

## Appendix H      Air Quality, Greenhouse Gas, and Energy Modeling

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# Anaheim General Plan - 1990 Proxy Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Anaheim General Plan - 1990 Proxy
Operational Year	2010
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	Anaheim, CA, USA
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.29

## 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
Single Family Housing	30,800	Dwelling Unit	9,999	60,060,000	360,755,996	0.00	91,784	—



Apartments Mid Rise	52,206	Dwelling Unit	1,374	50,117,760	0.00	0.00	155,574	—
Mobile Home Park	4,680	Dwelling Unit	590	6,084,000	0.00	0.00	13,946	—
Strip Mall	28,223	1000sqft	648	28,223,000	0.00	0.00	—	—
General Office Building	15,478	1000sqft	355	15,478,000	0.00	0.00	—	—
Government Office Building	1,686	1000sqft	38.7	1,686,000	0.00	0.00	—	—
Elementary School	10,451	Employee	244	10,640,649	0.00	0.00	—	—
Unrefrigerated Warehouse-No Rail	23,061	1000sqft	529	23,061,000	0.00	0.00	—	—
Hospital	12,820	1000sqft	294	12,820,000	0.00	0.00	—	—
Refrigerated Warehouse-No Rail	2,562	1000sqft	58.8	2,562,000	0.00	0.00	—	—
Single Family Housing	24,402	Dwelling Unit	7,923	47,583,900	285,817,137	0.00	72,718	—

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

No measures selected

## 2. Emissions Summary

### 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.	49,393	47,744	19,428	167,659	187	4,463	8,906	13,369	4,442	2,261	6,703	837,001	22,603,261	23,440,261	46,857	1,026	127,800	25,045,341
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	46,883	45,342	20,752	148,983	181	4,437	8,906	13,344	4,422	2,261	6,684	837,001	22,022,3	22,859,3	46,920	1,084	71,236	24,426,7
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	23,873	22,328	19,379	131,258	131	654	8,799	9,453	635	2,234	2,869	475,188	20,325,919	20,801,107	46,875	1,056	94,804	22,382,505
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4,357	4,075	3,537	23,955	23.9	119	1,606	1,725	116	408	524	78,673	3,365,188	3,443,861	7,761	175	15,696	3,705,679

## 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	14,148	12,784	16,445	127,464	125	280	8,906	9,187	265	2,261	2,527	—	12,700,345	12,700,345	1,186	819	58,070	13,031,978
Area	35,136	34,906	2,018	39,558	56.3	4,107	—	4,107	4,101	—	4,101	388,416	2,039,993	2,428,410	39.2	38.3	—	2,440,813
Energy	109	54.6	966	637	5.95	75.4	—	75.4	75.4	—	75.4	—	7,373,981	7,373,981	667	82.7	—	7,415,325
Water	—	—	—	—	—	—	—	—	—	—	—	33,007	488,942	521,949	3,429	86.8	—	633,533
Waste	—	—	—	—	—	—	—	—	—	—	—	415,577	0.00	415,577	41,535	0.00	—	1,453,962
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,730	69,730
Total	49,393	47,744	19,428	167,659	187	4,463	8,906	13,369	4,442	2,261	6,703	837,001	22,603,261	23,440,261	46,857	1,026	127,800	25,045,341
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13,948	12,555	17,909	118,816	119	282	8,906	9,188	267	2,261	2,528	—	12,153,293	12,153,293	1,250	877	1,506	12,447,367

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Area	32,825	32,733	1,877	29,530	55.8	4,080	—	4,080	4,080	—	4,080	388,416	2,006,09	2,394,51	37.8	38.0	—	2,406,79
Energy	109	54.6	966	637	5.95	75.4	—	75.4	75.4	—	75.4	—	7,373,981	7,373,981	667	82.7	—	7,415,325
Water	—	—	—	—	—	—	—	—	—	—	—	33,007	488,942	521,949	3,429	86.8	—	633,533
Waste	—	—	—	—	—	—	—	—	—	—	—	415,577	0.00	415,577	41,535	0.00	—	1,453,962
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,730	69,730
Total	46,883	45,342	20,752	148,983	181	4,437	8,906	13,344	4,422	2,261	6,684	837,001	22,022,311	22,859,311	46,920	1,084	71,236	24,426,712
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13,898	12,508	18,189	121,729	121	281	8,799	9,080	266	2,234	2,500	—	12,302,375	12,302,375	1,239	884	25,074	12,621,806
Area	9,866	9,766	225	8,891	4.19	298	—	298	293	—	293	26,604	160,622	187,226	3.56	2.80	—	188,149
Energy	109	54.6	966	637	5.95	75.4	—	75.4	75.4	—	75.4	—	7,373,981	7,373,981	667	82.7	—	7,415,325
Water	—	—	—	—	—	—	—	—	—	—	—	33,007	488,942	521,949	3,429	86.8	—	633,533
Waste	—	—	—	—	—	—	—	—	—	—	—	415,577	0.00	415,577	41,535	0.00	—	1,453,962
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,730	69,730
Total	23,873	22,328	19,379	131,258	131	654	8,799	9,453	635	2,234	2,869	475,188	20,325,919	20,801,107	46,875	1,056	94,804	22,382,505
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2,536	2,283	3,319	22,216	22.0	51.3	1,606	1,657	48.5	408	456	—	2,036,799	2,036,799	205	146	4,151	2,089,684
Area	1,801	1,782	41.1	1,623	0.77	54.4	—	54.4	53.5	—	53.5	4,405	26,593	30,997	0.59	0.46	—	31,150
Energy	19.9	9.96	176	116	1.09	13.8	—	13.8	13.8	—	13.8	—	1,220,847	1,220,847	111	13.7	—	1,227,692
Water	—	—	—	—	—	—	—	—	—	—	—	5,465	80,950	86,415	568	14.4	—	104,889
Waste	—	—	—	—	—	—	—	—	—	—	—	68,803	0.00	68,803	6,877	0.00	—	240,720
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11,545	11,545

Total	4,357	4,075	3,537	23,955	23.9	119	1,606	1,725	116	408	524	78,673	3,365,188	3,443,861	7,761	175	15,696	3,705,679
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## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,326,367	1,326,367	121	17.3	—	1,334,522
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	666,897	666,897	60.6	8.67	—	670,998
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	78,169	78,169	7.11	1.02	—	78,650
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	965,919	965,919	87.8	12.6	—	971,858
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	961,159	961,159	87.4	12.5	—	967,068

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	104,698	104,698	9.52	1.36	—	105,342
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	231,908	231,908	21.1	3.02	—	233,334
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	376,117	376,117	34.2	4.89	—	378,430
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	1,306,061	1,306,061	119	17.0	—	1,314,092
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	172,646	172,646	15.7	2.25	—	173,708
Total	—	—	—	—	—	—	—	—	—	—	—	—	6,189,941	6,189,941	563	80.5	—	6,228,001
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,326,367	1,326,367	121	17.3	—	1,334,522
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	666,897	666,897	60.6	8.67	—	670,998
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	78,169	78,169	7.11	1.02	—	78,650
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	965,919	965,919	87.8	12.6	—	971,858
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	961,159	961,159	87.4	12.5	—	967,068

Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	—	104,698	104,698	9.52	1.36	—	105,342
Element ary School	—	—	—	—	—	—	—	—	—	—	—	—	231,908	231,908	21.1	3.02	—	233,334
Unrefrig erated Wareho use-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	376,117	376,117	34.2	4.89	—	378,430
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	1,306,061	1,306,061	119	17.0	—	1,314,092
Refriger ated Wareho use-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	172,646	172,646	15.7	2.25	—	173,708
Total	—	—	—	—	—	—	—	—	—	—	—	—	6,189,941	6,189,941	563	80.5	—	6,228,001
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	219,595	219,595	20.0	2.86	—	220,945
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	110,412	110,412	10.0	1.44	—	111,091
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	12,942	12,942	1.18	0.17	—	13,021
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	159,919	159,919	14.5	2.08	—	160,902
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	159,131	159,131	14.5	2.07	—	160,109

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	17,334	17,334	1.58	0.23	—	17,441
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	38,395	38,395	3.49	0.50	—	38,631
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	62,270	62,270	5.66	0.81	—	62,653
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	216,233	216,233	19.7	2.81	—	217,563
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	28,584	28,584	2.60	0.37	—	28,759
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,024,815	1,024,815	93.2	13.3	—	1,031,117

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	27.6	13.8	236	101	1.51	19.1	—	19.1	19.1	—	19.1	—	299,801	299,801	26.5	0.56	—	300,633
Apartments Mid Rise	17.1	8.57	146	62.3	0.93	11.8	—	11.8	11.8	—	11.8	—	185,831	185,831	16.4	0.35	—	186,347
Mobile Home Park	4.26	2.13	36.4	15.5	0.23	2.94	—	2.94	2.94	—	2.94	—	46,166	46,166	4.09	0.09	—	46,294

Strip Mall	4.99	2.50	45.4	38.1	0.27	3.45	—	3.45	3.45	—	3.45	—	54,152	54,152	4.79	0.10	—	54,302
General Office Building	11.6	5.80	105	88.5	0.63	8.01	—	8.01	8.01	—	8.01	—	125,730	125,730	11.1	0.24	—	126,079
Government Office Building	1.26	0.63	11.5	9.64	0.07	0.87	—	0.87	0.87	—	0.87	—	13,696	13,696	1.21	0.03	—	13,734
Elementary School	6.60	3.30	60.0	50.4	0.36	4.56	—	4.56	4.56	—	4.56	—	71,545	71,545	6.33	0.13	—	71,743
Unrefrigerated Warehouse-No Rail	13.1	6.57	119	100	0.72	9.07	—	9.07	9.07	—	9.07	—	142,464	142,464	12.6	0.27	—	142,860
Hospital	20.7	10.3	188	158	1.13	14.3	—	14.3	14.3	—	14.3	—	224,082	224,082	19.8	0.42	—	224,703
Refrigerated Warehouse-No Rail	1.90	0.95	17.2	14.5	0.10	1.31	—	1.31	1.31	—	1.31	—	20,571	20,571	1.82	0.04	—	20,629
Total	109	54.6	966	637	5.95	75.4	—	75.4	75.4	—	75.4	—	1,184,040	1,184,040	105	2.23	—	1,187,324
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	27.6	13.8	236	101	1.51	19.1	—	19.1	19.1	—	19.1	—	299,801	299,801	26.5	0.56	—	300,633
Apartments Mid Rise	17.1	8.57	146	62.3	0.93	11.8	—	11.8	11.8	—	11.8	—	185,831	185,831	16.4	0.35	—	186,347
Mobile Home Park	4.26	2.13	36.4	15.5	0.23	2.94	—	2.94	2.94	—	2.94	—	46,166	46,166	4.09	0.09	—	46,294



Strip Mall	4.99	2.50	45.4	38.1	0.27	3.45	—	3.45	3.45	—	3.45	—	54,152	54,152	4.79	0.10	—	54,302
General Office Building	11.6	5.80	105	88.5	0.63	8.01	—	8.01	8.01	—	8.01	—	125,730	125,730	11.1	0.24	—	126,079
Government Office Building	1.26	0.63	11.5	9.64	0.07	0.87	—	0.87	0.87	—	0.87	—	13,696	13,696	1.21	0.03	—	13,734
Elementary School	6.60	3.30	60.0	50.4	0.36	4.56	—	4.56	4.56	—	4.56	—	71,545	71,545	6.33	0.13	—	71,743
Unrefrigerated Warehouse-No Rail	13.1	6.57	119	100	0.72	9.07	—	9.07	9.07	—	9.07	—	142,464	142,464	12.6	0.27	—	142,860
Hospital	20.7	10.3	188	158	1.13	14.3	—	14.3	14.3	—	14.3	—	224,082	224,082	19.8	0.42	—	224,703
Refrigerated Warehouse-No Rail	1.90	0.95	17.2	14.5	0.10	1.31	—	1.31	1.31	—	1.31	—	20,571	20,571	1.82	0.04	—	20,629
Total	109	54.6	966	637	5.95	75.4	—	75.4	75.4	—	75.4	—	1,184,040	1,184,040	105	2.23	—	1,187,324
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	5.04	2.52	43.1	18.3	0.28	3.49	—	3.49	3.49	—	3.49	—	49,636	49,636	4.39	0.09	—	49,773
Apartments Mid Rise	3.13	1.56	26.7	11.4	0.17	2.16	—	2.16	2.16	—	2.16	—	30,767	30,767	2.72	0.06	—	30,852
Mobile Home Park	0.78	0.39	6.64	2.82	0.04	0.54	—	0.54	0.54	—	0.54	—	7,643	7,643	0.68	0.01	—	7,664
Strip Mall	0.91	0.46	8.28	6.96	0.05	0.63	—	0.63	0.63	—	0.63	—	8,966	8,966	0.79	0.02	—	8,990

