbs/yr	1,510.67	2,172.78	5,282.56	812.70	1,434.18	1,434.18	28,205,522	2,486	48	—
short tons/yr	**0.76**	**1.09**	**2.64**	**0.41**	**0.72**	**0.72**	14,103	1.24	0.02	**14,141**
metric tons/yr	—	—	—	—	—	—	**12,794**	**1.13**	**0.02**	**12,828**

	VOC	**NOX**	**CO**	**SOx**	**PM10**	**PM2.5**	**CO2**	**CH4**	**N2O**	**CO2e MTons/year**
Nothern Pipeline Pump Stations Emissions (lbs/day)	13.79	17.05	31.36	7.40	13.06	13.06				42,638

Notes:

1. Tauruas 60 Engine Emission factors for criteria pollutants: Estimated Power Island Emissions, Stantec, October 25, 2021. Received from email September 19, 2024.
2. Emission factors for Greenhouse Gases: (CO2) Estimated Power Island Emissions, Stantec, October 25, 2021. Received from email September 19, 2024. (CH4, N2O) CalEEMod, Natural Gas Emission Factors, Appendix G, Table G-4
3. Centaur 40 Engine Emission factors for criteria pollutants: Estimated Power Island Emissions, Stantec, October 25, 2021. Received from email September 19, 2024.

50000 afy 30998 gpm

	@ 100% Efficiency			@ Assumed Operating Efficiency[2]					Back Calc'd	Back Calc'd
	kWh/yr	kWh/day	kWh	kWh/yr	kWh/day	kWh	MMBTU/year	MMBTU/day	TDH	TDH
Pump Station Operations[1]	22,000,000	60,274	2,511.42	73,333,333	200,913	8,371.4	250,213		322.12	1,073.74
Wellfied Operations[1]	30,800,000	84,384	3,515.98	77,000,000	210,959	8,790.0	262,724		450.97	1,127.43
				150,333,333	411,872	17,161	512,937	1,405		

1kWh = 3,412 BTU

(1) From RBF Power Requirements Analysis Technical Memorandum November 18, 2010

(2) RBF Power Requirements Analysis Technical Memorandum November 18, 2010 30% eff for pump stations, 40% eff for well field

50,000 AFY

Pollutant	Emission Factor lb/MMBTU	Emissions/ day lbs/day	Emissions/ye ar tons/year	CH2M Emissions factor lbs/day	CH2M Emissions factor (calculated)	Pump Station lbs/day	Wellfield lbs/day	Pump Station lbs/day	Wellfield lbs/day
CO	0.013	18.27	3.33	18.91	0.01346	8.91	9.36	9.22	9.68
NOx	0.009	12.65	2.31	12.94	0.00921	6.17	6.48	6.31	6.63
VOC	0.003	4.22	0.77	3.6	0.00256	2.06	2.16	1.76	1.84
PM10	0.007	9.84	1.80	9.28	0.00660	4.80	5.04	4.52	4.75

75000 afy 46497 gpm

	@ 100% Efficiency			@ Assumed Operating Efficiency[2]					Back Calc'd	Back Calc'd
	kWh/yr	kWh/day	kWh	kWh/yr	kWh/day	kWh	MMBTU/year	MMBTU/day	TDH	TDH
Pump Station Operations[1]	22,000,000	60,274	2,511.42	73,333,333	200,913	8,371.4	250,213		214.75	715.83
Wellfied Operations[1]	50,700,000	138,904	5,787.67	126,750,000	347,260	14,469.2	432,471		494.90	1,237.24
				200,083,333	548,174	22,841	682,684	1,870		

1kWh = 3,412 BTU

(1) From RBF Power Requirements Analysis Technical Memorandum November 18, 2010

(2) RBF Power Requirements Analysis Technical Memorandum November 18, 2010 30% eff for pump stations, 40% eff for well field

75,000 AFY

Pollutant	Emission Factor lb/MMBTU	Emissions/ day lbs/day	Emissions/ye ar tons/year	CH2M Emissions factor lbs/day	CH2M Emissions factor (calculated)	Pump Station lbs/day	Wellfield lbs/day	Pump Station lbs/day	Wellfield lbs/day
CO	0.013	24.31	4.44	18.91	0.01011	8.91	15.40	9.22	15.94
NOx	0.009	16.83	3.07	12.94	0.00692	6.17	10.66	6.31	10.91
VOC	0.003	5.61	1.02	3.6	0.00192	2.06	3.55	1.76	3.04
PM10	0.007	13.09	2.39	9.28	0.00496	4.80	8.29	4.52	7.82

