

Appendix A Air Quality and Greenhouse Gas Modeling Results



Dixon WWTF Expansion Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Dixon WWTF Expansion
Construction Start Date	1/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	34.8
Location	38.39818699874061, -121.81036435584218
County	Solano-Sacramento
City	Dixon
Air District	Yolo/Solano AQMD
Air Basin	Sacramento Valley
TAZ	829
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

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
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Unrefrigerated Warehouse-No Rail	3.80	1000sqft	2.50	3,800	0.00	—	—	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.01	2.33	18.9	15.9	0.06	0.74	17.5	18.2	0.68	4.47	5.16	—	8,051	8,051	0.16	0.84	11.1	8,318
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.99	2.33	19.4	16.7	0.06	0.68	29.4	30.1	0.63	3.01	3.64	—	8,049	8,049	0.16	0.84	0.29	8,304
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.18	0.97	9.59	9.01	0.02	0.37	4.64	5.02	0.34	0.56	0.90	—	2,587	2,587	0.08	0.16	0.85	2,636
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.18	1.75	1.65	< 0.005	0.07	0.85	0.92	0.06	0.10	0.16	—	428	428	0.01	0.03	0.14	436

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.01	1.69	18.9	15.9	0.06	0.74	17.5	18.2	0.68	4.47	5.16	—	8,051	8,051	0.16	0.84	11.1	8,318
2025	0.16	2.33	0.88	1.15	< 0.005	0.03	0.33	0.36	0.03	0.03	0.06	—	136	136	0.01	< 0.005	0.01	137
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.99	1.67	19.4	16.7	0.06	0.68	29.4	30.1	0.63	3.01	3.64	—	8,049	8,049	0.16	0.84	0.29	8,304
2025	1.49	2.33	10.6	11.9	0.02	0.40	2.13	2.53	0.37	0.21	0.59	—	2,231	2,231	0.09	0.02	< 0.005	2,240
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.18	0.97	9.59	9.01	0.02	0.37	4.64	5.02	0.34	0.56	0.90	—	2,587	2,587	0.08	0.16	0.85	2,636
2025	0.23	0.25	1.63	1.83	< 0.005	0.06	0.30	0.36	0.06	0.03	0.09	—	340	340	0.01	< 0.005	0.01	341
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.21	0.18	1.75	1.65	< 0.005	0.07	0.85	0.92	0.06	0.10	0.16	—	428	428	0.01	0.03	0.14	436
2025	0.04	0.05	0.30	0.33	< 0.005	0.01	0.05	0.07	0.01	0.01	0.02	—	56.3	56.3	< 0.005	< 0.005	< 0.005	56.5

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.15	0.04	0.41	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	3.61	718	722	0.47	0.02	0.21	740
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.12	0.04	0.23	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	3.61	714	717	0.47	0.02	0.01	735

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.13	0.04	0.30	< 0.005	< 0.005	2.64	2.64	< 0.005	0.27	0.27	3.61	715	718	0.47	0.02	0.09	736
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.02	0.01	0.05	< 0.005	< 0.005	0.48	0.48	< 0.005	0.05	0.05	0.60	118	119	0.08	< 0.005	0.02	122

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.03	0.24	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	—	56.8	56.8	< 0.005	< 0.005	0.21	57.8
Area	0.03	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.68	0.68	< 0.005	< 0.005	—	0.68
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	659	659	0.11	0.01	—	666
Water	—	—	—	—	—	—	—	—	—	—	—	1.68	1.54	3.22	0.17	< 0.005	—	8.78
Waste	—	—	—	—	—	—	—	—	—	—	—	1.93	0.00	1.93	0.19	0.00	—	6.74
Total	0.06	0.15	0.04	0.41	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	3.61	718	722	0.47	0.02	0.21	740
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.03	0.22	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	—	52.8	52.8	< 0.005	< 0.005	0.01	53.7
Area	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	659	659	0.11	0.01	—	666
Water	—	—	—	—	—	—	—	—	—	—	—	1.68	1.54	3.22	0.17	< 0.005	—	8.78
Waste	—	—	—	—	—	—	—	—	—	—	—	1.93	0.00	1.93	0.19	0.00	—	6.74
Total	0.03	0.12	0.04	0.23	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	3.61	714	717	0.47	0.02	0.01	735

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.03	0.21	< 0.005	< 0.005	2.64	2.64	< 0.005	0.27	0.27	—	53.5	53.5	< 0.005	< 0.005	0.09	54.5
Area	0.01	0.10	< 0.005	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.34	0.34	< 0.005	< 0.005	—	0.34
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	659	659	0.11	0.01	—	666
Water	—	—	—	—	—	—	—	—	—	—	—	1.68	1.54	3.22	0.17	< 0.005	—	8.78
Waste	—	—	—	—	—	—	—	—	—	—	—	1.93	0.00	1.93	0.19	0.00	—	6.74
Total	0.05	0.13	0.04	0.30	< 0.005	< 0.005	2.64	2.64	< 0.005	0.27	0.27	3.61	715	718	0.47	0.02	0.09	736
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.48	0.48	< 0.005	0.05	0.05	—	8.86	8.86	< 0.005	< 0.005	0.02	9.02
Area	< 0.005	0.02	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.06
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	109	109	0.02	< 0.005	—	110
Water	—	—	—	—	—	—	—	—	—	—	—	0.28	0.25	0.53	0.03	< 0.005	—	1.45
Waste	—	—	—	—	—	—	—	—	—	—	—	0.32	0.00	0.32	0.03	0.00	—	1.12
Total	0.01	0.02	0.01	0.05	< 0.005	< 0.005	0.48	0.48	< 0.005	0.05	0.05	0.60	118	119	0.08	< 0.005	0.02	122