General Office Building	2.12	1.06	19.2	16.2	0.12	1.46	—	1.46	1.46	—	1.46	—	20,816	20,816	1.84	0.04	—	20,874
Government Office Building	0.23	0.12	2.09	1.76	0.01	0.16	—	0.16	0.16	—	0.16	—	2,267	2,267	0.20	< 0.005	—	2,274
Elementary School	1.20	0.60	10.9	9.19	0.07	0.83	—	0.83	0.83	—	0.83	—	11,845	11,845	1.05	0.02	—	11,878
Unrefrigerated Warehouse-No Rail	2.40	1.20	21.8	18.3	0.13	1.66	—	1.66	1.66	—	1.66	—	23,587	23,587	2.09	0.04	—	23,652
Hospital	3.77	1.89	34.3	28.8	0.21	2.60	—	2.60	2.60	—	2.60	—	37,099	37,099	3.28	0.07	—	37,202
Refrigerated Warehouse-No Rail	0.35	0.17	3.15	2.64	0.02	0.24	—	0.24	0.24	—	0.24	—	3,406	3,406	0.30	0.01	—	3,415
Total	19.9	9.96	176	116	1.09	13.8	—	13.8	13.8	—	13.8	—	196,031	196,031	17.3	0.37	—	196,575

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	26,346	26,253	1,877	29,530	55.8	4,080	—	4,080	4,080	—	4,080	388,416	2,006,095	2,394,512	37.8	38.0	—	2,406,795

Consumer Products	5,528	5,528	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	951	951	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2,311	2,174	141	10,028	0.54	26.8	—	26.8	20.2	—	20.2	—	33,898	33,898	1.42	0.29	—	34,019
Total	35,136	34,906	2,018	39,558	56.3	4,107	—	4,107	4,101	—	4,101	388,416	2,039,993	2,428,410	39.2	38.3	—	2,440,813
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	26,346	26,253	1,877	29,530	55.8	4,080	—	4,080	4,080	—	4,080	388,416	2,006,095	2,394,512	37.8	38.0	—	2,406,795
Consumer Products	5,528	5,528	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	951	951	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	32,825	32,733	1,877	29,530	55.8	4,080	—	4,080	4,080	—	4,080	388,416	2,006,095	2,394,512	37.8	38.0	—	2,406,795
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	329	328	23.5	369	0.70	51.0	—	51.0	51.0	—	51.0	4,405	22,749	27,153	0.43	0.43	—	27,293
Consumer Products	1,009	1,009	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	174	174	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	289	272	17.6	1,254	0.07	3.35	—	3.35	2.53	—	2.53	—	3,844	3,844	0.16	0.03	—	3,858
Total	1,801	1,782	41.1	1,623	0.77	54.4	—	54.4	53.5	—	53.5	4,405	26,593	30,997	0.59	0.46	—	31,150

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3,969	195,034	199,004	425	12.2	—	213,260
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,754	37,996	41,750	388	9.64	—	54,333
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	337	3,406	3,743	34.8	0.86	—	4,871
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	4,006	40,546	44,552	414	10.3	—	57,979
General Office Building	—	—	—	—	—	—	—	—	—	—	—	5,271	53,355	58,627	545	13.5	—	76,295

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	642	6,496	7,138	66.4	1.65	—	9,289
Elementary School	—	—	—	—	—	—	—	—	—	—	—	591	5,984	6,576	61.2	1.52	—	8,557
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	10,219	103,431	113,650	1,057	26.2	—	147,902
Hospital	—	—	—	—	—	—	—	—	—	—	—	3,083	31,200	34,283	319	7.92	—	44,615
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1,135	11,491	12,626	117	2.92	—	16,431
Total	—	—	—	—	—	—	—	—	—	—	—	33,007	488,942	521,949	3,429	86.8	—	633,533
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3,969	195,034	199,004	425	12.2	—	213,260
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3,754	37,996	41,750	388	9.64	—	54,333
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	337	3,406	3,743	34.8	0.86	—	4,871
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	4,006	40,546	44,552	414	10.3	—	57,979
General Office Building	—	—	—	—	—	—	—	—	—	—	—	5,271	53,355	58,627	545	13.5	—	76,295

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	642	6,496	7,138	66.4	1.65	—	9,289
Elementary School	—	—	—	—	—	—	—	—	—	—	—	591	5,984	6,576	61.2	1.52	—	8,557
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	10,219	103,431	113,650	1,057	26.2	—	147,902
Hospital	—	—	—	—	—	—	—	—	—	—	—	3,083	31,200	34,283	319	7.92	—	44,615
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1,135	11,491	12,626	117	2.92	—	16,431
Total	—	—	—	—	—	—	—	—	—	—	—	33,007	488,942	521,949	3,429	86.8	—	633,533
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	657	32,290	32,947	70.3	2.02	—	35,308
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	622	6,291	6,912	64.3	1.60	—	8,995
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	55.7	564	620	5.76	0.14	—	806
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	663	6,713	7,376	68.6	1.70	—	9,599
General Office Building	—	—	—	—	—	—	—	—	—	—	—	873	8,834	9,706	90.3	2.24	—	12,632
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	106	1,076	1,182	11.0	0.27	—	1,538

Element School	—	—	—	—	—	—	—	—	—	—	—	97.9	991	1,089	10.1	0.25	—	1,417
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1,692	17,124	18,816	175	4.34	—	24,487
Hospital	—	—	—	—	—	—	—	—	—	—	—	510	5,166	5,676	52.8	1.31	—	7,386
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	188	1,902	2,090	19.4	0.48	—	2,720
Total	—	—	—	—	—	—	—	—	—	—	—	5,465	80,950	86,415	568	14.4	—	104,889

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	60,781	0.00	60,781	6,075	0.00	—	212,652
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	53,661	0.00	53,661	5,363	0.00	—	187,741
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	4,735	0.00	4,735	473	0.00	—	16,567
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	40,612	0.00	40,612	4,059	0.00	—	142,087

General Office Building	—	—	—	—	—	—	—	—	—	—	—	19,686	0.00	19,686	1,968	0.00	—	68,876
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2,144	0.00	2,144	214	0.00	—	7,503
Elementary School	—	—	—	—	—	—	—	—	—	—	—	11,434	0.00	11,434	1,143	0.00	—	40,003
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	29,704	0.00	29,704	2,969	0.00	—	103,924
Hospital	—	—	—	—	—	—	—	—	—	—	—	189,519	0.00	189,519	18,942	0.00	—	663,063
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	3,300	0.00	3,300	330	0.00	—	11,546
Total	—	—	—	—	—	—	—	—	—	—	—	415,577	0.00	415,577	41,535	0.00	—	1,453,962
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	60,781	0.00	60,781	6,075	0.00	—	212,652
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	53,661	0.00	53,661	5,363	0.00	—	187,741
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	4,735	0.00	4,735	473	0.00	—	16,567
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	40,612	0.00	40,612	4,059	0.00	—	142,087



General Office Building	—	—	—	—	—	—	—	—	—	—	—	19,686	0.00	19,686	1,968	0.00	—	68,876
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2,144	0.00	2,144	214	0.00	—	7,503
Elementary School	—	—	—	—	—	—	—	—	—	—	—	11,434	0.00	11,434	1,143	0.00	—	40,003
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	29,704	0.00	29,704	2,969	0.00	—	103,924
Hospital	—	—	—	—	—	—	—	—	—	—	—	189,519	0.00	189,519	18,942	0.00	—	663,063
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	3,300	0.00	3,300	330	0.00	—	11,546
Total	—	—	—	—	—	—	—	—	—	—	—	415,577	0.00	415,577	41,535	0.00	—	1,453,962
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	10,063	0.00	10,063	1,006	0.00	—	35,207
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	8,884	0.00	8,884	888	0.00	—	31,083
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	784	0.00	784	78.4	0.00	—	2,743
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	6,724	0.00	6,724	672	0.00	—	23,524
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,259	0.00	3,259	326	0.00	—	11,403

Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	355	0.00	355	35.5	0.00	—	1,242
Elementary School	—	—	—	—	—	—	—	—	—	—	—	1,893	0.00	1,893	189	0.00	—	6,623
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	4,918	0.00	4,918	492	0.00	—	17,206
Hospital	—	—	—	—	—	—	—	—	—	—	—	31,377	0.00	31,377	3,136	0.00	—	109,778
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	546	0.00	546	54.6	0.00	—	1,912
Total	—	—	—	—	—	—	—	—	—	—	—	68,803	0.00	68,803	6,877	0.00	—	240,720

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	771	771
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	359	359

Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43.6	43.6
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	176	176
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.6	37.6
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.10	4.10
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.1	41.1
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.1	20.1
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68,278	68,278
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,730	69,730
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	771	771
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	359	359
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43.6	43.6
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	176	176

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.6	37.6
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.10	4.10
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.1	41.1
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.1	20.1
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68,278	68,278
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,730	69,730
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	128	128
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	59.4	59.4
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.21	7.21
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.1	29.1
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.23	6.23
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68

Elementary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.81	6.81
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.33	3.33
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11,304	11,304
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11,545	11,545

### 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)

Equipm ent	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)

Equipm ent 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

### 5.9. Operational Mobile Sources

#### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1,527,461	1,527,461	1,527,461	557,523,141	12,578,363	12,578,363	12,578,363	4,591,102,584

### 5.10. Operational Area Sources

#### 5.10.1. Hearths

##### 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	1540
Gas Fireplaces	26180
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	3080
Wood Fireplaces	1220
Gas Fireplaces	20742
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	2440
Apartments Mid Rise	—
Wood Fireplaces	2610
Gas Fireplaces	44375
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	5221
Mobile Home Park	—
Wood Fireplaces	234
Gas Fireplaces	3978
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	468

### 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)
331787461.5	110,595,821	141,705,974	47,235,325	—

### 5.10.3. Landscape Equipment

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

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBtu/yr)
Single Family Housing	259,742,725	1,040	0.0945	0.0135	1,200
Apartments Mid Rise	234,068,242	1,040	0.0945	0.0135	579,843,840
Mobile Home Park	27,436,017	1,040	0.0945	0.0135	144,049,827
Strip Mall	339,019,248	1,040	0.0945	0.0135	168,969,525
General Office Building	337,348,503	1,040	0.0945	0.0135	392,312,623
Government Office Building	36,746,968	1,040	0.0945	0.0135	42,734,144
Elementary School	81,395,290	1,040	0.0945	0.0135	223,239,655
Unrefrigerated Warehouse-No Rail	132,010,033	1,040	0.0945	0.0135	444,527,207
Hospital	458,402,739	1,040	0.0945	0.0135	699,195,135
Refrigerated Warehouse-No Rail	60,595,634	1,040	0.0945	0.0135	64,188,457
Single Family Housing	205,787,077	1,040	0.0945	0.0135	935,459,117

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,155,790,020	5,714,539,199
Apartments Mid Rise	1,959,064,084	0.00
Mobile Home Park	175,620,042	0.00
Strip Mall	2,090,548,774	0.00
General Office Building	2,750,962,952	0.00
Government Office Building	334,940,230	0.00
Elementary School	308,546,010	0.00
Unrefrigerated Warehouse-No Rail	5,332,856,250	0.00
Hospital	1,608,660,492	0.00
Refrigerated Warehouse-No Rail	592,462,500	0.00

Single Family Housing	915,700,911	4,527,473,559
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### 5.13. Operational Waste Generation

#### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	63,331	—
Apartments Mid Rise	99,567	—
Mobile Home Park	8,786	—
Strip Mall	75,355	—
General Office Building	36,528	—
Government Office Building	3,979	—
Elementary School	21,216	—
Unrefrigerated Warehouse-No Rail	55,116	—
Hospital	351,653	—
Refrigerated Warehouse-No Rail	6,123	—
Single Family Housing	49,448	—

### 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
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Mobile Home Park	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Mobile Home Park	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00

Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Hospital	Chillers	R-134a	1,430	< 0.005	2.00	2.00	23.0
Hospital	Household refrigerators and/or freezers	R-134a	1,430	< 0.005	0.60	0.00	1.00
Hospital	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Hospital	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Refrigerated Warehouse-No Rail	Cold storage	R-404A	3,922	7.50	7.50	7.50	25.0

## 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	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm

Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2



Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—

CleanUp Sites	96.6
Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—

Auto Access	17.91351213
Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8

Cognitively Disabled	72.6
Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—

2016 Voting	42.3
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### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Land Use	Per table 3-1 in the Project Description,
Operations: Hearths	Removed wood stoves, included wood-burning fire places
Operations: Solid Waste	Generated solid waste values per CalRecycle 2024
Operations: Energy Use	Updated electricity consumption per CEC 1990 annual