From the Revised Calculations provided by CH_2MHill - Heat rate and emission data screen test for gas recip engines 8-May-12 Rev 2

	lb/kW	# of engines	Combined lbs/hr	lbs/day	ESA Emissions 2-25		MMBTU/hr		
VOC									
Well Field	0.000280465	2	2.18875	52.53		52.53	15.71	0.12	1.8852
Pump Station	0.000182331	2	2.91875	70.05		70.05	31.245		
Total VOC (lbs/day)				122.58	125.33				
NOx									
Well Field	0.00025708	2	2.00625	48.15		48.15			
Pump Station	0.000136729	2	2.18875	52.53		52.53			
Total NOx (lbs/day)				100.68	117.99				
CO									
Well Field	0.0003739	2	2.917916667	70.03		70.03			
Pump Station	0.000379836	2	6.080416667	145.93		145.93			
Total CO (lbs/day)				215.96	235.18				

	lb/MMBTU		Combined lbs/hr	lbs/day		MMBTU/hr	
PM10							
Well Field	0.0038400	2	0.1207	2.8957		15.71	0.00384 from AP-42
Pump Station	0.0038400	2	0.2400	5.7591		31.245	
Total PM10 (lbs/day)				8.6547	42.69		
PM2.5							
Well Field	0.0007710	2	0.0242	0.5814		15.71	0.00384
Pump Station	0.0007710	2	0.0482	1.1563		31.245	
Total 2.5 (lbs/day)				1.7377	7.68		
SOx						MMBTU/hr	
Well Field	0.0007710	2	0.0242	0.5814		15.71	
Pump Station	0.0007710	2	0.0482	1.1563		31.245	

	kW/Engine	# of engines	kW	
Power Provided				
Well Field	1951	2	3902	
Pump Station	4002	2	8004	
Total Power (kW/MW)			11906	11.906

Emissions Summary

	Generator Type	VOC	NOx	CO	SOx	PM10	PM2.5	CO_2	CH_4	N_2O	CO_2e	CO_2e
		lbs/day						1	25	298		MT/yr
NPS 1	ICE	2.75	3.95	9.61	1.48	2.61	2.61	51,327	4.52	0.09	51,466	8,521
NPS 2/3	ICE	3.25	3.74	5.70	1.74	3.08	3.08	60,543	5.34	0.10	60,707	10,051
NPS 4	ICE	1.50	1.72	2.62	0.80	1.42	1.42	27,829	2.45	0.05	27,904	4,620
NPS 5	ICE	1.39	2.00	4.86	0.75	1.32	1.32	25,948	2.29	0.04	26,019	4,308
NPS 6	ICE	2.28	2.63	4.00	1.22	2.16	2.16	42,493	3.75	0.07	42,608	7,054
NPS 7	ICE	2.62	3.01	4.58	1.40	2.48	2.48	48,697	4.29	0.08	48,829	8,084
Well Field	ICE	52.53	48.15	70.03	0.58	2.90	0.58					
SPS 1	ICE	35.03	26.27	72.97	0.58	2.88	0.58					
		101.34	**91.46**	**174.36**	**8.56**	**18.83**	**14.22**					
	MDAQMD Thresholds	**137.00**	**137.00**	**548.00**	**137.00**	**82.00**	**65.00**					
		no	**no**	**no**	**no**	**no**	**no**					
NPS	1-5	4.14	5.95	14.47	2.23	3.93	3.93	77,275	6.81	0.13	77,485	12,828
NPS	2,3,4,6,7	9.65	11.09	16.89	5.17	9.13	9.13	179,562	15.83	0.30	180,049	29,809
Total NPS		13.79	17.05	31.36	7.40	13.06	13.06	256,838	22.64	0.44	257,533	42,638
Total Wellfield + SPS 1		87.56	74.42	143.00	1.16	5.78	1.16					

AQ-4 CalEEMod Output Files

Cadiz Pipeline - Pump Station Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cadiz Pipeline - Pump Station
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	6.80
Location	Cadiz, CA 92277, USA
County	San Bernardino-Mojave Desert
City	Unincorporated
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5194
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.25

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
General Light Industry	43.6	1000sqft	1.00	43,560	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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.4	10.4	9.44	11.7	0.02	0.31	0.38	0.69	0.29	0.09	0.38	—	2,709	2,709	0.09	0.09	2.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.32	1.11	9.48	11.2	0.02	0.31	1.31	1.54	0.29	0.25	0.47	—	2,996	2,996	0.08	0.30	0.13
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.07	0.99	3.75	4.70	0.01	0.12	0.25	0.38	0.11	0.06	0.17	—	1,202	1,202	0.03	0.06	0.54
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	0.18	0.68	0.86	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	—	199	199	0.01	0.01	0.09