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.92	1.61	15.6	16.0	0.02	0.67	—	0.67	0.62	—	0.62	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.76	0.76	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.85	0.88	< 0.005	0.04	—	0.04	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.48	0.00	0.00	13.0	13.0	0.00	1.31	1.31	—	104	104	< 0.005	< 0.005	0.01	105
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.78	0.17	< 0.005	0.01	15.6	15.6	0.01	1.58	1.60	—	615	615	0.01	0.10	0.03	644
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.65	0.65	0.00	0.07	0.07	—	5.80	5.80	< 0.005	< 0.005	0.01	5.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.77	0.78	< 0.005	0.08	0.08	—	33.7	33.7	< 0.005	0.01	0.03	35.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.12	0.12	0.00	0.01	0.01	—	0.96	0.96	< 0.005	< 0.005	< 0.005	0.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	—	5.58	5.58	< 0.005	< 0.005	< 0.005	5.84

3.3. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.7	11.4	0.03	0.55	—	0.55	0.51	—	0.51	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement:	—	—	—	—	—	—	1.63	1.63	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.7	11.4	0.03	0.55	—	0.55	0.51	—	0.51	—	2,716	2,716	0.11	0.02	—	2,725
Dust From Material Movement:	—	—	—	—	—	—	1.63	1.63	—	0.18	0.18	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.21	2.08	1.88	< 0.005	0.09	—	0.09	0.08	—	0.08	—	446	446	0.02	< 0.005	—	448	
Dust From Material Movement	—	—	—	—	—	—	0.27	0.27	—	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	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.05	0.04	0.38	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	—	73.9	73.9	< 0.005	< 0.005	—	74.2	
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.03	0.03	0.02	0.34	0.00	0.00	7.81	7.81	0.00	0.79	0.79	—	68.9	68.9	< 0.005	< 0.005	0.28	70.0	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Hauling	0.19	0.10	6.22	1.47	0.03	0.10	1.39	1.49	0.10	0.38	0.48	—	5,267	5,267	0.05	0.82	10.8	5,522	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.03	0.03	0.03	0.29	0.00	0.00	7.81	7.81	0.00	0.79	0.79	—	62.3	62.3	< 0.005	< 0.005	0.01	63.1	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	

Hauling	0.18	0.09	6.71	1.50	0.03	0.10	1.39	1.49	0.10	0.38	0.48	—	5,271	5,271	0.05	0.82	0.28	5,516
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	1.16	1.16	0.00	0.12	0.12	—	10.4	10.4	< 0.005	< 0.005	0.02	10.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.02	1.08	0.24	0.01	0.02	0.22	0.24	0.02	0.06	0.08	—	866	866	0.01	0.13	0.76	907
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.21	0.21	0.00	0.02	0.02	—	1.73	1.73	< 0.005	< 0.005	< 0.005	1.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.20	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	143	143	< 0.005	0.02	0.13	150

3.5. Grading (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.96	1.65	15.9	15.4	0.02	0.74	—	0.74	0.68	—	0.68	—	2,454	2,454	0.10	0.02	—	2,462
Dust From Material Movement	—	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.26	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.3	40.3	< 0.005	< 0.005	—	40.5
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.68	6.68	< 0.005	< 0.005	—	6.70
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.46	0.00	0.00	10.4	10.4	0.00	1.05	1.05	—	91.9	91.9	< 0.005	< 0.005	0.38	93.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.15	0.15	0.00	0.02	0.02	—	1.39	1.39	< 0.005	< 0.005	< 0.005	1.41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.03	0.03	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.32	11.2	11.9	0.02	0.46	—	0.46	0.42	—	0.42	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.32	11.2	11.9	0.02	0.46	—	0.46	0.42	—	0.42	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.59	5.08	5.40	0.01	0.21	—	0.21	0.19	—	0.19	—	995	995	0.04	0.01	—	998
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.93	0.98	< 0.005	0.04	—	0.04	0.03	—	0.03	—	165	165	0.01	< 0.005	—	165

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.07	0.00	0.00	1.66	1.66	0.00	0.17	0.17	—	14.7	14.7	< 0.005	< 0.005	0.06	14.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.47	0.47	< 0.005	0.05	0.05	—	17.4	17.4	< 0.005	< 0.005	0.04	18.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	1.66	1.66	0.00	0.17	0.17	—	13.3	13.3	< 0.005	< 0.005	< 0.005	13.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.47	0.47	< 0.005	0.05	0.05	—	17.4	17.4	< 0.005	< 0.005	< 0.005	18.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.68	0.68	0.00	0.07	0.07	—	6.11	6.11	< 0.005	< 0.005	0.01	6.20
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	7.88	7.88	< 0.005	< 0.005	0.01	8.21
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.12	0.12	0.00	0.01	0.01	—	1.01	1.01	< 0.005	< 0.005	< 0.005	1.03
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	1.30	1.30	< 0.005	< 0.005	< 0.005	1.36
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.24	10.6	11.9	0.02	0.40	—	0.40	0.37	—	0.37	—	2,201	2,201	0.09	0.02	—	2,209
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.60	1.79	< 0.005	0.06	—	0.06	0.06	—	0.06	—	332	332	0.01	< 0.005	—	333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.29	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	54.9	54.9	< 0.005	< 0.005	—	55.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	1.66	1.66	0.00	0.17	0.17	—	13.0	13.0	< 0.005	< 0.005	< 0.005	13.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.47	0.47	< 0.005	0.05	0.05	—	17.1	17.1	< 0.005	< 0.005	< 0.005	17.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.23	0.23	0.00	0.02	0.02	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.03
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	2.58	2.58	< 0.005	< 0.005	< 0.005	2.69
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.04	0.04	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.43	0.43	< 0.005	< 0.005	< 0.005	0.45
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.75	6.44	8.26	0.01	0.31	—	0.31	0.29	—	0.29	—	1,244	1,244	0.05	0.01	—	1,248
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.1	34.1	< 0.005	< 0.005	—	34.2
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.64	5.64	< 0.005	< 0.005	—	5.66
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.69	0.00	0.00	15.6	15.6	0.00	1.57	1.57	—	138	138	< 0.005	0.01	0.56	140
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.39	0.39	0.00	0.04	0.04	—	3.48	3.48	< 0.005	< 0.005	0.01	3.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.07	0.07	0.00	0.01	0.01	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	—	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	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	—	0.61
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.33	0.33	0.00	0.03	0.03	—	2.88	2.88	< 0.005	< 0.005	0.01	2.92	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.33	0.33	0.00	0.03	0.03	—	2.60	2.60	< 0.005	< 0.005	< 0.005	2.63	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	0.07	0.07	< 0.005	< 0.005	< 0.005	0.07	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.03	0.03	0.24	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	—	56.8	56.8	< 0.005	< 0.005	0.21	57.8
Total	0.03	0.03	0.03	0.24	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	—	56.8	56.8	< 0.005	< 0.005	0.21	57.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.03	0.03	0.22	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	—	52.8	52.8	< 0.005	< 0.005	0.01	53.7
Total	0.03	0.03	0.03	0.22	< 0.005	< 0.005	2.92	2.92	< 0.005	0.30	0.30	—	52.8	52.8	< 0.005	< 0.005	0.01	53.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.48	0.48	< 0.005	0.05	0.05	—	8.86	8.86	< 0.005	< 0.005	0.02	9.02
Total	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.48	0.48	< 0.005	0.05	0.05	—	8.86	8.86	< 0.005	< 0.005	0.02	9.02