# Anaheim General Plan - Existing Detailed Report

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- 1. Basic Project Information
  - 1.1. Basic Project Information
  - 1.2. Land Use Types
  - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
  - 2.4. Operations Emissions Compared Against Thresholds
  - 2.5. Operations Emissions by Sector, Unmitigated
- 4. Operations Emissions Details
  - 4.1. Mobile Emissions by Land Use
    - 4.1.1. Unmitigated
  - 4.2. Energy
    - 4.2.1. Electricity Emissions By Land Use - Unmitigated
    - 4.2.3. Natural Gas Emissions By Land Use - Unmitigated
  - 4.3. Area Emissions by Source
    - 4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps



5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Anaheim General Plan - Existing
Operational Year	2021
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	Anaheim, CA, USA
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.29

## 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
Single Family Housing	30,800	Dwelling Unit	9,999	60,060,000	360,755,996	0.00	103,761	—

Apartments Mid Rise	52,206	Dwelling Unit	1,374	50,117,760	1.00	0.00	155,574	—
Mobile Home Park	4,680	Dwelling Unit	590	6,084,000	0.00	0.00	13,946	—
Strip Mall	17,908	1000sqft	411	17,908,000	0.00	0.00	—	—
General Office Building	15,478	1000sqft	355	15,478,000	0.00	0.00	—	—
Government Office Building	1,686	1000sqft	38.7	1,686,000	0.00	0.00	—	—
Elementary School	10,451	Employee	244	10,640,649	0.00	0.00	—	—
Unrefrigerated Warehouse-No Rail	23,061	1000sqft	529	23,061,000	0.00	0.00	—	—
Hospital	12,820	1000sqft	294	12,820,000	0.00	0.00	—	—
Refrigerated Warehouse-No Rail	2,562	1000sqft	58.8	2,562,000	0.00	0.00	—	—
Single Family Housing	24,402	Dwelling Unit	7,923	47,583,900	285,817,137	0.00	72,718	—

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

No measures selected

## 2. Emissions Summary

### 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.	42,207	41,204	10,363	106,836	206	4,334	11,741	16,074	4,324	2,980	7,305	967,218	24,202,030	25,169,249	59,474	787	141,244	27,032,003
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	40,791	39,857	10,850	92,505	200	4,323	11,741	16,064	4,317	2,980	7,297	967,218	23,612,8	24,580,0	59,511	818	71,522	26,383,2
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17,108	16,204	9,251	73,269	150	529	11,599	12,128	521	2,945	3,466	605,406	21,916,786	22,522,192	59,470	785	100,573	24,343,591
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3,122	2,957	1,688	13,372	27.3	96.6	2,117	2,213	95.1	537	632	100,232	3,628,574	3,728,806	9,846	130	16,651	4,030,359

## 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	8,535	7,813	6,546	66,246	138	97.4	11,741	11,838	90.8	2,980	3,071	—	14,082,769	14,082,769	732	578	71,578	14,344,802
Area	33,462	33,286	1,975	39,482	56.3	4,091	—	4,091	4,088	—	4,088	388,416	2,038,148	2,426,565	39.1	38.3	—	2,438,962
Energy	210	105	1,842	1,108	11.5	145	—	145	145	—	145	—	7,741,340	7,741,340	729	80.1	—	7,783,436
Water	—	—	—	—	—	—	—	—	—	—	—	35,542	339,772	375,314	3,677	91.3	—	494,452
Waste	—	—	—	—	—	—	—	—	—	—	—	543,261	0.00	543,261	54,297	0.00	—	1,900,684
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,666	69,666
Total	42,207	41,204	10,363	106,836	206	4,334	11,741	16,074	4,324	2,980	7,305	967,218	24,202,030	25,169,249	59,474	787	141,244	27,032,003
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8,433	7,696	7,131	61,867	133	97.5	11,741	11,838	90.9	2,980	3,071	—	13,525,626	13,525,626	770	609	1,856	13,728,200

Anaheim General Plan - Existing Detailed Report, 12/16/2024

Area	32,148	32,055	1,877	29,530	55.8	4,080	—	4,080	4,080	—	4,080	388,416	2,006,09	2,394,51	37.8	38.0	—	2,406,79
Energy	210	105	1,842	1,108	11.5	145	—	145	145	—	145	—	7,741,340	7,741,340	729	80.1	—	7,783,436
Water	—	—	—	—	—	—	—	—	—	—	—	35,542	339,772	375,314	3,677	91.3	—	494,452
Waste	—	—	—	—	—	—	—	—	—	—	—	543,261	0.00	543,261	54,297	0.00	—	1,900,684
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,666	69,666
Total	40,791	39,857	10,850	92,505	200	4,323	11,741	16,064	4,317	2,980	7,297	967,218	23,612,834	24,580,053	59,511	818	71,522	26,383,233
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8,391	7,656	7,214	63,322	134	97.5	11,599	11,697	90.9	2,945	3,036	—	13,676,315	13,676,315	763	611	30,907	13,908,471
Area	8,507	8,443	196	8,839	4.16	287	—	287	285	—	285	26,604	159,358	185,962	3.51	2.79	—	186,881
Energy	210	105	1,842	1,108	11.5	145	—	145	145	—	145	—	7,741,340	7,741,340	729	80.1	—	7,783,436
Water	—	—	—	—	—	—	—	—	—	—	—	35,542	339,772	375,314	3,677	91.3	—	494,452
Waste	—	—	—	—	—	—	—	—	—	—	—	543,261	0.00	543,261	54,297	0.00	—	1,900,684
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,666	69,666
Total	17,108	16,204	9,251	73,269	150	529	11,599	12,128	521	2,945	3,466	605,406	21,916,786	22,522,192	59,470	785	100,573	24,343,591
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1,531	1,397	1,317	11,556	24.5	17.8	2,117	2,135	16.6	537	554	—	2,264,270	2,264,270	126	101	5,117	2,302,706
Area	1,552	1,541	35.7	1,613	0.76	52.3	—	52.3	52.0	—	52.0	4,405	26,384	30,788	0.58	0.46	—	30,940
Energy	38.3	19.2	336	202	2.09	26.5	—	26.5	26.5	—	26.5	—	1,281,667	1,281,667	121	13.3	—	1,288,637
Water	—	—	—	—	—	—	—	—	—	—	—	5,884	56,253	62,138	609	15.1	—	81,862
Waste	—	—	—	—	—	—	—	—	—	—	—	89,943	0.00	89,943	8,989	0.00	—	314,680
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11,534	11,534

Total	3,122	2,957	1,688	13,372	27.3	96.6	2,117	2,213	95.1	537	632	100,232	3,628,574	3,728,806	9,846	130	16,651	4,030,359
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## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,241,426	1,241,426	120	17.2	—	1,249,556
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	624,189	624,189	60.3	8.66	—	628,276
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	73,163	73,163	7.06	1.02	—	73,643
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	573,643	573,643	55.4	7.96	—	577,400
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	899,606	899,606	86.9	12.5	—	905,497

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	97,993	97,993	9.46	1.36	—	98,635
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	217,056	217,056	21.0	3.01	—	218,478
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	352,031	352,031	34.0	4.88	—	354,336
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	1,222,420	1,222,420	118	17.0	—	1,230,426
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	161,590	161,590	15.6	2.24	—	162,648
Total	—	—	—	—	—	—	—	—	—	—	—	—	5,463,117	5,463,117	527	75.8	—	5,498,894
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,241,426	1,241,426	120	17.2	—	1,249,556
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	624,189	624,189	60.3	8.66	—	628,276
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	73,163	73,163	7.06	1.02	—	73,643
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	573,643	573,643	55.4	7.96	—	577,400
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	899,606	899,606	86.9	12.5	—	905,497



Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	—	97,993	97,993	9.46	1.36	—	98,635
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	217,056	217,056	21.0	3.01	—	218,478
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	352,031	352,031	34.0	4.88	—	354,336
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	1,222,420	1,222,420	118	17.0	—	1,230,426
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	161,590	161,590	15.6	2.24	—	162,648
Total	—	—	—	—	—	—	—	—	—	—	—	—	5,463,117	5,463,117	527	75.8	—	5,498,894
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	205,532	205,532	19.8	2.85	—	206,878
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	103,342	103,342	9.98	1.43	—	104,018
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	12,113	12,113	1.17	0.17	—	12,192
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	94,973	94,973	9.17	1.32	—	95,595
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	148,940	148,940	14.4	2.07	—	149,915

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	16,224	16,224	1.57	0.23	—	16,330
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	35,936	35,936	3.47	0.50	—	36,172
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	58,283	58,283	5.63	0.81	—	58,664
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	202,386	202,386	19.5	2.81	—	203,711
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	26,753	26,753	2.58	0.37	—	26,928
Total	—	—	—	—	—	—	—	—	—	—	—	—	904,481	904,481	87.3	12.6	—	910,405

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	92.3	46.2	789	336	5.04	63.8	—	63.8	63.8	—	63.8	—	1,001,590	1,001,590	88.6	1.89	—	1,004,368
Apartments Mid Rise	25.3	12.7	216	92.0	1.38	17.5	—	17.5	17.5	—	17.5	—	274,440	274,440	24.3	0.52	—	275,201
Mobile Home Park	6.29	3.14	53.7	22.9	0.34	4.34	—	4.34	4.34	—	4.34	—	68,179	68,179	6.03	0.13	—	68,368

Strip Mall	4.68	2.34	42.5	35.7	0.26	3.23	—	3.23	3.23	—	3.23	—	50,744	50,744	4.49	0.10	—	50,885
General Office Building	17.1	8.56	156	131	0.93	11.8	—	11.8	11.8	—	11.8	—	185,681	185,681	16.4	0.35	—	186,196
Government Office Building	1.86	0.93	17.0	14.2	0.10	1.29	—	1.29	1.29	—	1.29	—	20,226	20,226	1.79	0.04	—	20,282
Elementary School	9.74	4.87	88.6	74.4	0.53	6.73	—	6.73	6.73	—	6.73	—	105,659	105,659	9.35	0.20	—	105,952
Unrefrigerated Warehouse-No Rail	19.4	9.70	176	148	1.06	13.4	—	13.4	13.4	—	13.4	—	210,394	210,394	18.6	0.40	—	210,978
Hospital	30.5	15.3	277	233	1.66	21.1	—	21.1	21.1	—	21.1	—	330,929	330,929	29.3	0.62	—	331,846
Refrigerated Warehouse-No Rail	2.80	1.40	25.5	21.4	0.15	1.94	—	1.94	1.94	—	1.94	—	30,380	30,380	2.69	0.06	—	30,465
Total	210	105	1,842	1,108	11.5	145	—	145	145	—	145	—	2,278,223	2,278,223	202	4.29	—	2,284,542
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	92.3	46.2	789	336	5.04	63.8	—	63.8	63.8	—	63.8	—	1,001,590	1,001,590	88.6	1.89	—	1,004,368
Apartments Mid Rise	25.3	12.7	216	92.0	1.38	17.5	—	17.5	17.5	—	17.5	—	274,440	274,440	24.3	0.52	—	275,201
Mobile Home Park	6.29	3.14	53.7	22.9	0.34	4.34	—	4.34	4.34	—	4.34	—	68,179	68,179	6.03	0.13	—	68,368

Strip Mall	4.68	2.34	42.5	35.7	0.26	3.23	—	3.23	3.23	—	3.23	—	50,744	50,744	4.49	0.10	—	50,885
General Office Building	17.1	8.56	156	131	0.93	11.8	—	11.8	11.8	—	11.8	—	185,681	185,681	16.4	0.35	—	186,196
Government Office Building	1.86	0.93	17.0	14.2	0.10	1.29	—	1.29	1.29	—	1.29	—	20,226	20,226	1.79	0.04	—	20,282
Elementary School	9.74	4.87	88.6	74.4	0.53	6.73	—	6.73	6.73	—	6.73	—	105,659	105,659	9.35	0.20	—	105,952
Unrefrigerated Warehouse-No Rail	19.4	9.70	176	148	1.06	13.4	—	13.4	13.4	—	13.4	—	210,394	210,394	18.6	0.40	—	210,978
Hospital	30.5	15.3	277	233	1.66	21.1	—	21.1	21.1	—	21.1	—	330,929	330,929	29.3	0.62	—	331,846
Refrigerated Warehouse-No Rail	2.80	1.40	25.5	21.4	0.15	1.94	—	1.94	1.94	—	1.94	—	30,380	30,380	2.69	0.06	—	30,465
Total	210	105	1,842	1,108	11.5	145	—	145	145	—	145	—	2,278,223	2,278,223	202	4.29	—	2,284,542
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	16.9	8.43	144	61.3	0.92	11.6	—	11.6	11.6	—	11.6	—	165,825	165,825	14.7	0.31	—	166,285
Apartments Mid Rise	4.62	2.31	39.5	16.8	0.25	3.19	—	3.19	3.19	—	3.19	—	45,437	45,437	4.02	0.09	—	45,563
Mobile Home Park	1.15	0.57	9.80	4.17	0.06	0.79	—	0.79	0.79	—	0.79	—	11,288	11,288	1.00	0.02	—	11,319
Strip Mall	0.85	0.43	7.76	6.52	0.05	0.59	—	0.59	0.59	—	0.59	—	8,401	8,401	0.74	0.02	—	8,425