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
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	10.4	10.4	9.44	11.7	0.02	0.31	0.38	0.69	0.29	0.09	0.38	—	2,709	2,709	0.09	0.09	2.03
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.32	1.11	9.48	11.2	0.02	0.31	1.31	1.54	0.29	0.25	0.47	—	2,996	2,996	0.08	0.30	0.13
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.07	0.99	3.75	4.70	0.01	0.12	0.25	0.38	0.11	0.06	0.17	—	1,202	1,202	0.03	0.06	0.54
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.19	0.18	0.68	0.86	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	—	199	199	0.01	0.01	0.09

3. Construction Emissions Details

3.1. Site Preparation (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	2.07	3.82	0.01	0.07	—	0.07	0.06	—	0.06	—	581	581	0.02	< 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	0.01	0.01	0.11	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.8	31.8	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.27	5.27	< 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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.03	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	< 0.005	0.01	0.03
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	313	313	< 0.005	0.04	0.02
Hauling	< 0.005	< 0.005	0.16	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.01
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	0.02
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.02
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.32	7.32	< 0.005	< 0.005	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.83	2.83	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.21	1.21	< 0.005	< 0.005	< 0.005

3.3. Grading (2026) - 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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	3.99	5.75	0.01	0.19	—	0.19	0.18	—	0.18	—	893	893	0.04	0.01	—
Dust From Material Movemen	—	—	—	—	—	—	0.54	0.54	—	0.06	0.06	—	—	—	—	—	—
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	0.03	0.03	0.22	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.9	48.9	< 0.005	< 0.005	—
Dust From Material Movemen	—	—	—	—	—	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.10	8.10	< 0.005	< 0.005	—
Dust From Material Movemen	—	—	—	—	—	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.03	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	< 0.005	0.01	0.03
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	313	313	< 0.005	0.04	0.02
Hauling	0.03	0.03	1.81	0.40	0.01	0.03	0.42	0.45	0.03	0.11	0.14	—	1,537	1,537	< 0.005	0.24	0.08
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	0.02
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.02
Hauling	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	84.2	84.2	< 0.005	0.01	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.83	2.83	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.01

3.5. Building Construction (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.21	1.01	8.89	10.00	0.02	0.30	—	0.30	0.28	—	0.28	—	1,977	1,977	0.08	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.21	1.01	8.89	10.00	0.02	0.30	—	0.30	0.28	—	0.28	—	1,977	1,977	0.08	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	0.32	2.80	3.15	0.01	0.10	—	0.10	0.09	—	0.09	—	623	623	0.03	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.51	0.57	< 0.005	0.02	—	0.02	0.02	—	0.02	—	103	103	< 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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.54	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	286	286	0.01	0.01	0.97
Vendor	0.01	0.01	0.31	0.13	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	312	312	< 0.005	0.04	0.79
Hauling	< 0.005	< 0.005	0.15	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.03	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	< 0.005	0.01	0.03
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	313	313	< 0.005	0.04	0.02
Hauling	< 0.005	< 0.005	0.16	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.01
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	82.1	82.1	< 0.005	< 0.005	0.13
Vendor	< 0.005	< 0.005	0.10	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	98.4	98.4	< 0.005	0.01	0.11
Hauling	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.1	42.1	< 0.005	0.01	0.04
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.6	13.6	< 0.005	< 0.005	0.02
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.02
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.97	6.97	< 0.005	< 0.005	0.01

3.7. Paving (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.69	3.98	0.01	0.12	—	0.12	0.11	—	0.11	—	614	614	0.02	< 0.005	—
Paving	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.15	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	33.6	33.6	< 0.005	< 0.005	—
Paving	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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.57	5.57	< 0.005	< 0.005	—
Paving	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.54	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	286	286	0.01	0.01	0.97
Vendor	0.01	0.01	0.31	0.13	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	312	312	< 0.005	0.04	0.79
Hauling	< 0.005	< 0.005	0.15	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	0.02
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.02
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.32	7.32	< 0.005	< 0.005	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.83	2.83	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.21	1.21	< 0.005	< 0.005	< 0.005

3.9. Architectural Coating (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.14	1.51	< 0.005	0.03	—	0.03	0.03	—	0.03	—	178	178	0.01	< 0.005	—
Architectural Coatings	10.1	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.75	9.75	< 0.005	< 0.005	—
Architectural Coatings	0.55	0.55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.61	1.61	< 0.005	< 0.005	—
Architectural Coatings	0.10	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.54	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	286	286	0.01	0.01	0.97