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	653	653	0.11	0.01	—	659
Total	—	—	—	—	—	—	—	—	—	—	—	—	653	653	0.11	0.01	—	659
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	653	653	0.11	0.01	—	659
Total	—	—	—	—	—	—	—	—	—	—	—	—	653	653	0.11	0.01	—	659
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	108	108	0.02	< 0.005	—	109
Total	—	—	—	—	—	—	—	—	—	—	—	—	108	108	0.02	< 0.005	—	109

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.76	6.76	< 0.005	< 0.005	—	6.78
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.76	6.76	< 0.005	< 0.005	—	6.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.76	6.76	< 0.005	< 0.005	—	6.78
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.76	6.76	< 0.005	< 0.005	—	6.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.12	1.12	< 0.005	< 0.005	—	1.12
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.12	1.12	< 0.005	< 0.005	—	1.12

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.03	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.68	0.68	< 0.005	< 0.005	—	0.68
Total	0.03	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.68	0.68	< 0.005	< 0.005	—	0.68
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.06
Total	< 0.005	0.02	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.06	0.06	< 0.005	< 0.005	—	0.06

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1.68	1.54	3.22	0.17	< 0.005	—	8.78
Total	—	—	—	—	—	—	—	—	—	—	—	1.68	1.54	3.22	0.17	< 0.005	—	8.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1.68	1.54	3.22	0.17	< 0.005	—	8.78
Total	—	—	—	—	—	—	—	—	—	—	—	1.68	1.54	3.22	0.17	< 0.005	—	8.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	0.28	0.25	0.53	0.03	< 0.005	—	1.45
Total	—	—	—	—	—	—	—	—	—	—	—	0.28	0.25	0.53	0.03	< 0.005	—	1.45

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1.93	0.00	1.93	0.19	0.00	—	6.74
Total	—	—	—	—	—	—	—	—	—	—	—	1.93	0.00	1.93	0.19	0.00	—	6.74
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1.93	0.00	1.93	0.19	0.00	—	6.74
Total	—	—	—	—	—	—	—	—	—	—	—	1.93	0.00	1.93	0.19	0.00	—	6.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	0.32	0.00	0.32	0.03	0.00	—	1.12
Total	—	—	—	—	—	—	—	—	—	—	—	0.32	0.00	0.32	0.03	0.00	—	1.12

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

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

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2024	1/29/2024	5.00	20.0	—
Site Preparation	Site Preparation	1/30/2024	4/22/2024	5.00	60.0	—
Grading	Grading	4/23/2024	4/30/2024	5.00	6.00	—
Building Construction	Building Construction	5/15/2024	3/18/2025	5.00	220	—
Paving	Paving	5/1/2024	5/14/2024	5.00	10.0	—
Architectural Coating	Architectural Coating	3/19/2025	4/1/2025	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
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
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.5	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	8.75	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	75.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1.60	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	0.62	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.32	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	5,700	1,900	—

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 (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	700	—
Site Preparation	26,000	10,000	4.50	0.00	—
Grading	—	—	6.00	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
Unrefrigerated Warehouse-No Rail	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMТ/Weekday	VMТ/Saturday	VMТ/Sunday	VMТ/Year
Unrefrigerated Warehouse-No Rail	6.61	6.61	6.61	2,413	64.4	64.4	64.4	23,493

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	5,700	1,900	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	1,167,843	204	0.0330	0.0040	21,108

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	878,750	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	3.57	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.5	annual days of extreme heat
Extreme Precipitation	3.95	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	14.2	annual hectares burned

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

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

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	37.8
AQ-PM	17.2
AQ-DPM	18.0
Drinking Water	76.4
Lead Risk Housing	40.2
Pesticides	86.4
Toxic Releases	28.4
Traffic	44.1
Effect Indicators	—
CleanUp Sites	89.1
Groundwater	99.1
Haz Waste Facilities/Generators	95.5
Impaired Water Bodies	91.9
Solid Waste	99.6
Sensitive Population	—
Asthma	57.3
Cardio-vascular	44.1

Low Birth Weights	0.68
Socioeconomic Factor Indicators	—
Education	77.1
Housing	2.62
Linguistic	62.2
Poverty	26.4
Unemployment	23.8