General Office Building	3.12	1.56	28.4	23.9	0.17	2.16	—	2.16	2.16	—	2.16	—	30,742	30,742	2.72	0.06	—	30,827
Government Office Building	0.34	0.17	3.09	2.60	0.02	0.24	—	0.24	0.24	—	0.24	—	3,349	3,349	0.30	0.01	—	3,358
Elementary School	1.78	0.89	16.2	13.6	0.10	1.23	—	1.23	1.23	—	1.23	—	17,493	17,493	1.55	0.03	—	17,542
Unrefrigerated Warehouse-No Rail	3.54	1.77	32.2	27.0	0.19	2.45	—	2.45	2.45	—	2.45	—	34,833	34,833	3.08	0.07	—	34,930
Hospital	5.57	2.78	50.6	42.5	0.30	3.85	—	3.85	3.85	—	3.85	—	54,789	54,789	4.85	0.10	—	54,941
Refrigerated Warehouse-No Rail	0.51	0.26	4.65	3.90	0.03	0.35	—	0.35	0.35	—	0.35	—	5,030	5,030	0.45	0.01	—	5,044
Total	38.3	19.2	336	202	2.09	26.5	—	26.5	26.5	—	26.5	—	377,186	377,186	33.4	0.71	—	378,232

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	26,346	26,253	1,877	29,530	55.8	4,080	—	4,080	4,080	—	4,080	388,416	2,006,095	2,394,512	37.8	38.0	—	2,406,795

Consumer Products	5,307	5,307	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	495	495	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1,314	1,231	97.8	9,953	0.50	10.5	—	10.5	7.96	—	7.96	—	32,053	32,053	1.34	0.27	—	32,167
Total	33,462	33,286	1,975	39,482	56.3	4,091	—	4,091	4,088	—	4,088	388,416	2,038,148	2,426,565	39.1	38.3	—	2,438,962
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	26,346	26,253	1,877	29,530	55.8	4,080	—	4,080	4,080	—	4,080	388,416	2,006,095	2,394,512	37.8	38.0	—	2,406,795
Consumer Products	5,307	5,307	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	495	495	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	32,148	32,055	1,877	29,530	55.8	4,080	—	4,080	4,080	—	4,080	388,416	2,006,095	2,394,512	37.8	38.0	—	2,406,795
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	329	328	23.5	369	0.70	51.0	—	51.0	51.0	—	51.0	4,405	22,749	27,153	0.43	0.43	—	27,293
Consumer Products	969	969	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	90.3	90.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	164	154	12.2	1,244	0.06	1.32	—	1.32	1.00	—	1.00	—	3,635	3,635	0.15	0.03	—	3,648
Total	1,552	1,541	35.7	1,613	0.76	52.3	—	52.3	52.0	—	52.0	4,405	26,384	30,788	0.58	0.46	—	30,940

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	35,542	339,772	375,314	3,677	91.3	—	494,452
Total	—	—	—	—	—	—	—	—	—	—	—	35,542	339,772	375,314	3,677	91.3	—	494,452
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	35,542	339,772	375,314	3,677	91.3	—	494,452
Total	—	—	—	—	—	—	—	—	—	—	—	35,542	339,772	375,314	3,677	91.3	—	494,452
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5,884	56,253	62,138	609	15.1	—	81,862
Total	—	—	—	—	—	—	—	—	—	—	—	5,884	56,253	62,138	609	15.1	—	81,862

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	86,384	0.00	86,384	8,634	0.00	—	302,228
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	71,268	0.00	71,268	7,123	0.00	—	249,343
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	6,389	0.00	6,389	639	0.00	—	22,352
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	34,552	0.00	34,552	3,453	0.00	—	120,885
General Office Building	—	—	—	—	—	—	—	—	—	—	—	26,443	0.00	26,443	2,643	0.00	—	92,516
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2,880	0.00	2,880	288	0.00	—	10,078
Elementary School	—	—	—	—	—	—	—	—	—	—	—	15,377	0.00	15,377	1,537	0.00	—	53,797
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	39,895	0.00	39,895	3,987	0.00	—	139,580
Hospital	—	—	—	—	—	—	—	—	—	—	—	255,640	0.00	255,640	25,550	0.00	—	894,398



Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	4,432	0.00	4,432	443	0.00	—	15,507
Total	—	—	—	—	—	—	—	—	—	—	—	543,261	0.00	543,261	54,297	0.00	—	1,900,684
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	86,384	0.00	86,384	8,634	0.00	—	302,228
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	71,268	0.00	71,268	7,123	0.00	—	249,343
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	6,389	0.00	6,389	639	0.00	—	22,352
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	34,552	0.00	34,552	3,453	0.00	—	120,885
General Office Building	—	—	—	—	—	—	—	—	—	—	—	26,443	0.00	26,443	2,643	0.00	—	92,516
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2,880	0.00	2,880	288	0.00	—	10,078
Elementary School	—	—	—	—	—	—	—	—	—	—	—	15,377	0.00	15,377	1,537	0.00	—	53,797
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	39,895	0.00	39,895	3,987	0.00	—	139,580
Hospital	—	—	—	—	—	—	—	—	—	—	—	255,640	0.00	255,640	25,550	0.00	—	894,398

Refrigerated Warehouse-No	—	—	—	—	—	—	—	—	—	—	—	4,432	0.00	4,432	443	0.00	—	15,507
Total	—	—	—	—	—	—	—	—	—	—	—	543,261	0.00	543,261	54,297	0.00	—	1,900,684
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	14,302	0.00	14,302	1,429	0.00	—	50,037
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	11,799	0.00	11,799	1,179	0.00	—	41,282
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	1,058	0.00	1,058	106	0.00	—	3,701
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	5,720	0.00	5,720	572	0.00	—	20,014
General Office Building	—	—	—	—	—	—	—	—	—	—	—	4,378	0.00	4,378	438	0.00	—	15,317
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	477	0.00	477	47.7	0.00	—	1,668
Elementary School	—	—	—	—	—	—	—	—	—	—	—	2,546	0.00	2,546	254	0.00	—	8,907
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	6,605	0.00	6,605	660	0.00	—	23,109
Hospital	—	—	—	—	—	—	—	—	—	—	—	42,324	0.00	42,324	4,230	0.00	—	148,078

Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	734	0.00	734	73.3	0.00	—	2,567
Total	—	—	—	—	—	—	—	—	—	—	—	89,943	0.00	89,943	8,989	0.00	—	314,680

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	771	771
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	359	359
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43.6	43.6
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	112	112
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.6	37.6
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.10	4.10

Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.1	41.1
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.1	20.1
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68,278	68,278
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,666	69,666
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	771	771
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	359	359
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43.6	43.6
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	112	112
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.6	37.6
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.10	4.10
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.1	41.1
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.1	20.1

Refrigerated Warehouse Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68,278	68,278
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	69,666	69,666
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	128	128
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	59.4	59.4
Mobile Home Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.21	7.21
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.5	18.5
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.23	6.23
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.68	0.68
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.81	6.81
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.33	3.33
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11,304	11,304
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11,534	11,534

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)

Equipm ent 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)

Equipm ent 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)

Equipm ent 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)

Vegetati on	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

### 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	2,014,775	2,014,775	2,014,775	735,392,875	16,591,309	16,591,309	16,591,309	6,055,827,785

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	1540
Gas Fireplaces	26180
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	3080
Wood Fireplaces	1220
Gas Fireplaces	20742
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	2440
Apartments Mid Rise	—
Wood Fireplaces	2610
Gas Fireplaces	44375
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	5221
Mobile Home Park	—

Wood Fireplaces	234
Gas Fireplaces	3978
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	468

### 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)
331787461.5	110,595,821	126,233,474	42,077,825	—

### 5.10.3. Landscape Equipment

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

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	257,391,069	982	0.0948	0.0136	1,743,724,701
Apartments Mid Rise	231,949,037	982	0.0948	0.0136	856,325,470
Mobile Home Park	27,187,617	982	0.0948	0.0136	212,735,788
Strip Mall	213,166,201	982	0.0948	0.0136	158,336,160
General Office Building	334,294,219	982	0.0948	0.0136	579,375,460
Government Office Building	36,414,269	982	0.0948	0.0136	63,110,675
Elementary School	80,658,354	982	0.0948	0.0136	329,684,976

Unrefrigerated Warehouse-No Rail	130,814,841	982	0.0948	0.0136	656,487,046
Hospital	454,252,455	982	0.0948	0.0136	1,032,585,950
Refrigerated Warehouse-No Rail	60,047,014	982	0.0948	0.0136	94,794,851
Single Family Housing	203,923,924	982	0.0948	0.0136	1,381,505,524

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	18,547,620,800	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	93,385	—
Apartments Mid Rise	132,238	—
Mobile Home Park	11,854	—
Strip Mall	64,111	—
General Office Building	49,065	—
Government Office Building	5,345	—
Elementary School	28,531	—
Unrefrigerated Warehouse-No Rail	74,026	—
Hospital	474,340	—
Refrigerated Warehouse-No Rail	8,224	—
Single Family Housing	66,901	—

## 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
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Mobile Home Park	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Mobile Home Park	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Hospital	Chillers	R-134a	1,430	< 0.005	2.00	2.00	23.0
Hospital	Household refrigerators and/or freezers	R-134a	1,430	< 0.005	0.60	0.00	1.00
Hospital	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Hospital	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Refrigerated Warehouse-No Rail	Cold storage	R-404A	3,922	7.50	7.50	7.50	25.0

### 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	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events.

Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell.

The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A



Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

### 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

### 6.4. Climate Risk Reduction Measures

## 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886

Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Land Use	Per table 3-1 in the Project Description
Operations: Hearths	Removed wood stoves, included wood-burning fire places
Operations: Water and Waste Water	To simplify modeling, projected water demand Citywide per 2020 UWMP has been added to a single land use; 56,912 AFY
Operations: Solid Waste	Revised waste generation values per Table 5.17-6 in the EIR (Utilities and Service Systems)
Operations: Energy Use	Revised electricity and natural gas data per APU and SoCal Gas 2021 data.

# Anaheim General Plan - 2045 Buildout 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	Anaheim General Plan - 2045 Buildout
Operational Year	2045
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	Anaheim, CA, USA
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.29

## 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
Single Family Housing	45,551	Dwelling Unit	10,000	88,824,450	533,532,350	0.00	135,742	—

Apartments Mid Rise	89,781	Dwelling Unit	2,363	86,189,760	0.00	0.00	284,603	—
Strip Mall	24,022	1000sqft	551	24,022,000	0.00	0.00	—	—
General Office Building	20,776	1000sqft	477	20,776,000	0.00	0.00	—	—
Government Office Building	2,597	1000sqft	59.6	2,597,000	0.00	0.00	—	—
Unrefrigerated Warehouse-No Rail	43,659	1000sqft	1,002	43,659,000	0.00	0.00	—	—
Elementary School	21,786	Employee	509	22,181,339	0.00	0.00	—	—
Single Family Housing	1,858	Dwelling Unit	3,962	3,623,100	21,762,488	0.00	5,537	—
Refrigerated Warehouse-No Rail	4,851	1000sqft	111	4,851,000	0.00	0.00	—	—
Hospital	17,530	1000sqft	402	17,530,000	0.00	0.00	—	—

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

No measures selected

## 2. Emissions Summary

### 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.	15,010	14,242	6,890	58,066	147	370	14,356	14,726	364	3,642	4,006	727,229	17,382,537	18,109,765	73,510	550	133,910	20,245,394
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	13,254	12,604	7,022	41,342	142	357	14,356	14,712	354	3,642	3,995	727,229	16,848,751	17,575,980	73,522	570	130,958	19,714,936
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14,229	13,588	5,561	50,998	134	240	14,183	14,423	235	3,598	3,833	727,229	15,036,502	15,763,731	73,484	568	132,188	17,902,199
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2,597	2,480	1,015	9,307	24.4	43.9	2,588	2,632	42.9	657	700	120,401	2,489,464	2,609,865	12,166	94.0	21,885	2,963,913