Vendor	0.01	0.01	0.31	0.13	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	312	312	< 0.005	0.04	0.79
Hauling	< 0.005	< 0.005	0.15	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	0.02
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.02
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.32	7.32	< 0.005	< 0.005	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.36	2.36	< 0.005	< 0.005	< 0.005
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.83	2.83	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.21	1.21	< 0.005	< 0.005	< 0.005

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
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
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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/1/2026	1/28/2026	5.00	20.0	—
Grading	Grading	1/29/2026	2/25/2026	5.00	20.0	—
Building Construction	Building Construction	2/26/2026	8/5/2026	5.00	115	—
Paving	Paving	8/6/2026	9/2/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	9/3/2026	9/30/2026	5.00	20.0	—

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	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Architectural Coating	Air Compressors	Diesel	Average	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
Site Preparation	—	—	—	—
Site Preparation	Worker	20.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	10.0	10.2	HHDT,MHDT
Site Preparation	Hauling	2.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	10.0	10.2	HHDT,MHDT
Grading	Hauling	23.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	20.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	10.0	10.2	HHDT,MHDT
Building Construction	Hauling	2.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	10.0	10.2	HHDT,MHDT
Paving	Hauling	2.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	20.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	10.0	10.2	HHDT,MHDT

Architectural Coating	Hauling	2.00	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
Architectural Coating	0.00	0.00	65,340	21,780	—

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	—	3,300	10.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	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
2026	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. 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 assume emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	32.0	annual days of extreme heat

Extreme Precipitation	0.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.01	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 observe 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 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 consi 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 eve 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 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 different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temper 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	4	0	0	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	0	0	0	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 grea 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 representi 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 me

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
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	1	1	1	2
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 grea 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 representi 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	64.9
AQ-PM	13.4
AQ-DPM	0.09
Drinking Water	61.3
Lead Risk Housing	67.3
Pesticides	0.00

Toxic Releases	6.40
Traffic	0.38
Effect Indicators	—
CleanUp Sites	97.5
Groundwater	22.1
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	0.00
Solid Waste	94.1
Sensitive Population	—
Asthma	34.4
Cardio-vascular	99.5
Low Birth Weights	61.7
Socioeconomic Factor Indicators	—
Education	50.7
Housing	4.03
Linguistic	24.8
Poverty	79.8
Unemployment	76.1

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	20.42858976
Employed	0.61593738
Median HI	9.059412293
Education	—

Bachelor's or higher	30.4889003
High school enrollment	100
Preschool enrollment	1.873476197
Transportation	—
Auto Access	58.83485179
Active commuting	1.039394328
Social	—
2-parent households	73.18105993
Voting	62.09418709
Neighborhood	—
Alcohol availability	97.0101373
Park access	20.00513281
Retail density	2.630565892
Supermarket access	6.775311177
Tree canopy	0.10265623
Housing	—
Homeownership	46.75991274
Housing habitability	57.3206724
Low-inc homeowner severe housing cost burden	90.69677916
Low-inc renter severe housing cost burden	87.54010009
Uncrowded housing	55.19055563
Health Outcomes	—
Insured adults	33.3504427
Arthritis	0.0
Asthma ER Admissions	58.4
High Blood Pressure	0.0
Cancer (excluding skin)	0.0

Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	1.8
Cognitively Disabled	5.5
Physically Disabled	3.9
Heart Attack ER Admissions	8.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	85.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	51.6
Elderly	14.5
English Speaking	72.3
Foreign-born	4.1
Outdoor Workers	67.4
Climate Change Adaptive Capacity	—

Impervious Surface Cover	95.3
Traffic Density	0.2
Traffic Access	23.0
Other Indices	—
Hardship	61.9
Other Decision Support	—
2016 Voting	75.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	44.0
Healthy Places Index Score for Project Location (b)	10.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
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

Characteristics: Project Details	See project assumptions
Land Use	Assume 1 acre per station
Construction: Construction Phases	9 month construction per station
Construction: Off-Road Equipment	See project assumptions
Construction: Dust From Material Movement	See project assumptions
Construction: Trips and VMT	See project assumptions

Cadiz Pipeline - Pipeline Inspection 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	Cadiz Pipeline - Pipeline Inspection
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	6.80
Location	Cadiz, CA 92277, USA
County	San Bernardino-Mojave Desert
City	Unincorporated
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5194
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.25

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 Non-Asphalt Surfaces	1,457	1000sqft	33.5	0.00	1,457,280	—	—	—