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	42.46118311
Employed	79.36609778
Median HI	62.96676505
Education	—
Bachelor's or higher	43.46208136
High school enrollment	25.6255614
Preschool enrollment	77.6337739
Transportation	—
Auto Access	69.12613884
Active commuting	79.81521879
Social	—
2-parent households	79.32760169
Voting	67.7659438
Neighborhood	—
Alcohol availability	88.83613499

Park access	6.685486975
Retail density	1.860644168
Supermarket access	17.91351213
Tree canopy	32.40087258
Housing	—
Homeownership	45.79751059
Housing habitability	63.40305402
Low-inc homeowner severe housing cost burden	15.23161812
Low-inc renter severe housing cost burden	95.45746182
Uncrowded housing	34.55665341
Health Outcomes	—
Insured adults	48.58206082
Arthritis	0.0
Asthma ER Admissions	49.0
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	70.1
Cognitively Disabled	52.2
Physically Disabled	76.0
Heart Attack ER Admissions	60.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0

Pedestrian Injuries	94.5
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	45.9
Elderly	35.4
English Speaking	44.6
Foreign-born	29.3
Outdoor Workers	3.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	98.9
Traffic Density	46.8
Traffic Access	23.0
Other Indices	—
Hardship	46.6
Other Decision Support	—
2016 Voting	69.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	55.0

Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Warehouse land use used to represent new maintenance building and new pump station structure.
Construction: Off-Road Equipment	Construction equipment assumptions applied for linear project.
Operations: Energy Use	Annual electricity consumption increased to account for new electrical equipment.
Construction: On-Road Fugitive Dust	All area roadways are paved.
Construction: Construction Phases	Site prep extended to account for material import/export.
Construction: Dust From Material Movement	Material import/export required per applicant-provided information.

Appendix B Energy Calculations



Dixon WWTF Improvement Project—Energy Consumption Summary

Date of Last Revision: October 23, 2023

Summary of Energy Use During Construction

(Annually)

Construction vehicle fuel

32,654 gallons (gasoline, diesel)

Construction equipment fuel

21,704 gallons (diesel)

Summary of Energy Use During Proposed Operations

(Annually)

Operational vehicle fuel consumption

1,083 gallons (gasoline, diesel)

Operational electricity consumption

1,128,191 kilowatt hours

Construction Vehicle Fuel Calculations (Page 1 of 2)

California Air Resource Board (CARB). 2023. EMFAC2021 Web Database. Website: <https://arb.ca.gov/emfac/emissions-inventory/>. Accessed October 16, 2023.

Source: EMFAC2021 (v1.0.2) Emissions Inventory
 Region Type: County
 Region: Solano
 Calendar Year: 2024
 Season: Annual
 Vehicle Classification: EMFAC2007 Categories
 Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

VMT = Vehicle Miles Traveled
 FE = Fuel Economy

Given						Calculations				
Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (mi/day)	Fuel Consumption (1000 gallons/day)	FE (mi/gallon)	VMT*FE
Solano	2024	HHDT	Aggregate	Aggregate	Gasoline	0.764655	48.88088	0.013986877	3.494767586	170.8273
Solano	2024	HHDT	Aggregate	Aggregate	Diesel	4627.7722	689969.8	114.2470026	6.039281672	4166922
Solano	2024	LDA	Aggregate	Aggregate	Gasoline	156883.98	6604203	223.5700755	29.5397437	1.95E+08
Solano	2024	LDA	Aggregate	Aggregate	Diesel	519.82391	17175.99	0.407836504	42.11489773	723365.2
Solano	2024	LDT1	Aggregate	Aggregate	Gasoline	14805.593	510875.5	20.67319846	24.71197143	12624741
Solano	2024	LDT1	Aggregate	Aggregate	Diesel	5.2210937	49.97687	0.002050294	24.37546278	1218.209
Solano	2024	LDT2	Aggregate	Aggregate	Gasoline	64304.323	2615535	109.3866289	23.91092365	62539866
Solano	2024	LDT2	Aggregate	Aggregate	Diesel	211.84007	9217.287	0.286856773	32.13201771	296170
Solano	2024	LHDT1	Aggregate	Aggregate	Gasoline	6026.789	232970.9	24.54334469	9.492223016	2211412
Solano	2024	LHDT1	Aggregate	Aggregate	Diesel	5198.9274	196093.3	12.37409461	15.84708521	3107508
Solano	2024	LHDT2	Aggregate	Aggregate	Gasoline	735.82948	28538.81	3.338249221	8.549034948	243979.3
Solano	2024	LHDT2	Aggregate	Aggregate	Diesel	1980.445	78927.53	6.073799205	12.99475469	1025644
Solano	2024	MDV	Aggregate	Aggregate	Gasoline	47796.127	1783895	91.51120002	19.49373717	34774786
Solano	2024	MDV	Aggregate	Aggregate	Diesel	729.74548	29457.53	1.226211986	24.02319499	707664
Solano	2024	MHDT	Aggregate	Aggregate	Gasoline	371.83014	23429.59	4.939197182	4.743602327	111140.6
Solano	2024	MHDT	Aggregate	Aggregate	Diesel	2694.3673	113489.5	13.4294305	8.450802131	959077

Worker
 Sum of VMT*FE (Column BI) **3.07E+08**
 Total VMT **11570410**
 Weighted Average Fuel Economy **26.51196**

Vendor
 Sum of VMT*FE (Column BI) **11825853**
 Total VMT **1363468**
 Weighted Average Fuel Economy **8.673361**

Haul
 Sum of VMT*FE (Column BI) **4167093**
 Total VMT **690018.7**
 Weighted Average Fuel Economy **6.039101**

Construction Vehicle Fuel Calculations (Page 2 of 2)