## 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	5,415	4,994	2,811	42,148	122	42.5	14,356	14,398	39.7	3,642	3,681	—	12,408,409	12,408,409	428	440	3,031	12,553,187
Area	9,336	9,119	1,792	14,432	11.3	149	—	149	146	—	146	0.00	2,164,898	2,164,898	41.8	4.37	—	2,167,246
Energy	259	129	2,287	1,486	14.1	179	—	179	179	—	179	—	2,809,229	2,809,229	249	5.29	—	2,817,021
Water	—	—	—	—	—	—	—	—	—	—	—	41,394	0.00	41,394	4,244	101	—	177,558
Waste	—	—	—	—	—	—	—	—	—	—	—	685,835	0.00	685,835	68,547	0.00	—	2,399,503
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130,879	130,879
Total	15,010	14,242	6,890	58,066	147	370	14,356	14,726	364	3,642	4,006	727,229	17,382,537	18,109,765	73,510	550	133,910	20,245,394
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Mobile	5,424	5,001	3,064	39,145	117	42.6	14,356	14,399	39.8	3,642	3,681	—	11,919,688	11,919,688	442	460	78.6	12,067,954
Area	7,571	7,474	1,670	711	10.7	135	—	135	135	—	135	0.00	2,119,834	2,119,834	39.9	3.99	—	2,122,021
Energy	259	129	2,287	1,486	14.1	179	—	179	179	—	179	—	2,809,229	2,809,229	249	5.29	—	2,817,021
Water	—	—	—	—	—	—	—	—	—	—	—	41,394	0.00	41,394	4,244	101	—	177,558
Waste	—	—	—	—	—	—	—	—	—	—	—	685,835	0.00	685,835	68,547	0.00	—	2,399,503
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130,879	130,879
Total	13,254	12,604	7,022	41,342	142	357	14,356	14,712	354	3,642	3,995	727,229	16,848,751	17,575,980	73,522	570	130,958	19,714,936
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5,372	4,949	3,076	40,065	118	42.6	14,183	14,225	39.7	3,598	3,638	—	12,051,212	12,051,212	440	461	1,309	12,200,917
Area	8,598	8,510	198	9,447	1.20	18.8	—	18.8	16.5	—	16.5	0.00	176,060	176,060	4.03	0.53	—	176,320
Energy	259	129	2,287	1,486	14.1	179	—	179	179	—	179	—	2,809,229	2,809,229	249	5.29	—	2,817,021
Water	—	—	—	—	—	—	—	—	—	—	—	41,394	0.00	41,394	4,244	101	—	177,558
Waste	—	—	—	—	—	—	—	—	—	—	—	685,835	0.00	685,835	68,547	0.00	—	2,399,503
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130,879	130,879
Total	14,229	13,588	5,561	50,998	134	240	14,183	14,423	235	3,598	3,833	727,229	15,036,502	15,763,731	73,484	568	132,188	17,902,199
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	980	903	561	7,312	21.6	7.77	2,588	2,596	7.25	657	664	—	1,995,216	1,995,216	72.8	76.3	217	2,020,001
Area	1,569	1,553	36.1	1,724	0.22	3.43	—	3.43	3.01	—	3.01	0.00	29,149	29,149	0.67	0.09	—	29,192
Energy	47.3	23.6	417	271	2.58	32.7	—	32.7	32.7	—	32.7	—	465,100	465,100	41.2	0.88	—	466,390
Water	—	—	—	—	—	—	—	—	—	—	—	6,853	0.00	6,853	703	16.7	—	29,397
Waste	—	—	—	—	—	—	—	—	—	—	—	113,548	0.00	113,548	11,349	0.00	—	397,265

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21,669	21,669
Total	2,597	2,480	1,015	9,307	24.4	43.9	2,588	2,632	42.9	657	700	120,401	2,489,464	2,609,865	12,166	94.0	21,885	2,963,913

## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00



Unrefrig Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	79.3	39.7	678	288	4.33	54.8	—	54.8	54.8	—	54.8	—	860,193	860,193	76.1	1.62	—	862,579
Apartments Mid Rise	43.5	21.8	372	158	2.37	30.1	—	30.1	30.1	—	30.1	—	471,966	471,966	41.8	0.89	—	473,275
Strip Mall	6.28	3.14	57.0	47.9	0.34	4.34	—	4.34	4.34	—	4.34	—	68,069	68,069	6.02	0.13	—	68,258
General Office Building	23.0	11.5	209	175	1.25	15.9	—	15.9	15.9	—	15.9	—	249,239	249,239	22.1	0.47	—	249,930
Government Office Building	2.87	1.44	26.1	21.9	0.16	1.98	—	1.98	1.98	—	1.98	—	31,155	31,155	2.76	0.06	—	31,241
Unrefrigerated Warehouse-No Rail	36.7	18.4	334	280	2.00	25.4	—	25.4	25.4	—	25.4	—	398,318	398,318	35.3	0.75	—	399,423

Elementary	20.3	10.2	185	155	1.11	14.0	—	14.0	14.0	—	14.0	—	220,256	220,256	19.5	0.41	—	220,866
Refrigerated Warehouse-No Rail	5.30	2.65	48.2	40.5	0.29	3.66	—	3.66	3.66	—	3.66	—	57,523	57,523	5.09	0.11	—	57,683
Hospital	41.7	20.9	379	319	2.28	28.8	—	28.8	28.8	—	28.8	—	452,510	452,510	40.0	0.85	—	453,765
Total	259	129	2,287	1,486	14.1	179	—	179	179	—	179	—	2,809,229	2,809,229	249	5.29	—	2,817,021
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	79.3	39.7	678	288	4.33	54.8	—	54.8	54.8	—	54.8	—	860,193	860,193	76.1	1.62	—	862,579
Apartments Mid Rise	43.5	21.8	372	158	2.37	30.1	—	30.1	30.1	—	30.1	—	471,966	471,966	41.8	0.89	—	473,275
Strip Mall	6.28	3.14	57.0	47.9	0.34	4.34	—	4.34	4.34	—	4.34	—	68,069	68,069	6.02	0.13	—	68,258
General Office Building	23.0	11.5	209	175	1.25	15.9	—	15.9	15.9	—	15.9	—	249,239	249,239	22.1	0.47	—	249,930
Government Office Building	2.87	1.44	26.1	21.9	0.16	1.98	—	1.98	1.98	—	1.98	—	31,155	31,155	2.76	0.06	—	31,241
Unrefrigerated Warehouse-No Rail	36.7	18.4	334	280	2.00	25.4	—	25.4	25.4	—	25.4	—	398,318	398,318	35.3	0.75	—	399,423
Elementary School	20.3	10.2	185	155	1.11	14.0	—	14.0	14.0	—	14.0	—	220,256	220,256	19.5	0.41	—	220,866

Refrigerated Warehouse	5.30	2.65	48.2	40.5	0.29	3.66	—	3.66	3.66	—	3.66	—	57,523	57,523	5.09	0.11	—	57,683
Hospital	41.7	20.9	379	319	2.28	28.8	—	28.8	28.8	—	28.8	—	452,510	452,510	40.0	0.85	—	453,765
Total	259	129	2,287	1,486	14.1	179	—	179	179	—	179	—	2,809,229	2,809,229	249	5.29	—	2,817,021
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	14.5	7.24	124	52.6	0.79	10.00	—	10.00	10.00	—	10.00	—	142,415	142,415	12.6	0.27	—	142,810
Apartments Mid Rise	7.94	3.97	67.9	28.9	0.43	5.49	—	5.49	5.49	—	5.49	—	78,139	78,139	6.92	0.15	—	78,356
Strip Mall	1.15	0.57	10.4	8.75	0.06	0.79	—	0.79	0.79	—	0.79	—	11,270	11,270	1.00	0.02	—	11,301
General Office Building	4.19	2.10	38.1	32.0	0.23	2.90	—	2.90	2.90	—	2.90	—	41,264	41,264	3.65	0.08	—	41,379
Government Office Building	0.52	0.26	4.77	4.00	0.03	0.36	—	0.36	0.36	—	0.36	—	5,158	5,158	0.46	0.01	—	5,172
Unrefrigerated Warehouse-No Rail	6.70	3.35	60.9	51.2	0.37	4.63	—	4.63	4.63	—	4.63	—	65,946	65,946	5.84	0.12	—	66,129
Elementary School	3.71	1.85	33.7	28.3	0.20	2.56	—	2.56	2.56	—	2.56	—	36,466	36,466	3.23	0.07	—	36,567
Refrigerated Warehouse-No Rail	0.97	0.48	8.80	7.39	0.05	0.67	—	0.67	0.67	—	0.67	—	9,524	9,524	0.84	0.02	—	9,550
Hospital	7.61	3.81	69.2	58.1	0.42	5.26	—	5.26	5.26	—	5.26	—	74,918	74,918	6.63	0.14	—	75,126

Total	47.3	23.6	417	271	2.58	32.7	—	32.7	32.7	—	32.7	—	465,100	465,100	41.2	0.88	—	466,390
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### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	195	97.7	1,670	711	10.7	135	—	135	135	—	135	0.00	2,119,834	2,119,834	39.9	3.99	—	2,122,021
Consumer Products	6,725	6,725	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	651	651	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1,764	1,646	121	13,721	0.69	14.0	—	14.0	10.6	—	10.6	—	45,065	45,065	1.89	0.38	—	45,225
Total	9,336	9,119	1,792	14,432	11.3	149	—	149	146	—	146	0.00	2,164,898	2,164,898	41.8	4.37	—	2,167,246
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	195	97.7	1,670	711	10.7	135	—	135	135	—	135	0.00	2,119,834	2,119,834	39.9	3.99	—	2,122,021
Consumer Products	6,725	6,725	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	651	651	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	7,571	7,474	1,670	711	10.7	135	—	135	135	—	135	0.00	2,119,834	2,119,834	39.9	3.99	—	2,122,021
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	2.44	1.22	20.9	8.88	0.13	1.69	—	1.69	1.69	—	1.69	0.00	24,039	24,039	0.45	0.05	—	24,063
Consumer Products	1,227	1,227	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	119	119	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	221	206	15.2	1,715	0.09	1.74	—	1.74	1.32	—	1.32	—	5,110	5,110	0.21	0.04	—	5,128
Total	1,569	1,553	36.1	1,724	0.22	3.43	—	3.43	3.01	—	3.01	0.00	29,149	29,149	0.67	0.09	—	29,192

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	41,394	0.00	41,394	4,244	101	—	177,558
Total	—	—	—	—	—	—	—	—	—	—	—	41,394	0.00	41,394	4,244	101	—	177,558

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	41,394	0.00	41,394	4,244	101	—	177,558
Total	—	—	—	—	—	—	—	—	—	—	—	41,394	0.00	41,394	4,244	101	—	177,558
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6,853	0.00	6,853	703	16.7	—	29,397
Total	—	—	—	—	—	—	—	—	—	—	—	6,853	0.00	6,853	703	16.7	—	29,397

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	89,085	0.00	89,085	8,904	0.00	—	311,677
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	165,654	0.00	165,654	16,557	0.00	—	579,568
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	58,647	0.00	58,647	5,862	0.00	—	205,186
General Office Building	—	—	—	—	—	—	—	—	—	—	—	45,012	0.00	45,012	4,499	0.00	—	157,481



Government Office Building	—	—	—	—	—	—	—	—	—	—	—	5,626	0.00	5,626	562	0.00	—	19,685
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	95,530	0.00	95,530	9,548	0.00	—	334,227
Elementary School	—	—	—	—	—	—	—	—	—	—	—	40,508	0.00	40,508	4,049	0.00	—	141,722
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	10,614	0.00	10,614	1,061	0.00	—	37,136
Hospital	—	—	—	—	—	—	—	—	—	—	—	175,158	0.00	175,158	17,506	0.00	—	612,820
Total	—	—	—	—	—	—	—	—	—	—	—	685,835	0.00	685,835	68,547	0.00	—	2,399,503
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	89,085	0.00	89,085	8,904	0.00	—	311,677
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	165,654	0.00	165,654	16,557	0.00	—	579,568
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	58,647	0.00	58,647	5,862	0.00	—	205,186
General Office Building	—	—	—	—	—	—	—	—	—	—	—	45,012	0.00	45,012	4,499	0.00	—	157,481
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	5,626	0.00	5,626	562	0.00	—	19,685

Unrefrig Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	95,530	0.00	95,530	9,548	0.00	—	334,227
Elementary School	—	—	—	—	—	—	—	—	—	—	—	40,508	0.00	40,508	4,049	0.00	—	141,722
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	10,614	0.00	10,614	1,061	0.00	—	37,136
Hospital	—	—	—	—	—	—	—	—	—	—	—	175,158	0.00	175,158	17,506	0.00	—	612,820
Total	—	—	—	—	—	—	—	—	—	—	—	685,835	0.00	685,835	68,547	0.00	—	2,399,503
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	14,749	0.00	14,749	1,474	0.00	—	51,602
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	27,426	0.00	27,426	2,741	0.00	—	95,954
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	9,710	0.00	9,710	970	0.00	—	33,971
General Office Building	—	—	—	—	—	—	—	—	—	—	—	7,452	0.00	7,452	745	0.00	—	26,073
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	932	0.00	932	93.1	0.00	—	3,259
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	15,816	0.00	15,816	1,581	0.00	—	55,335
Elementary School	—	—	—	—	—	—	—	—	—	—	—	6,706	0.00	6,706	670	0.00	—	23,464