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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.89	0.75	5.83	8.41	0.02	0.23	0.67	0.90	0.21	0.13	0.34	—	1,929	1,929	0.06	0.08	2.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.87	0.74	5.86	7.90	0.02	0.23	0.67	0.90	0.21	0.13	0.34	—	1,897	1,897	0.05	0.08	0.05
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.49	0.42	3.38	4.31	0.01	0.12	0.33	0.46	0.12	0.07	0.18	—	1,063	1,063	0.03	0.05	0.52
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.08	0.62	0.79	< 0.005	0.02	0.06	0.08	0.02	0.01	0.03	—	176	176	< 0.005	0.01	0.09

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
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	0.89	0.75	5.83	8.41	0.02	0.23	0.67	0.90	0.21	0.13	0.34	—	1,929	1,929	0.06	0.08	2.03
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.87	0.74	5.86	7.90	0.02	0.23	0.67	0.90	0.21	0.13	0.34	—	1,897	1,897	0.05	0.08	0.05
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.49	0.42	3.38	4.31	0.01	0.12	0.33	0.46	0.12	0.07	0.18	—	1,063	1,063	0.03	0.05	0.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.09	0.08	0.62	0.79	< 0.005	0.02	0.06	0.08	0.02	0.01	0.03	—	176	176	< 0.005	0.01	0.09

3. Construction Emissions Details

3.1. Building Construction (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	4.75	4.71	0.01	0.18	—	0.18	0.16	—	0.16	—	1,198	1,198	0.05	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	4.75	4.71	0.01	0.18	—	0.18	0.16	—	0.16	—	1,198	1,198	0.05	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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.16	1.15	< 0.005	0.04	—	0.04	0.04	—	0.04	—	292	292	0.01	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.3	48.3	< 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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.54	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	286	286	0.01	0.01	0.97
Vendor	0.01	0.01	0.31	0.13	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	312	312	< 0.005	0.04	0.79
Hauling	< 0.005	< 0.005	0.15	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.03	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	< 0.005	0.01	0.03
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	313	313	< 0.005	0.04	0.02
Hauling	< 0.005	< 0.005	0.16	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.01
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.28	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.6	63.6	< 0.005	< 0.005	0.10
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	76.2	76.2	< 0.005	0.01	0.08
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.6	32.6	< 0.005	0.01	0.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.02

Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.01
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.39	5.39	< 0.005	< 0.005	< 0.005

3.3. Pipeline Inspection (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	0.64	5.28	6.70	0.01	0.22	—	0.22	0.20	—	0.20	—	988	988	0.04	0.01	—
Dust From Material Movemen	—	—	—	—	—	—	0.29	0.29	—	0.03	0.03	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	0.64	5.28	6.70	0.01	0.22	—	0.22	0.20	—	0.20	—	988	988	0.04	0.01	—
Dust From Material Movemen	—	—	—	—	—	—	0.29	0.29	—	0.03	0.03	—	—	—	—	—	—
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	0.27	0.23	1.86	2.37	< 0.005	0.08	—	0.08	0.07	—	0.07	—	349	349	0.01	< 0.005	—

Dust From Material Movemen	—	—	—	—	—	—	0.10	0.10	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.34	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	57.8	57.8	< 0.005	< 0.005	—
Dust From Material Movemen	—	—	—	—	—	—	0.02	0.02	—	< 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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.54	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	286	286	0.01	0.01	0.97
Vendor	0.01	0.01	0.31	0.13	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	312	312	< 0.005	0.04	0.79
Hauling	< 0.005	< 0.005	0.15	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.03	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	< 0.005	0.01	0.03
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	313	313	< 0.005	0.04	0.02
Hauling	< 0.005	< 0.005	0.16	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.01
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	92.1	92.1	< 0.005	< 0.005	0.15
Vendor	< 0.005	< 0.005	0.12	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	110	110	< 0.005	0.02	0.12
Hauling	< 0.005	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	47.2	47.2	< 0.005	0.01	0.04

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.02
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.02
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.82	7.82	< 0.005	< 0.005	0.01

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
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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Building Construction	Building Construction	7/1/2026	10/31/2026	5.00	89.0	—
Pipeline Inspection	Trenching	1/1/2026	6/30/2026	5.00	129	—

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

Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Pipeline Inspection	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Pipeline Inspection	Graders	Diesel	Average	1.00	8.00	148	0.41
Pipeline Inspection	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Pipeline Inspection	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Pipeline Inspection	—	—	—	—
Pipeline Inspection	Worker	20.0	18.5	LDA,LDT1,LDT2
Pipeline Inspection	Vendor	10.0	10.2	HHDT,MHDT
Pipeline Inspection	Hauling	2.00	20.0	HHDT
Pipeline Inspection	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	20.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	10.0	10.2	HHDT,MHDT
Building Construction	Hauling	2.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