Construction Schedule

Source: CalEEMod Output

Dixon WWTF Improvements Project

CalEEMod Phase Type	Phase Name	Start Date	End Date	Num Days Week	Num Days
Demolition	Demolition	1/1/2024	1/29/2024	5	20
Site Preparation	Site Preparation	1/30/2024	4/22/2024	5	60
Grading	Grading	4/23/2024	4/30/2024	5	6
Building Construction	Building Constructi	5/15/2024	3/18/2025	5	220
Paving	Paving	5/1/2024	5/14/2024	5	10
Architectural Coating	Architectural Coatir	3/19/2025	4/1/2025	5	10

Construction Trips and VMT

Phase Name	Trips per Day			Construction Trip Length in Miles			Number of Days per Phase	Trips per Phase			VMT per Phase			Fuel Consumption (gallons)		
	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length		Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trips	Vendor Trips	Hauling Trips	Worker Trips	Vendor Trips	Hauling Trips
Demolition	26	0	18	11.7	8.4	20	20	520	0	360	6,084	0	7,200	229.48	0.00	1,192.23
Site Preparation	16	0	150	11.7	8.4	20	60	960	0	9,000	11,232	0	180,000	423.66	0.00	29,805.76
Grading	20	0	0	11.7	8.4	20	6	120	0	0	1,404	0	0	52.96	0.00	0.00
Building Construction	4	2	0	11.7	8.4	20	220	880	440	0	10,296	3,696	0	388.35	426.13	0.00
Paving	30	0	0	11.7	8.4	20	10	300	0	0	3,510	0	0	132.39	0.00	0.00
Architectural Coating	1	0	0	11.7	8.4	20	10	6	0	0	75	0	0	2.82	0.00	0.00
											32,601	3,696	187,200	1,230	426	30,998

Total Project Construction VMT (miles)
223,497

Total Project Fuel Consumption (gallons)
32,654

Construction Equipment Fuel Calculation

Dixon WWTF Improvements Project
Construction Schedule

CalEEMod Phase Type	Phase Name	Start Date	End Date	Num Days/	
				Week	Num Days
Demolition	Demolition	1/1/2024	1/29/2024	5	20
Site Preparation	Site Preparation	1/30/2024	2/3/2024	5	3
Grading	Grading	2/4/2024	2/12/2024	5	6
Building Construction	Building Construction	2/13/2024	12/17/2024	5	220
Paving	Paving	12/18/2024	1/1/2025	5	10
Architectural Coating	Architectural Coating	1/2/2025	1/16/2025	5	10

Construction Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of Days	HP Hours	HP Bin	Equipment Type + HP	Fuel (gallons/HP-hour)	Diesel Fuel Usage
Demolition	Concrete/Industrial Saws	1	8	33	0.73	20	3,854.40	50	Concrete/Industrial Saws 50	0.04190845	161.53
Demolition	Rubber Tired Dozers	1	8	367	0.4	20	23,488.00	600	Rubber Tired Dozers 600	0.04481708	1,052.66
Demolition	Tractors/Loaders/Backhoes	3	8	84	0.37	20	14,918.40	100	Tractors/Loaders/Backhoes 100	0.05650435	842.95
Site Preparation	Tractors/Loaders/Backhoes	1	7	84	0.37	3	652.68	100	Tractors/Loaders/Backhoes 100	0.05650435	36.88
Site Preparation	Graders	1	8	148	0.41	3	1,456.32	175	Graders 175	0.05402787	78.68
Site Preparation	Scrapers	1	8	423	0.48	3	4,872.96	600	Scrapers 600	0.04726234	230.31
Grading	Graders	1	8	148	0.41	6	2,912.64	175	Graders 175	0.05402787	157.36
Grading	Rubber Tired Dozers	1	8	367	0.4	6	7,046.40	600	Rubber Tired Dozers 600	0.04481708	315.80
Grading	Tractors/Loaders/Backhoes	2	7	84	0.37	6	2,610.72	100	Tractors/Loaders/Backhoes 100	0.05650435	147.52
Building Construction	Cranes	1	8	367	0.29	220	187,316.80	600	Cranes 600	0.05173333	9,690.52
Building Construction	Forklifts	2	7	82	0.2	220	50,512.00	100	Forklifts 100	0.05795440	2,927.39
Building Construction	Generator Sets	1	8	14	0.74	220	18,233.60	15	Generator Sets 15	0.01758493	320.64
Building Construction	Tractors/Loaders/Backhoes	1	6	84	0.37	220	41,025.60	100	Tractors/Loaders/Backhoes 100	0.05650435	2,318.12
Building Construction	Welders	3	8	46	0.45	220	109,296.00	50	Welders 50	0.02580036	2,819.88
Paving	Cement and Mortar Mixers	1	8	10	0.56	10	448.00	15	Cement and Mortar Mixers 15	0	0.00
Paving	Pavers	1	8	81	0.42	10	2,721.60	100	Pavers 100	0.05653944	153.88
Paving	Paving Equipment	1	8	89	0.36	10	2,563.20	100	Paving Equipment 100	0.05961036	152.79
Paving	Rollers	2	8	36	0.38	10	2,188.80	50	Rollers 50	0.05799746	126.94
Paving	Tractors/Loaders/Backhoes	1	8	84	0.37	10	2,486.40	100	Tractors/Loaders/Backhoes 100	0.05650435	140.49
Architectural Coating	Air Compressors	1	6	37	0.48	10	1,065.60	50	Air Compressors 50	0.02761098	29.42
											21,703.78

Notes:
 Equipment assumptions are provided in the CalEEMod output files.
 Source of usage estimates: California Air Resource Board (CARB). 2023. OFFROAD2021 (v1.0.5) Emissions Inventory
 Website: <https://arb.ca.gov/emfac/emissions-inventory/>. Accessed October 17, 2023.

Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory

Region Type: County

Region: Solano

Calendar Year: 2024

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2021 Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	CalYr	Vehicle Class + HP Bin	Model Year	Fuel	Fuel Consumption (gallons/year)	Horsepower Hours (HP- hours/year)	Fuel (gallons/HP- hour)
Solano	2024	Cranes 100	Aggregate	Diesel	798.3278426	9602.988816	0.083133268
Solano	2024	Cranes 175	Aggregate	Diesel	5949.865188	99666.11276	0.059697976
Solano	2024	Cranes 25	Aggregate	Diesel	1.623454209	28.94865794	0.056080465
Solano	2024	Cranes 300	Aggregate	Diesel	19170.70674	358305.858	0.053503749
Solano	2024	Cranes 50	Aggregate	Diesel	66.79424819	779.9443291	0.085639764
Solano	2024	Cranes 600	Aggregate	Diesel	26554.57368	513297.1863	0.051733332
Solano	2024	Cranes 75	Aggregate	Diesel	263.9076137	3281.019493	0.080434638
Solano	2024	Excavators 100	Aggregate	Diesel	22093.16942	392075.7356	0.056349239
Solano	2024	Excavators 175	Aggregate	Diesel	124610.1631	2469560.859	0.05045843
Solano	2024	Excavators 25	Aggregate	Diesel	0.967263374	17.24777724	0.056080465
Solano	2024	Excavators 300	Aggregate	Diesel	133014.835	2637957.405	0.05042342
Solano	2024	Excavators 50	Aggregate	Diesel	35879.6882	639524.5757	0.056103689
Solano	2024	Excavators 600	Aggregate	Diesel	153808.1196	3057650.877	0.050302708
Solano	2024	Excavators 75	Aggregate	Diesel	28507.40038	507096.5955	0.056216904
Solano	2024	Graders 100	Aggregate	Diesel	901.1494921	14918.56086	0.060404586
Solano	2024	Graders 175	Aggregate	Diesel	14473.92815	267897.4407	0.05402787
Solano	2024	Graders 300	Aggregate	Diesel	48074.66718	944703.6862	0.05088862
Solano	2024	Graders 50	Aggregate	Diesel	115.174717	1817.129233	0.063382788
Solano	2024	Graders 600	Aggregate	Diesel	11660.99227	231390.5057	0.050395293
Solano	2024	Graders 75	Aggregate	Diesel	426.7107361	5746.341989	0.074257804
Solano	2024	Cement And Mortar Mixers 15	Aggregate	Diesel	10.43009478	0	0
Solano	2024	Cement And Mortar Mixers 25	Aggregate	Diesel	2.039328377	0	0
Solano	2024	Concrete/Industrial Saws 25	Aggregate	Diesel	1.395741403	0	0
Solano	2024	Concrete/Industrial Saws 50	Aggregate	Diesel	474.5	11322.3	0.041908446
Solano	2024	Pavers 100	Aggregate	Diesel	3061.60465	54149.8975	0.056539436
Solano	2024	Pavers 175	Aggregate	Diesel	10315.72601	204384.6129	0.050472126
Solano	2024	Pavers 300	Aggregate	Diesel	12527.08655	248309.6243	0.05044946
Solano	2024	Pavers 50	Aggregate	Diesel	555.516578	9738.090002	0.057045743
Solano	2024	Pavers 600	Aggregate	Diesel	2213.126292	44249.44174	0.050014784
Solano	2024	Pavers 75	Aggregate	Diesel	2835.234458	49827.25621	0.056901276
Solano	2024	Paving Equipment 100	Aggregate	Diesel	1737.605333	29149.38688	0.059610356
Solano	2024	Paving Equipment 175	Aggregate	Diesel	11462.11101	226509.6615	0.050603188
Solano	2024	Paving Equipment 300	Aggregate	Diesel	5151.601442	101831.8939	0.050589273
Solano	2024	Paving Equipment 50	Aggregate	Diesel	1445.672584	25297.53224	0.057146783
Solano	2024	Paving Equipment 600	Aggregate	Diesel	12251.87405	244168.9682	0.050177851
Solano	2024	Paving Equipment 75	Aggregate	Diesel	1043.436725	18606.06395	0.056080465
Solano	2024	Rollers 100	Aggregate	Diesel	8591.173607	147814.7426	0.058121223
Solano	2024	Rollers 175	Aggregate	Diesel	49488.56922	978178.2178	0.05059259
Solano	2024	Rollers 300	Aggregate	Diesel	4228.345443	81928.37177	0.051610271
Solano	2024	Rollers 50	Aggregate	Diesel	13926.8254	240128.2039	0.057997458
Solano	2024	Rollers 600	Aggregate	Diesel	3426.813826	69710.33645	0.049157901
Solano	2024	Rollers 75	Aggregate	Diesel	5532.063335	97930.63728	0.056489608
Solano	2024	Forklifts 100	Aggregate	Diesel	12309.55899	212400.7754	0.057954398
Solano	2024	Rough Terrain Forklifts 175	Aggregate	Diesel	79265.40469	1570229.601	0.050480137
Solano	2024	Rough Terrain Forklifts 300	Aggregate	Diesel	677.8652778	13106.80531	0.051718574
Solano	2024	Rough Terrain Forklifts 50	Aggregate	Diesel	444.1825123	7920.449828	0.056080465
Solano	2024	Rough Terrain Forklifts 600	Aggregate	Diesel	191.828253	3789.733429	0.050617875
Solano	2024	Rough Terrain Forklifts 75	Aggregate	Diesel	17688.96465	313545.7235	0.056415902
Solano	2024	Rubber Tired Dozers 100	Aggregate	Diesel	600.3790469	10140.20708	0.05920777
Solano	2024	Rubber Tired Dozers 175	Aggregate	Diesel	1864.607893	36886.8566	0.050549384
Solano	2024	Rubber Tired Dozers 300	Aggregate	Diesel	2318.674572	45940.4217	0.050471338
Solano	2024	Rubber Tired Dozers 50	Aggregate	Diesel	135.2106179	1395.984305	0.096856832
Solano	2024	Rubber Tired Dozers 600	Aggregate	Diesel	12121.87662	270474.4626	0.044817084
Solano	2024	Rubber Tired Dozers 75	Aggregate	Diesel	283.7046927	4500.669227	0.063036113