Refriger Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	1,757	0.00	1,757	176	0.00	—	6,148
Hospital	—	—	—	—	—	—	—	—	—	—	—	28,999	0.00	28,999	2,898	0.00	—	101,459
Total	—	—	—	—	—	—	—	—	—	—	—	113,548	0.00	113,548	11,349	0.00	—	397,265

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	662	662
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	617	617
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	150	150
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	50.5	50.5
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.32	6.32
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	85.7	85.7

Refrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	129,280	129,280
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130,879	130,879
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	662	662
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	617	617
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	150	150
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	50.5	50.5
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.32	6.32
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	85.7	85.7
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	129,280	129,280
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	27.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130,879	130,879
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110	110
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	102	102
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.8	24.8
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.37	8.37
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.05	1.05
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	14.2
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21,404	21,404
Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.55	4.55
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21,669	21,669

### 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)

Equipm ent 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)

Equipm ent 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)

Equipm ent 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)

Vegetati on	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

### 5.9. Operational Mobile Sources

#### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	2,528,840	2,528,840	2,528,840	923,026,600	20,319,889	20,319,889	20,319,889	7,416,759,485

### 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	38718
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	4555
Wood Fireplaces	0
Gas Fireplaces	16549
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1947
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	45410
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	5342

### 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)
361740552.75	120,580,184	203,424,509	67,808,170	—

### 5.10.3. Landscape Equipment

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

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	380,663,005	0.00	0.0000	0.0000	2,578,844,281
Apartments Mid Rise	398,893,163	0.00	0.0000	0.0000	1,472,661,324
Strip Mall	285,943,628	0.00	0.0000	0.0000	212,393,971
General Office Building	448,720,552	0.00	0.0000	0.0000	777,691,210
Government Office Building	56,090,069	0.00	0.0000	0.0000	97,211,401
Unrefrigerated Warehouse-No Rail	247,658,174	0.00	0.0000	0.0000	1,242,858,850
Elementary School	168,139,207	0.00	0.0000	0.0000	687,256,408
Single Family Housing	15,527,033	0.00	0.0000	0.0000	105,189,626
Refrigerated Warehouse-No Rail	113,695,575	0.00	0.0000	0.0000	179,488,611
Hospital	621,142,398	0.00	0.0000	0.0000	1,411,952,551

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	21,601,654,433	0.00

### 5.13. Operational Waste Generation

#### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	158,818	—
Apartments Mid Rise	307,371	—
Strip Mall	108,820	—
General Office Building	83,520	—
Government Office Building	10,440	—
Unrefrigerated Warehouse-No Rail	177,256	—
Elementary School	75,162	—
Single Family Housing	6,478	—
Refrigerated Warehouse-No Rail	19,695	—
Hospital	325,006	—

### 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
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Refrigerated Warehouse-No Rail	Cold storage	R-404A	3,922	7.50	7.50	7.50	25.0
Hospital	Chillers	R-134a	1,430	< 0.005	2.00	2.00	23.0

Hospital	Household refrigerators and/or freezers	R-134a	1,430	< 0.005	0.60	0.00	1.00
Hospital	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Hospital	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

## 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	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2



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

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

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

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1

Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411

Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4

Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Land Use	Per CalEEMod requirements had to split single-family housing into to separate land uses, based on data provided from Placeworks
Operations: Hearths	No wood stoves or wood burning fire per SCAQMD Rule 445
Characteristics: Utility Information	Per RPS requirements and SB 100 and AB 1279
Operations: Water and Waste Water	Revised per Table 5.17-2 UWMP Projected water demand Citywide for 2045
Operations: Solid Waste	Per solid waste generation data from UWMP
Operations: Energy Use	Updated per APU and SoCal Gas forecast rates based on 2021 existing CalEEMod run; factor of 1.21 applied for electricity and 1.48 applied for natural gas.

# Anaheim Construction - Painting Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Anaheim Construction - Painting
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	Anaheim, CA, USA
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 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
Apartments Mid Rise	70.0	Dwelling Unit	1.84	67,200	0.00	—	209	—

### 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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	59.1	56.1	97.1	125	0.19	3.02	0.00	3.02	2.78	0.00	2.78	—	14,687	14,687	0.60	0.12	0.00	14,738
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.62	1.54	2.66	3.44	0.01	0.08	0.00	0.08	0.08	0.00	0.08	—	402	402	0.02	< 0.005	0.00	404
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.30	0.28	0.49	0.63	< 0.005	0.02	0.00	0.02	0.01	0.00	0.01	—	66.6	66.6	< 0.005	< 0.005	0.00	66.8

### 2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	59.1	56.1	97.1	125	0.19	3.02	0.00	3.02	2.78	0.00	2.78	—	14,687	14,687	0.60	0.12	0.00	14,738
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	1.62	1.54	2.66	3.44	0.01	0.08	0.00	0.08	0.08	0.00	0.08	—	402	402	0.02	< 0.005	0.00	404
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.30	0.28	0.49	0.63	< 0.005	0.02	0.00	0.02	0.01	0.00	0.01	—	66.6	66.6	< 0.005	< 0.005	0.00	66.8

### 3. Construction Emissions Details

#### 3.1. Architectural Coating (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	17.0	14.1	97.1	125	0.19	3.02	—	3.02	2.78	—	2.78	—	14,687	14,687	0.60	0.12	—	14,738
Architectural Coatings	42.1	42.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	0.39	2.66	3.44	0.01	0.08	—	0.08	0.08	—	0.08	—	402	402	0.02	< 0.005	—	404

Architectural Coating	1.15	1.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.09	0.07	0.49	0.63	< 0.005	0.02	—	0.02	0.01	—	0.01	—	66.6	66.6	< 0.005	< 0.005	—	66.8
Architectural Coatings	0.21	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	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
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## 4. Operations Emissions Details

### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Architectural Coating	Architectural Coating	12/1/2025	12/15/2025	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
Architectural Coating	Air Compressors	Diesel	Average	110	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
Architectural Coating	—	—	—	—

Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	136,080	45,360	0.00	0.00	—

## 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
Apartments Mid Rise	—	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)



Year	kWh per Year	CO2	CH4	N2O
2025	0.00	756	0.07	0.01

### 5.18. Vegetation

#### 5.18.1. Land Use Change

##### 5.18.1.1. Unmitigated

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

##### 5.18.1.1. Unmitigated

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

##### 5.18.2.1. Unmitigated

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

### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth

Wildfire	0.00	annual hectares burned
----------	------	------------------------

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

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

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

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

### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

### 6.3. Adjusted Climate Risk Scores

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

Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6

Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213

Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6

Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Construction: Construction Phases	hypothetical run
Construction: Off-Road Equipment	Threshold
Construction: Trips and VMT	Hypothetical

# Anaheim Construction - Building Construction 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	Anaheim Construction - Building Construction
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	Anaheim, CA, USA
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 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
Apartments Mid Rise	70.0	Dwelling Unit	1.84	67,200	0.00	—	209	—

### 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.	13.5	11.1	99.6	108	0.23	3.80	1.27	5.06	3.50	0.32	3.82	—	24,209	24,209	1.05	0.57	7.59	24,412
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.5	11.1	99.7	108	0.23	3.80	1.27	5.06	3.50	0.32	3.82	—	24,177	24,177	1.05	0.57	0.20	24,373
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.39	6.10	54.6	59.2	0.13	2.08	0.69	2.77	1.92	0.18	2.09	—	13,252	13,252	0.58	0.31	1.80	13,361
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.35	1.11	9.97	10.8	0.02	0.38	0.13	0.51	0.35	0.03	0.38	—	2,194	2,194	0.10	0.05	0.30	2,212

### 2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	13.5	11.1	99.6	108	0.23	3.80	1.27	5.06	3.50	0.32	3.82	—	24,209	24,209	1.05	0.57	7.59	24,412

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	13.5	11.1	99.7	108	0.23	3.80	1.27	5.06	3.50	0.32	3.82	—	24,177	24,177	1.05	0.57	0.20	24,373
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	7.39	6.10	54.6	59.2	0.13	2.08	0.69	2.77	1.92	0.18	2.09	—	13,252	13,252	0.58	0.31	1.80	13,361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.35	1.11	9.97	10.8	0.02	0.38	0.13	0.51	0.35	0.03	0.38	—	2,194	2,194	0.10	0.05	0.30	2,212

### 3. Construction Emissions Details

#### 3.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	13.1	10.9	96.6	104	0.22	3.77	—	3.77	3.47	—	3.47	—	21,209	21,209	0.86	0.17	—	21,282
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	13.1	10.9	96.6	104	0.22	3.77	—	3.77	3.47	—	3.47	—	21,209	21,209	0.86	0.17	—	21,282
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

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Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.16	5.98	52.9	57.1	0.12	2.07	—	2.07	1.90	—	1.90	—	11,621	11,621	0.47	0.09	—	11,661
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	1.31	1.09	9.66	10.4	0.02	0.38	—	0.38	0.35	—	0.35	—	1,924	1,924	0.08	0.02	—	1,931
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	0.20	0.18	0.18	2.82	0.00	0.00	0.66	0.66	0.00	0.15	0.15	—	669	669	0.01	0.02	2.53	679
Vendor	0.02	0.01	0.25	0.12	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	239	239	0.01	0.03	0.65	249
Hauling	0.20	0.04	2.54	1.13	0.01	0.03	0.54	0.57	0.03	0.15	0.18	—	2,092	2,092	0.17	0.34	4.41	2,202
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.20	2.44	0.00	0.00	0.66	0.66	0.00	0.15	0.15	—	637	637	0.01	0.02	0.07	644
Vendor	0.02	0.01	0.26	0.13	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	239	239	0.01	0.03	0.02	249
Hauling	0.20	0.04	2.64	1.13	0.01	0.03	0.54	0.57	0.03	0.15	0.18	—	2,093	2,093	0.17	0.34	0.11	2,198
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.40	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	354	354	< 0.005	0.01	0.60	358
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	131	131	0.01	0.02	0.15	136
Hauling	0.11	0.02	1.46	0.62	0.01	0.01	0.29	0.31	0.01	0.08	0.10	—	1,147	1,147	0.09	0.19	1.05	1,205
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	58.5	58.5	< 0.005	< 0.005	0.10	59.3
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.6	21.6	< 0.005	< 0.005	0.03	22.6
Hauling	0.02	< 0.005	0.27	0.11	< 0.005	< 0.005	0.05	0.06	< 0.005	0.02	0.02	—	190	190	0.02	0.03	0.17	200

## 4. Operations Emissions Details

### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

#### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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



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

## 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	2/8/2025	11/15/2025	5.00	200	—

### 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	Cranes	Diesel	Average	15.0	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	15.0	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	15.0	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	15.0	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	17.0	8.00	46.0	0.45

### 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	50.4	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	7.48	10.2	HHDT,MHDT
Building Construction	Hauling	30.0	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 ft)
------------	--	--	--	--	-----------------------------

### 5.6. Dust Mitigation

#### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
------------	------------------------	------------------------	----------------------	-------------------------------	---------------------

#### 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
----------	--------------------	-----------

Apartments Mid Rise	—	0%
---------------------	---	----

## 5.8. Construction Electricity Consumption and Emissions Factors

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

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	756	0.07	0.01

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

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

#### 5.18.1.1. Unmitigated

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

#### 5.18.2.1. Unmitigated

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

### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

### 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

### 6.4. Climate Risk Reduction Measures

## 7. Health and Equity Details

### 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1

Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191

Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3

Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5



Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Construction: Construction Phases	hypothetical run
Construction: Off-Road Equipment	Threshold

Construction: Trips and VMT

Hypothetical

# Anaheim Construction - Max Demolition Detailed Report

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8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Anaheim Construction - Max Demolition
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	Anaheim, CA, USA
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 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
Apartments Mid Rise	70.0	Dwelling Unit	1.84	67,200	0.00	—	209	—

### 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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.7	10.5	98.9	98.3	0.17	3.98	3.93	7.91	3.67	0.74	4.40	—	18,796	18,796	0.83	0.50	0.20	18,965
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.70	0.58	5.42	5.39	0.01	0.22	0.21	0.43	0.20	0.04	0.24	—	1,030	1,030	0.05	0.03	0.18	1,040
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13	0.11	0.99	0.98	< 0.005	0.04	0.04	0.08	0.04	0.01	0.04	—	171	171	0.01	< 0.005	0.03	172

### 2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	12.7	10.5	98.9	98.3	0.17	3.98	3.93	7.91	3.67	0.74	4.40	—	18,796	18,796	0.83	0.50	0.20	18,965
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.70	0.58	5.42	5.39	0.01	0.22	0.21	0.43	0.20	0.04	0.24	—	1,030	1,030	0.05	0.03	0.18	1,040
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.13	0.11	0.99	0.98	< 0.005	0.04	0.04	0.08	0.04	0.01	0.04	—	171	171	0.01	< 0.005	0.03	172

### 3. Construction Emissions Details

#### 3.1. Demolition (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	12.2	10.2	96.0	94.0	0.15	3.96	—	3.96	3.64	—	3.64	—	15,882	15,882	0.64	0.13	—	15,936
Demolition	—	—	—	—	—	—	2.54	2.54	—	0.38	0.38	—	—	—	—	—	—	—
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	0.67	0.56	5.26	5.15	0.01	0.22	—	0.22	0.20	—	0.20	—	870	870	0.04	0.01	—	873
Demolition	—	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00



Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.96	0.94	< 0.005	0.04	—	0.04	0.04	—	0.04	—	144	144	0.01	< 0.005	—	145
Demolition	—	—	—	—	—	—	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.23	0.26	3.15	0.00	0.00	0.85	0.85	0.00	0.20	0.20	—	821	821	0.01	0.03	0.08	831
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	0.20	0.04	2.64	1.13	0.01	0.03	0.54	0.57	0.03	0.15	0.18	—	2,093	2,093	0.17	0.34	0.11	2,198
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.6	45.6	< 0.005	< 0.005	0.08	46.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	115	115	0.01	0.02	0.10	121
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.55	7.55	< 0.005	< 0.005	0.01	7.65
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	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.0	19.0	< 0.005	< 0.005	0.02	20.0

## 4. Operations Emissions Details

### 4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	1/1/2025	1/29/2025	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
Demolition	Rubber Tired Dozers	Diesel	Average	8.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	8.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Back hoes	Diesel	Average	10.0	8.00	84.0	0.37

### 5.3. Construction Vehicles

#### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	65.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	30.0	20.0	HHDT

Demolition	Onsite truck	—	—	HHDT
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## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
------------	--	--	--	--	-----------------------------

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	2,400	—

### 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
Apartments Mid Rise	—	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

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

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	756	0.07	0.01

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

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

#### 5.18.1.1. Unmitigated

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

#### 5.18.2.1. Unmitigated

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

### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

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.