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

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)
Pipeline Inspection	—	323,840	64.5	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
Other Non-Asphalt Surfaces	33.5	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	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. 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 assume emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	32.0	annual days of extreme heat
Extreme Precipitation	0.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.01	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 observe 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 o 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 consi 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 eve 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 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 different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temper 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	4	0	0	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	0	0	0	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 grea 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 representi 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 me

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
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	1	1	1	2
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 grea 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 representi 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	64.9
AQ-PM	13.4
AQ-DPM	0.09
Drinking Water	61.3
Lead Risk Housing	67.3
Pesticides	0.00
Toxic Releases	6.40
Traffic	0.38
Effect Indicators	—
CleanUp Sites	97.5
Groundwater	22.1

Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	0.00
Solid Waste	94.1
Sensitive Population	—
Asthma	34.4
Cardio-vascular	99.5
Low Birth Weights	61.7
Socioeconomic Factor Indicators	—
Education	50.7
Housing	4.03
Linguistic	24.8
Poverty	79.8
Unemployment	76.1

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	20.42858976
Employed	0.61593738
Median HI	9.059412293
Education	—
Bachelor's or higher	30.4889003
High school enrollment	100
Preschool enrollment	1.873476197
Transportation	—
Auto Access	58.83485179

Active commuting	1.039394328
Social	—
2-parent households	73.18105993
Voting	62.09418709
Neighborhood	—
Alcohol availability	97.0101373
Park access	20.00513281
Retail density	2.630565892
Supermarket access	6.775311177
Tree canopy	0.10265623
Housing	—
Homeownership	46.75991274
Housing habitability	57.3206724
Low-inc homeowner severe housing cost burden	90.69677916
Low-inc renter severe housing cost burden	87.54010009
Uncrowded housing	55.19055563
Health Outcomes	—
Insured adults	33.3504427
Arthritis	0.0
Asthma ER Admissions	58.4
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	1.8

Cognitively Disabled	5.5
Physically Disabled	3.9
Heart Attack ER Admissions	8.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	85.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	51.6
Elderly	14.5
English Speaking	72.3
Foreign-born	4.1
Outdoor Workers	67.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	95.3
Traffic Density	0.2
Traffic Access	23.0
Other Indices	—
Hardship	61.9

Other Decision Support	—
2016 Voting	75.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	44.0
Healthy Places Index Score for Project Location (b)	10.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
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
Characteristics: Project Details	See project assumptions
Construction: Construction Phases	Total pipeline inspection 6 months, pipeline rehab 4 months
Construction: Off-Road Equipment	See project assumptions
Land Use	Pipeline inspection area
Construction: Dust From Material Movement	Dust movement

Construction: Trips and VMT	See project assumptions

Cadiz Pipeline - ARAVBO Valves Detailed Report

Table of Contents

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cadiz Pipeline - ARAVBO Valves
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	6.80
Location	Cadiz, CA 92277, USA
County	San Bernardino-Mojave Desert
City	Unincorporated
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5194
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.25

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 Non-Asphalt Surfaces	0.05	1000sqft	< 0.005	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.61	0.52	4.31	5.55	0.01	0.19	0.46	0.65	0.18	0.09	0.26	—	1,317	1,317	0.03	0.07	0.04
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.05	0.07	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	15.7	15.7	< 0.005	< 0.005	0.01
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	—	2.60	2.60	< 0.005	< 0.005	< 0.005

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
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.61	0.52	4.31	5.55	0.01	0.19	0.46	0.65	0.18	0.09	0.26	—	1,317	1,317	0.03	0.07	0.04

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.01	0.05	0.07	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	15.7	15.7	< 0.005	< 0.005	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.60	2.60	< 0.005	< 0.005	< 0.005

3. Construction Emissions Details

3.1. Building Construction (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.34	2.80	3.47	0.01	0.07	—	0.07	0.07	—	0.07	—	452	452	0.02	< 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	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.71	3.71	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	127	127	< 0.005	< 0.005	0.01
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	313	313	< 0.005	0.04	0.02
Hauling	< 0.005	< 0.005	0.16	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.01
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	—	1.07	1.07	< 0.005	< 0.005	< 0.005
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.57	2.57	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.43	0.43	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005