Solano	2024 Tractors/Loaders/Backhoes 100	Aggregate	Diesel	147982.3374	2618954.853	0.056504348
Solano	2024 Tractors/Loaders/Backhoes 175	Aggregate	Diesel	157523.0402	3111960.807	0.050618581
Solano	2024 Tractors/Loaders/Backhoes 25	Aggregate	Diesel	3.239370487	57.76290311	0.056080465
Solano	2024 Tractors/Loaders/Backhoes 300	Aggregate	Diesel	66633.31187	1319740.743	0.050489698
Solano	2024 Tractors/Loaders/Backhoes 50	Aggregate	Diesel	13946.30293	235391.924	0.05924716
Solano	2024 Tractors/Loaders/Backhoes 600	Aggregate	Diesel	50600.68191	1007851.995	0.050206461
Solano	2024 Tractors/Loaders/Backhoes 75	Aggregate	Diesel	63494.23259	1108569.679	0.057275816
Solano	2024 Trenchers 100	Aggregate	Diesel	1640.306114	28601.79344	0.057349764
Solano	2024 Trenchers 175	Aggregate	Diesel	2678.277288	52496.91778	0.051017801
Solano	2024 Trenchers 300	Aggregate	Diesel	1614.712155	31873.66474	0.050659758
Solano	2024 Trenchers 50	Aggregate	Diesel	4276.809634	74939.27013	0.05707034
Solano	2024 Trenchers 600	Aggregate	Diesel	2629.681734	53262.76704	0.049371857
Solano	2024 Trenchers 75	Aggregate	Diesel	1370.23959	23307.40217	0.058789889
Solano	2024 Air Compressors 15	Aggregate	Diesel	158.8239424	0	0
Solano	2024 Air Compressors 25	Aggregate	Diesel	634.1898238	0	0
Solano	2024 Air Compressors 50	Aggregate	Diesel	9146.9	331277.65	0.027610978
Solano	2024 Welders 15	Aggregate	Diesel	3637.223169	0	0
Solano	2024 Welders 25	Aggregate	Diesel	5802.828751	0	0
Solano	2024 Welders 50	Aggregate	Diesel	41993.25	1627622.6	0.025800361
Solano	2024 Rental Generator 100	Aggregate	Diesel	41037.75938	2594400.245	0.015817821
Solano	2024 Rental Generator 175	Aggregate	Diesel	83491.20966	5278300.229	0.015817821
Solano	2024 Rental Generator 300	Aggregate	Diesel	110854.2881	7008189.445	0.015817821
Solano	2024 Rental Generator 50	Aggregate	Diesel	255.1169554	14507.6998	0.017584935
Solano	2024 Rental Generator 600	Aggregate	Diesel	383877.656	24268680.83	0.015817821
Solano	2024 Rental Generator 75	Aggregate	Diesel	24504.95362	1549199.046	0.015817821
Solano	2025 Scrapers 600	Aggregate	Diesel	130473.6962	2760627.093	0.04726234

Operational Fuel Calculation—Project-Generated Operational Trips (Page 1 of 2)

California Air Resource Board (CARB). 2023. EMFAC2021 Web Database. Website: <https://arb.ca.gov/emfac/emissions-inventory/>. Accessed October 16, 2023.

Source: EMFAC2021 (v1.0.2) Emissions Inventory
 Region Type: County
 Region: Solano
 Calendar Year: 2025
 Season: Annual
 Vehicle Classification: EMFAC2007 Categories