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

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9



Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003

Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4

Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Construction: Construction Phases	hypothetical run
Construction: Off-Road Equipment	hypothetical run for maximum demolition emissions

# Anaheim Construction - Grading Detailed Report

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5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

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6. Climate Risk 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	Anaheim Construction - Grading
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	Anaheim, CA, USA
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 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
Apartments Mid Rise	70.0	Dwelling Unit	1.84	67,200	0.00	—	209	—



### 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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.6	10.3	99.4	97.0	0.18	4.34	51.7	56.0	4.00	24.5	28.5	—	21,532	21,532	1.06	0.99	0.35	21,855
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	0.11	1.09	1.06	< 0.005	0.05	0.57	0.61	0.04	0.27	0.31	—	236	236	0.01	0.01	0.06	240
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.02	0.20	0.19	< 0.005	0.01	0.10	0.11	0.01	0.05	0.06	—	39.1	39.1	< 0.005	< 0.005	0.01	39.7

### 2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	12.6	10.3	99.4	97.0	0.18	4.34	51.7	56.0	4.00	24.5	28.5	—	21,532	21,532	1.06	0.99	0.35	21,855
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.14	0.11	1.09	1.06	< 0.005	0.05	0.57	0.61	0.04	0.27	0.31	—	236	236	0.01	0.01	0.06	240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.03	0.02	0.20	0.19	< 0.005	0.01	0.10	0.11	0.01	0.05	0.06	—	39.1	39.1	< 0.005	< 0.005	0.01	39.7

### 3. Construction Emissions Details

#### 3.1. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	11.9	10.0	92.7	91.6	0.14	4.28	—	4.28	3.94	—	3.94	—	15,658	15,658	0.64	0.13	—	15,711
Dust From Material Movement	—	—	—	—	—	—	49.6	49.6	—	24.0	24.0	—	—	—	—	—	—	—
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	0.13	0.11	1.02	1.00	< 0.005	0.05	—	0.05	0.04	—	0.04	—	172	172	0.01	< 0.005	—	172

Dust From Material Movement	—	—	—	—	—	—	0.54	0.54	—	0.26	0.26	—	—	—	—	—	—	—
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	0.19	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.4	28.4	< 0.005	< 0.005	—	28.5
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.19	0.22	2.66	0.00	0.00	0.72	0.72	0.00	0.17	0.17	—	695	695	0.01	0.03	0.07	703
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	0.49	0.10	6.53	2.81	0.03	0.07	1.34	1.41	0.07	0.38	0.44	—	5,180	5,180	0.42	0.84	0.28	5,440
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.72	7.72	< 0.005	< 0.005	0.01	7.82
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	0.07	0.03	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	56.8	56.8	< 0.005	0.01	0.05	59.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.29

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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.40	9.40	< 0.005	< 0.005	0.01	9.88

## 4. Operations Emissions Details

### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Grading	Grading	2/2/2025	2/7/2025	5.00	4.00	—

### 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
Grading	Graders	Diesel	Average	7.00	8.00	148	0.41
Grading	Tractors/Loaders/Back hoes	Diesel	Average	8.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	7.00	8.00	367	0.40

### 5.3. Construction Vehicles

#### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	—	—	—	—
Grading	Worker	55.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	74.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT

### 5.4. Vehicles

#### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

### 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

### 5.6. Dust Mitigation

#### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Grading	1,500	1,500	28.0	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
Apartments Mid Rise	—	0%

### 5.8. Construction Electricity Consumption and Emissions Factors

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

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	756	0.07	0.01

### 5.18. Vegetation

#### 5.18.1. Land Use Change

##### 5.18.1.1. Unmitigated

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

##### 5.18.1.1. Unmitigated

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

##### 5.18.2.1. Unmitigated

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



### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

### 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

### 6.4. Climate Risk Reduction Measures

## 7. Health and Equity Details

### 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6

AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

### 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	25.74104966

Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5

High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8

Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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

Construction: Construction Phases	hypothetical run
Construction: Off-Road Equipment	Threshold

# Anaheim Construction - Paving 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	Anaheim Construction - Paving
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	Anaheim, CA, USA
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 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
Apartments Mid Rise	70.0	Dwelling Unit	1.84	67,200	0.00	—	209	—

### 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, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.5	11.3	99.2	150	0.20	4.27	3.61	7.88	3.93	0.86	4.78	—	24,840	24,840	0.95	0.41	0.38	24,985
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.37	0.31	2.72	4.11	0.01	0.12	0.10	0.21	0.11	0.02	0.13	—	682	682	0.03	0.01	0.17	686
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07	0.06	0.50	0.75	< 0.005	0.02	0.02	0.04	0.02	< 0.005	0.02	—	113	113	< 0.005	< 0.005	0.03	114

### 2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	13.5	11.3	99.2	150	0.20	4.27	3.61	7.88	3.93	0.86	4.78	—	24,840	24,840	0.95	0.41	0.38	24,985
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.37	0.31	2.72	4.11	0.01	0.12	0.10	0.21	0.11	0.02	0.13	—	682	682	0.03	0.01	0.17	686
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.07	0.06	0.50	0.75	< 0.005	0.02	0.02	0.04	0.02	< 0.005	0.02	—	113	113	< 0.005	< 0.005	0.03	114

### 3. Construction Emissions Details

#### 3.1. Paving (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	12.4	10.4	97.3	136	0.20	4.26	—	4.26	3.92	—	3.92	—	20,826	20,826	0.84	0.17	—	20,898
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	2.66	3.74	0.01	0.12	—	0.12	0.11	—	0.11	—	571	571	0.02	< 0.005	—	573
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.06	0.05	0.49	0.68	< 0.005	0.02	—	0.02	0.02	—	0.02	—	94.5	94.5	< 0.005	< 0.005	—	94.8
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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.05	0.93	1.04	12.7	0.00	0.00	3.43	3.43	0.00	0.80	0.80	—	3,316	3,316	0.05	0.12	0.34	3,355
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.01	0.88	0.38	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	698	698	0.06	0.11	0.04	733
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	92.1	92.1	< 0.005	< 0.005	0.16	93.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	19.1	19.1	< 0.005	< 0.005	0.02	20.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	0.03	15.4
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.16	3.16	< 0.005	< 0.005	< 0.005	3.33

## 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)

Vegetati	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
Paving	Paving	11/16/2025	11/30/2025	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
Paving	Tractors/Loaders/Back hoes	Diesel	Average	21.0	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	21.0	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	21.0	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	21.0	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	21.0	6.00	10.0	0.56

### 5.3. Construction Vehicles

#### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Paving	—	—	—	—
Paving	Worker	263	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT

Paving	Hauling	10.0	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
------------	--	--	--	--	-----------------------------

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
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
Apartments Mid Rise	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
2025	0.00	756	0.07	0.01

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

## 6. Climate Risk Detailed Report

### 6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9

Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003

Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4

Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3



### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Construction: Construction Phases	hypothetical run
Construction: Off-Road Equipment	Threshold
Construction: Trips and VMT	Hypothetical

# Anaheim 2045 Operations - Scenario 1 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	Anaheim 2045 Operations - Scenario 1
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	33.83348030839879, -117.91401298715893
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 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
Apartments Mid Rise	500	Dwelling Unit	13.2	480,000	0.00	—	1,490	—

Single Family Housing	10.0	Dwelling Unit	3.25	19,500	117,129	—	30.0	—
Strip Mall	15.0	1000sqft	0.34	15,000	0.00	—	—	—

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

No measures selected

## 2. Emissions Summary

### 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.	21.8	21.0	5.45	85.7	0.17	0.19	19.0	19.2	0.19	4.83	5.02	251	20,050	20,301	25.9	0.68	7.69	21,158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	19.0	18.4	5.50	51.9	0.16	0.18	19.0	19.2	0.18	4.83	5.00	251	19,321	19,572	25.9	0.70	3.78	20,434
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.8	20.1	5.71	73.5	0.17	0.19	18.8	19.0	0.18	4.77	4.95	251	19,551	19,801	25.9	0.70	5.41	20,665
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.80	3.67	1.04	13.4	0.03	0.03	3.43	3.47	0.03	0.87	0.90	41.5	3,237	3,278	4.30	0.12	0.90	3,421

### 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
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.91	6.35	3.65	55.3	0.16	0.06	19.0	19.1	0.05	4.83	4.88	—	16,431	16,431	0.56	0.57	4.02	16,620
Area	14.7	14.5	0.27	29.7	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	80.0	80.0	< 0.005	< 0.005	—	80.3
Energy	0.18	0.09	1.52	0.66	0.01	0.12	—	0.12	0.12	—	0.12	—	3,430	3,430	0.20	0.01	—	3,437
Water	—	—	—	—	—	—	—	—	—	—	—	38.8	108	147	3.98	0.09	—	275
Waste	—	—	—	—	—	—	—	—	—	—	—	212	0.00	212	21.2	0.00	—	742
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.67	3.67
Total	21.8	21.0	5.45	85.7	0.17	0.19	19.0	19.2	0.19	4.83	5.02	251	20,050	20,301	25.9	0.68	7.69	21,158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.92	6.36	3.98	51.2	0.15	0.06	19.0	19.1	0.05	4.83	4.88	—	15,783	15,783	0.57	0.60	0.10	15,976
Area	11.9	11.9	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.18	0.09	1.52	0.66	0.01	0.12	—	0.12	0.12	—	0.12	—	3,430	3,430	0.20	0.01	—	3,437
Water	—	—	—	—	—	—	—	—	—	—	—	38.8	108	147	3.98	0.09	—	275
Waste	—	—	—	—	—	—	—	—	—	—	—	212	0.00	212	21.2	0.00	—	742
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.67	3.67
Total	19.0	18.4	5.50	51.9	0.16	0.18	19.0	19.2	0.18	4.83	5.00	251	19,321	19,572	25.9	0.70	3.78	20,434
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.85	6.30	4.00	52.5	0.16	0.06	18.8	18.9	0.05	4.77	4.82	—	15,957	15,957	0.57	0.60	1.74	16,153
Area	13.8	13.7	0.19	20.4	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	54.8	54.8	< 0.005	< 0.005	—	55.0
Energy	0.18	0.09	1.52	0.66	0.01	0.12	—	0.12	0.12	—	0.12	—	3,430	3,430	0.20	0.01	—	3,437
Water	—	—	—	—	—	—	—	—	—	—	—	38.8	108	147	3.98	0.09	—	275
Waste	—	—	—	—	—	—	—	—	—	—	—	212	0.00	212	21.2	0.00	—	742
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.67	3.67
Total	20.8	20.1	5.71	73.5	0.17	0.19	18.8	19.0	0.18	4.77	4.95	251	19,551	19,801	25.9	0.70	5.41	20,665
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	1.25	1.15	0.73	9.58	0.03	0.01	3.43	3.44	0.01	0.87	0.88	—	2,642	2,642	0.09	0.10	0.29	2,674
Area	2.52	2.50	0.03	3.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.08	9.08	< 0.005	< 0.005	—	9.11
Energy	0.03	0.02	0.28	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	568	568	0.03	< 0.005	—	569
Water	—	—	—	—	—	—	—	—	—	—	—	6.42	17.9	24.3	0.66	0.02	—	45.5
Waste	—	—	—	—	—	—	—	—	—	—	—	35.1	0.00	35.1	3.51	0.00	—	123
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.61	0.61
Total	3.80	3.67	1.04	13.4	0.03	0.03	3.43	3.47	0.03	0.87	0.90	41.5	3,237	3,278	4.30	0.12	0.90	3,421