3.3. Trenching (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	0.46	3.78	4.86	0.01	0.18	—	0.18	0.17	—	0.17	—	744	744	0.03	0.01	—
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.08	4.08	< 0.005	< 0.005	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 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	—
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	127	127	< 0.005	< 0.005	0.01
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	313	313	< 0.005	0.04	0.02
Hauling	< 0.005	< 0.005	0.16	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.01
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	—	0.71	0.71	< 0.005	< 0.005	< 0.005
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.71	1.71	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005

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
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
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
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
Building Construction	Building Construction	1/6/2026	1/8/2026	5.00	3.00	—
Trenching	Trenching	1/1/2026	1/2/2026	5.00	2.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Trenching	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Trenching	Graders	Diesel	Average	1.00	8.00	148	0.41

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Trenching	—	—	—	—
Trenching	Worker	10.0	18.5	LDA,LDT1,LDT2
Trenching	Vendor	10.0	10.2	HHDT,MHDT
Trenching	Hauling	2.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

Building Construction	—	—	—	—
Building Construction	Worker	10.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	10.0	10.2	HHDT,MHDT
Building Construction	Hauling	2.00	20.0	HHDT
Building 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

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)
Trenching	—	44.4	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	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Other Non-Asphalt Surfaces	< 0.005	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	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. 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 assume emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	32.0	annual days of extreme heat
Extreme Precipitation	0.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.01	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 observe 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 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 consi 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 eve 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 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 different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temper 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	4	0	0	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	0	0	0	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 grea 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 representi
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 me

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
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	1	1	1	2
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 grea
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 representi
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	64.9
AQ-PM	13.4
AQ-DPM	0.09

Drinking Water	61.3
Lead Risk Housing	67.3
Pesticides	0.00
Toxic Releases	6.40
Traffic	0.38
Effect Indicators	—
CleanUp Sites	97.5
Groundwater	22.1
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	0.00
Solid Waste	94.1
Sensitive Population	—
Asthma	34.4
Cardio-vascular	99.5
Low Birth Weights	61.7
Socioeconomic Factor Indicators	—
Education	50.7
Housing	4.03
Linguistic	24.8
Poverty	79.8
Unemployment	76.1

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	20.42858976

Employed	0.61593738
Median HI	9.059412293
Education	—
Bachelor's or higher	30.4889003
High school enrollment	100
Preschool enrollment	1.873476197
Transportation	—
Auto Access	58.83485179
Active commuting	1.039394328
Social	—
2-parent households	73.18105993
Voting	62.09418709
Neighborhood	—
Alcohol availability	97.0101373
Park access	20.00513281
Retail density	2.630565892
Supermarket access	6.775311177
Tree canopy	0.10265623
Housing	—
Homeownership	46.75991274
Housing habitability	57.3206724
Low-inc homeowner severe housing cost burden	90.69677916
Low-inc renter severe housing cost burden	87.54010009
Uncrowded housing	55.19055563
Health Outcomes	—
Insured adults	33.3504427
Arthritis	0.0

Asthma ER Admissions	58.4
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	1.8
Cognitively Disabled	5.5
Physically Disabled	3.9
Heart Attack ER Admissions	8.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	85.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	51.6
Elderly	14.5
English Speaking	72.3

Foreign-born	4.1
Outdoor Workers	67.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	95.3
Traffic Density	0.2
Traffic Access	23.0
Other Indices	—
Hardship	61.9
Other Decision Support	—
2016 Voting	75.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	44.0
Healthy Places Index Score for Project Location (b)	10.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
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
Characteristics: Project Details	See project assumptions
Construction: Construction Phases	1 week per valve
Construction: Off-Road Equipment	See project assumptions
Construction: Dust From Material Movement	See project assumptions
Construction: Trips and VMT	See project assumptions

Cadiz Pipeline - Cathodic Protection Repair Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cadiz Pipeline - Cathodic Protection Repair
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	6.80
Location	Cadiz, CA 92277, USA
County	San Bernardino-Mojave Desert
City	Unincorporated
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5194
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.25

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 Non-Asphalt Surfaces	1,457	1000sqft	33.5	0.00	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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.79	0.66	5.33	7.23	0.01	0.22	0.25	0.47	0.20	0.06	0.26	—	1,506	1,506	0.04	0.08	1.55
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.78	0.66	5.37	6.98	0.01	0.22	0.25	0.47	0.20	0.06	0.26	—	1,490	1,490	0.04	0.08	0.04
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	0.16	1.29	1.70	< 0.005	0.05	0.06	0.11	0.05	0.02	0.06	—	360	360	0.01	0.02	0.16
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.03	0.24	0.31	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	59.6	59.6	< 0.005	< 0.005	0.03