VMT = Vehicle Miles Traveled
 FE = Fuel Economy

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Given						Calculations				
Region	Calendar Year	Vehicle Class	Model Year	Speed	Fuel	Population	VMT	Fuel Consumption	FE	VMT*FE
Solano	2025	LDA	Aggregate	Aggregate	Gasoline	155086.2886	6585579.464	218.4922354	30.14102287	198496101.2
Solano	2025	LDA	Aggregate	Aggregate	Diesel	479.6275964	15772.03518	0.371113442	42.4992291	670299.3364
Sum of VMT*FE 199166400.6										
Total VMT 6601351.499										
Weighted Average Fuel Economy 30.17054926										
Solano	2025	LDT1	Aggregate	Aggregate	Gasoline	14247.9777	495747.6426	19.72472627	25.13330912	12459778.75
Solano	2025	LDT1	Aggregate	Aggregate	Diesel	4.73364108	44.0006713	0.001802964	24.40463707	1073.820414
Solano	2025	LDT2	Aggregate	Aggregate	Gasoline	64749.54165	2660496.722	108.5065751	24.51922124	65233307.75
Solano	2025	LDT2	Aggregate	Aggregate	Diesel	219.0295772	9538.013995	0.291035356	32.77269858	312586.4577
Solano	2025	MDV	Aggregate	Aggregate	Gasoline	47085.68566	1773609.679	88.88428211	19.95414304	35390861.24
Solano	2025	MDV	Aggregate	Aggregate	Diesel	720.212249	28708.13071	1.179461669	24.34002857	698756.7217
Sum of VMT*FE 114096364.7										
Total VMT 4968144.189										
Weighted Average Fuel Economy 22.96559045										
Solano	2025	LHDT1	Aggregate	Aggregate	Gasoline	5904.305917	230912.0123	23.94284975	9.644299434	2226984.59
Solano	2025	LHDT1	Aggregate	Aggregate	Diesel	5076.45104	191839.3716	12.07682581	15.88491668	3047352.434
Solano	2025	LHDT2	Aggregate	Aggregate	Gasoline	723.505783	28253.12039	3.261136799	8.663580258	244773.176
Solano	2025	LHDT2	Aggregate	Aggregate	Diesel	1970.093551	78286.15139	5.987907108	13.0740424	1023516.462
Solano	2025	MHDT	Aggregate	Aggregate	Gasoline	364.0983135	23497.00016	4.890693402	4.80443124	112889.7216
Solano	2025	MHDT	Aggregate	Aggregate	Diesel	2735.20074	113820.27	13.40701835	8.489603507	966288.9633
Solano	2025	HHDT	Aggregate	Aggregate	Gasoline	0.547217457	46.52327969	0.012409923	3.748877354	174.4100697
Solano	2025	HHDT	Aggregate	Aggregate	Diesel	4742.416061	696573.8146	113.5149461	6.136406163	4274459.848
Sum of VMT*FE 11896439.61										
Total VMT 1363228.264										
Weighted Average Fuel Economy 8.726667369										
Solano	2025	MCY	Aggregate	Aggregate	Gasoline	9290.951028	53171.39051	1.307154279	40.67721106	2162863.874
Weighted Average Fuel Economy 40.67721106										
Solano	2025	MH	Aggregate	Aggregate	Gasoline	1138.918238	10687.9639	2.420127688	4.416280988	47201.05176
Solano	2025	MH	Aggregate	Aggregate	Diesel	460.2238227	4477.59523	0.476846226	9.390019228	42044.7053
Solano	2025	OBUS	Aggregate	Aggregate	Gasoline	163.98328	10217.16721	2.12608642	4.805621779	49099.84124
Solano	2025	OBUS	Aggregate	Aggregate	Diesel	142.2120279	12064.96232	1.884143728	6.403419302	77257.01257
Solano	2025	SBUS	Aggregate	Aggregate	Gasoline	32.41667082	1972.547968	0.196336129	10.04679056	19817.7763
Solano	2025	SBUS	Aggregate	Aggregate	Diesel	316.4659956	6980.043272	0.859963263	8.11667611	56654.75047
Solano	2025	UBUS	Aggregate	Aggregate	Gasoline	38.84372104	1865.875276	0.265124077	7.037743595	13131.55177
Solano	2025	UBUS	Aggregate	Aggregate	Diesel	69.28031532	7307.537684	0.793970611	9.203788635	67257.03229
Sum of VMT*FE 372463.7217										
Total VMT 55573.69285										
Weighted Average Fuel Economy 6.702158928										

Operational Fuel Calculation—Project-Generated Operational Trips (Page 2 of 2)

Total Operational VMT

Dixon WWTF Improvements Project

Trip Type	Annual VMT
Staff Trips	23,493.22

Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.506181587	0.038016549	0.2047342	0.138198987	0.032415933	0.008169269	0.010529279	0.053415787	0.00170856	0.000703403	0.004077101	0.000686471	0.001162872

*based on EMFAC results

1.000

Trip Type 1: Staff Trips with Mixed Fleet

Vehicle Type	Fraction of 1	Annual VMT	Average Fuel Economy (miles/gallon)	Total Annual Fuel Consumption (gallons)
Passenger Cars (LDA)	0.5062	11,892	30.17	394
Light Trucks and Medium Vehicles (LDT1, LDT2, anc)	0.3809	8,950	22.97	390
Light-Heavy to Heavy-Heavy Diesel Trucks	0.1045	2,456	8.73	281
Motorcycles	0.0041	96	40.68	2
Other	0.0043	100	6.70	15
Total	1.0000	23493		1,083

Operational Equipment Fuel Calculation

Dixon WWTF Improvements Project

Equipment	Number of units	Fuel type	horsepower	kW	Hours of operation	hours/yr	kwhr/yr
junction structure gates motor operators	2	electricity	1	0.746	1 hour/day	365	544.58
influent pumps	2	electricity	85	63.41	One pump is estimated to run 50 hour per Year	50	3170.5
blowers	2	electricity	150	111.9	One Blower 24 hours/day	8760	980244
RAS pump	2	electricity	15	11.19	One Pump 24 hours/day	8760	98024.4
Secondary Clarifier 3	1	electricity	1.5	1.119	24 hours/day	8760	9802.44
Effluent pumps	2	electricity	100	74.6	One pump is estimated to run 50 hour per Year	50	3730
Plant water pumps	2	electricity	10	7.46	One pump is estimated to run 12 hours/day	4380	32674.8
						<i>total</i>	<i>1,128,191</i>
						building defac	39651.79
							1,167,843

Appendix C Native American Consultations



Record of Contact with Native Americans for the City of Dixon WWTF Expansion Project			
Name & Affiliation	Date of Contact	Form of Contact	Notes
Wayne Mitchum Jr., Cachil Dehe Band of Wintun Indians of the Colusa Indian Community	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Jennie Mitchum, Cachil Dehe Band of Wintun Indians of the Colusa Indian Community	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Lloyd Mathiesen, Chicken Ranch Rancheria of Me-Wuk Indians	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Charlie Wright, Cortina Rancheria - Kletsel Dehe Band of Wintun Indians	10/30/2023	USPS Mail	Sent proposed Project introductory letter and map.
Michael Derry, Guidiville Rancheria of California	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Bunny Tarin, Guidiville Rancheria of California	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Leland Valdez, Nashville Enterprise Miwok-Maidu-Nishinam Tribe	10/30/2023	USPS Mail	Sent proposed Project introductory letter and map.
Cosme Valdez, Nashville Enterprise Miwok-Maidu-Nishinam Tribe	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Gene Whitehouse, United Auburn Indian Community of the Auburn Rancheria	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Dahlton Brown, Wilton Rancheria	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Cultural Preservation Department, Wilton Rancheria	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Herbert Griffin, Wilton Rancheria	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Anthony Roberts, Yocha Dehe Wintun Nation	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.
Yvonne Perkins, Yocha Dehe Wintun Nation	10/30/2023	USPS Mail & Email	Sent proposed Project introductory letter and map.