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
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	0.79	0.66	5.33	7.23	0.01	0.22	0.25	0.47	0.20	0.06	0.26	—	1,506	1,506	0.04	0.08	1.55
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.78	0.66	5.37	6.98	0.01	0.22	0.25	0.47	0.20	0.06	0.26	—	1,490	1,490	0.04	0.08	0.04
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.19	0.16	1.29	1.70	< 0.005	0.05	0.06	0.11	0.05	0.02	0.06	—	360	360	0.01	0.02	0.16
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.03	0.03	0.24	0.31	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	59.6	59.6	< 0.005	< 0.005	0.03

3. Construction Emissions Details

3.1. Building Construction (2026) - 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
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.60	4.83	6.29	0.01	0.21	—	0.21	0.19	—	0.19	—	917	917	0.04	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.60	4.83	6.29	0.01	0.21	—	0.21	0.19	—	0.19	—	917	917	0.04	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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.16	1.52	< 0.005	0.05	—	0.05	0.05	—	0.05	—	221	221	0.01	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.6	36.6	< 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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.77	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	143	143	0.01	< 0.005	0.48
Vendor	0.01	0.01	0.31	0.13	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	312	312	< 0.005	0.04	0.79
Hauling	< 0.005	< 0.005	0.15	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	127	127	< 0.005	< 0.005	0.01
Vendor	0.01	0.01	0.33	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	313	313	< 0.005	0.04	0.02
Hauling	< 0.005	< 0.005	0.16	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	134	134	< 0.005	0.02	0.01
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.4	31.4	< 0.005	< 0.005	0.05
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	75.3	75.3	< 0.005	0.01	0.08
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.2	32.2	< 0.005	0.01	0.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.20	5.20	< 0.005	< 0.005	0.01

Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.33	5.33	< 0.005	< 0.005	< 0.005

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
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
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
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
Building Construction	Building Construction	7/1/2026	10/31/2026	5.00	88.0	—

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
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction	Graders	Diesel	Average	1.00	8.00	148	0.41

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	10.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	10.0	10.2	HHDT,MHDT
Building Construction	Hauling	2.00	20.0	HHDT
Building 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

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)

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	33.5	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	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. 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 assume emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	32.0	annual days of extreme heat
Extreme Precipitation	0.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.01	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 observe 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 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 consi 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 eve 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 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 different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temper 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	4	0	0	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	0	0	0	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 grea 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 representi 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 me

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
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	1	1	1	2
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 grea 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 representi 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	64.9

AQ-PM	13.4
AQ-DPM	0.09
Drinking Water	61.3
Lead Risk Housing	67.3
Pesticides	0.00
Toxic Releases	6.40
Traffic	0.38
Effect Indicators	—
CleanUp Sites	97.5
Groundwater	22.1
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	0.00
Solid Waste	94.1
Sensitive Population	—
Asthma	34.4
Cardio-vascular	99.5
Low Birth Weights	61.7
Socioeconomic Factor Indicators	—
Education	50.7
Housing	4.03
Linguistic	24.8
Poverty	79.8
Unemployment	76.1

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	20.42858976
Employed	0.61593738
Median HI	9.059412293
Education	—
Bachelor's or higher	30.4889003
High school enrollment	100
Preschool enrollment	1.873476197
Transportation	—
Auto Access	58.83485179
Active commuting	1.039394328
Social	—
2-parent households	73.18105993
Voting	62.09418709
Neighborhood	—
Alcohol availability	97.0101373
Park access	20.00513281
Retail density	2.630565892
Supermarket access	6.775311177
Tree canopy	0.10265623
Housing	—
Homeownership	46.75991274
Housing habitability	57.3206724
Low-inc homeowner severe housing cost burden	90.69677916
Low-inc renter severe housing cost burden	87.54010009
Uncrowded housing	55.19055563
Health Outcomes	—

Insured adults	33.3504427
Arthritis	0.0
Asthma ER Admissions	58.4
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	1.8
Cognitively Disabled	5.5
Physically Disabled	3.9
Heart Attack ER Admissions	8.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	85.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	51.6

Elderly	14.5
English Speaking	72.3
Foreign-born	4.1
Outdoor Workers	67.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	95.3
Traffic Density	0.2
Traffic Access	23.0
Other Indices	—
Hardship	61.9
Other Decision Support	—
2016 Voting	75.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	44.0
Healthy Places Index Score for Project Location (b)	10.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
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
Characteristics: Project Details	See project assumptions
Construction: Construction Phases	See project assumptions
Construction: Off-Road Equipment	See project assumptions
Construction: Trips and VMT	See project assumptions