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	4.95	4.55	2.62	39.9	0.12	0.04	13.8	13.8	0.04	3.49	3.53	—	11,868	11,868	0.40	0.41	2.90	12,005
Single Family Housing	0.21	0.19	0.11	1.66	< 0.005	< 0.005	0.57	0.57	< 0.005	0.14	0.15	—	493	493	0.02	0.02	0.12	499
Strip Mall	1.76	1.62	0.92	13.8	0.04	0.01	4.71	4.72	0.01	1.19	1.21	—	4,070	4,070	0.14	0.14	0.99	4,117
Total	6.91	6.35	3.65	55.3	0.16	0.06	19.0	19.1	0.05	4.83	4.88	—	16,431	16,431	0.56	0.57	4.02	16,620
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	4.95	4.55	2.86	36.9	0.11	0.04	13.8	13.8	0.04	3.49	3.53	—	11,400	11,400	0.41	0.43	0.08	11,539
Single Family Housing	0.21	0.19	0.12	1.53	< 0.005	< 0.005	0.57	0.57	< 0.005	0.14	0.15	—	474	474	0.02	0.02	< 0.005	479
Strip Mall	1.76	1.62	1.00	12.8	0.04	0.01	4.71	4.72	0.01	1.19	1.21	—	3,909	3,909	0.14	0.15	0.03	3,958
Total	6.92	6.36	3.98	51.2	0.15	0.06	19.0	19.1	0.05	4.83	4.88	—	15,783	15,783	0.57	0.60	0.10	15,976
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.90	0.82	0.52	6.90	0.02	0.01	2.48	2.49	0.01	0.63	0.64	—	1,908	1,908	0.07	0.07	0.21	1,932
Single Family Housing	0.04	0.03	0.02	0.29	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	79.3	79.3	< 0.005	< 0.005	0.01	80.2
Strip Mall	0.32	0.29	0.18	2.39	0.01	< 0.005	0.85	0.85	< 0.005	0.22	0.22	—	654	654	0.02	0.02	0.07	662
Total	1.25	1.15	0.73	9.58	0.03	0.01	3.43	3.44	0.01	0.87	0.88	—	2,642	2,642	0.09	0.10	0.29	2,674

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,341	1,341	0.02	< 0.005	—	1,342
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	50.4	50.4	< 0.005	< 0.005	—	50.5

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	108	108	< 0.005	< 0.005	—	108
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,499	1,499	0.03	< 0.005	—	1,500
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,341	1,341	0.02	< 0.005	—	1,342
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	50.4	50.4	< 0.005	< 0.005	—	50.5
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	108	108	< 0.005	< 0.005	—	108
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,499	1,499	0.03	< 0.005	—	1,500
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	222	222	< 0.005	< 0.005	—	222
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	8.35	8.35	< 0.005	< 0.005	—	8.36
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	17.8	17.8	< 0.005	< 0.005	—	17.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	248	248	< 0.005	< 0.005	—	248

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	0.16	0.08	1.40	0.60	0.01	0.11	—	0.11	0.11	—	0.11	—	1,780	1,780	0.16	< 0.005	—	1,785
Single Family Housing	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	123	123	0.01	< 0.005	—	123
Strip Mall	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.8	28.8	< 0.005	< 0.005	—	28.9
Total	0.18	0.09	1.52	0.66	0.01	0.12	—	0.12	0.12	—	0.12	—	1,931	1,931	0.17	< 0.005	—	1,937
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.16	0.08	1.40	0.60	0.01	0.11	—	0.11	0.11	—	0.11	—	1,780	1,780	0.16	< 0.005	—	1,785
Single Family Housing	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	123	123	0.01	< 0.005	—	123
Strip Mall	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.8	28.8	< 0.005	< 0.005	—	28.9
Total	0.18	0.09	1.52	0.66	0.01	0.12	—	0.12	0.12	—	0.12	—	1,931	1,931	0.17	< 0.005	—	1,937
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.03	0.01	0.26	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	295	295	0.03	< 0.005	—	295
Single Family Housing	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.3	20.3	< 0.005	< 0.005	—	20.4
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.77	4.77	< 0.005	< 0.005	—	4.78
Total	0.03	0.02	0.28	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	320	320	0.03	< 0.005	—	321

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	11.0	11.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.89	0.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.77	2.62	0.27	29.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	80.0	80.0	< 0.005	< 0.005	—	80.3
Total	14.7	14.5	0.27	29.7	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	80.0	80.0	< 0.005	< 0.005	—	80.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	11.0	11.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.89	0.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	11.9	11.9	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Product	2.01	2.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.16	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.35	0.33	0.03	3.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.08	9.08	< 0.005	< 0.005	—	9.11
Total	2.52	2.50	0.03	3.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	9.08	9.08	< 0.005	< 0.005	—	9.11

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	36.0	93.4	129	3.69	0.09	—	248
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.72	9.07	9.79	0.07	< 0.005	—	12.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.13	5.53	7.66	0.22	0.01	—	14.7
Total	—	—	—	—	—	—	—	—	—	—	—	38.8	108	147	3.98	0.09	—	275
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	36.0	93.4	129	3.69	0.09	—	248
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.72	9.07	9.79	0.07	< 0.005	—	12.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.13	5.53	7.66	0.22	0.01	—	14.7
Total	—	—	—	—	—	—	—	—	—	—	—	38.8	108	147	3.98	0.09	—	275
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	5.95	15.5	21.4	0.61	0.01	—	41.0
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.12	1.50	1.62	0.01	< 0.005	—	2.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.35	0.92	1.27	0.04	< 0.005	—	2.43
Total	—	—	—	—	—	—	—	—	—	—	—	6.42	17.9	24.3	0.66	0.02	—	45.5

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	199	0.00	199	19.9	0.00	—	697
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4.29	0.00	4.29	0.43	0.00	—	15.0



Strip Mall	—	—	—	—	—	—	—	—	—	—	—	8.49	0.00	8.49	0.85	0.00	—	29.7
Total	—	—	—	—	—	—	—	—	—	—	—	212	0.00	212	21.2	0.00	—	742
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	199	0.00	199	19.9	0.00	—	697
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4.29	0.00	4.29	0.43	0.00	—	15.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	8.49	0.00	8.49	0.85	0.00	—	29.7
Total	—	—	—	—	—	—	—	—	—	—	—	212	0.00	212	21.2	0.00	—	742
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	33.0	0.00	33.0	3.30	0.00	—	115
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.71	0.00	0.71	0.07	0.00	—	2.48
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.41	0.00	1.41	0.14	0.00	—	4.92
Total	—	—	—	—	—	—	—	—	—	—	—	35.1	0.00	35.1	3.51	0.00	—	123

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.44	3.44
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.67	3.67
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.44	3.44
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.67	3.67
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.57	0.57
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.61	0.61

## 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)

Equipm ent 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)

Equipm ent 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)

Equipm ent 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)

Vegetati on	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

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	2,270	2,270	2,270	828,550	19,471	19,471	19,471	7,106,815
Single Family Housing	94.3	94.3	94.3	34,420	809	809	809	295,230
Strip Mall	817	817	817	298,114	6,668	6,668	6,668	2,433,641

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	50
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

### 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)
1011487.5	337,163	22,500	7,500	—

### 5.10.3. Landscape Equipment

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

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,832,917	267	0.0049	0.0005	5,553,421
Single Family Housing	68,951	267	0.0049	0.0005	383,353
Strip Mall	147,320	267	0.0049	0.0005	89,804



## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	18,762,825	0.00
Single Family Housing	375,257	1,855,377
Strip Mall	1,111,088	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	370	—
Single Family Housing	7.96	—
Strip Mall	15.8	—

## 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
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

## 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	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters  
 Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2

Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945

Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8

Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0



Healthy Places Index Score for Project Location (b)	38.0
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
Operations: Hearths	AQMD Rule 445 states no wood stoves or fireplaces are allowed.
Operations: Vehicle Data	Per ITE 11th generation trip manual

# Anaheim 2045 Operations - Scenario 2 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	Anaheim 2045 Operations - Scenario 2
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	33.83348030839879, -117.91401298715893
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 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
Apartments Mid Rise	250	Dwelling Unit	6.58	240,000	0.00	—	745	—
Strip Mall	10.0	1000sqft	0.23	10,000	0.00	—	—	—

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

No measures selected

## 2. Emissions Summary

### 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.	10.9	10.5	2.77	44.1	0.09	0.09	10.0	10.1	0.09	2.54	2.63	125	10,389	10,513	12.9	0.35	3.90	10,945
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.52	9.19	2.81	27.3	0.09	0.09	10.0	10.1	0.09	2.54	2.63	125	10,008	10,133	12.9	0.37	1.84	10,567
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.4	10.0	2.92	38.0	0.09	0.09	9.90	9.99	0.09	2.51	2.60	125	10,127	10,252	12.9	0.37	2.69	10,687
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.90	1.83	0.53	6.94	0.02	0.02	1.81	1.82	0.02	0.46	0.47	20.6	1,677	1,697	2.14	0.06	0.45	1,769

### 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	3.64	3.35	1.92	29.1	0.08	0.03	10.0	10.0	0.03	2.54	2.57	—	8,647	8,647	0.29	0.30	2.11	8,747



Area	7.17	7.09	0.13	14.7	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	39.7	39.7	< 0.005	< 0.005	—	39.9
Energy	0.08	0.04	0.72	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	1,651	1,651	0.09	< 0.005	—	1,655
Water	—	—	—	—	—	—	—	—	—	—	—	19.4	50.4	69.8	1.99	0.05	—	134
Waste	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	10.9	10.5	2.77	44.1	0.09	0.09	10.0	10.1	0.09	2.54	2.63	125	10,389	10,513	12.9	0.35	3.90	10,945
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.65	3.36	2.10	27.0	0.08	0.03	10.0	10.0	0.03	2.54	2.57	—	8,306	8,306	0.30	0.32	0.05	8,408
Area	5.79	5.79	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.08	0.04	0.72	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	1,651	1,651	0.09	< 0.005	—	1,655
Water	—	—	—	—	—	—	—	—	—	—	—	19.4	50.4	69.8	1.99	0.05	—	134
Waste	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	9.52	9.19	2.81	27.3	0.09	0.09	10.0	10.1	0.09	2.54	2.63	125	10,008	10,133	12.9	0.37	1.84	10,567
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.61	3.32	2.11	27.6	0.08	0.03	9.90	9.93	0.03	2.51	2.54	—	8,398	8,398	0.30	0.32	0.91	8,501
Area	6.73	6.68	0.09	10.1	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	27.2	27.2	< 0.005	< 0.005	—	27.3
Energy	0.08	0.04	0.72	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	1,651	1,651	0.09	< 0.005	—	1,655
Water	—	—	—	—	—	—	—	—	—	—	—	19.4	50.4	69.8	1.99	0.05	—	134
Waste	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Total	10.4	10.0	2.92	38.0	0.09	0.09	9.90	9.99	0.09	2.51	2.60	125	10,127	10,252	12.9	0.37	2.69	10,687
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.66	0.61	0.38	5.04	0.02	0.01	1.81	1.81	0.01	0.46	0.46	—	1,390	1,390	0.05	0.05	0.15	1,407
Area	1.23	1.22	0.02	1.84	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	4.50	4.50	< 0.005	< 0.005	—	4.52
Energy	0.02	0.01	0.13	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	273	273	0.02	< 0.005	—	274

Water	—	—	—	—	—	—	—	—	—	—	—	3.21	8.34	11.6	0.33	0.01	—	22.1
Waste	—	—	—	—	—	—	—	—	—	—	—	17.4	0.00	17.4	1.74	0.00	—	61.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29
Total	1.90	1.83	0.53	6.94	0.02	0.02	1.81	1.82	0.02	0.46	0.47	20.6	1,677	1,697	2.14	0.06	0.45	1,769

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.47	2.27	1.31	19.9	0.06	0.02	6.88	6.90	0.02	1.74	1.76	—	5,934	5,934	0.20	0.21	1.45	6,002
Strip Mall	1.17	1.08	0.61	9.19	0.03	0.01	3.14	3.15	0.01	0.80	0.81	—	2,713	2,713	0.09	0.10	0.66	2,745
Total	3.64	3.35	1.92	29.1	0.08	0.03	10.0	10.0	0.03	2.54	2.57	—	8,647	8,647	0.29	0.30	2.11	8,747
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.48	2.28	1.43	18.5	0.06	0.02	6.88	6.90	0.02	1.74	1.76	—	5,700	5,700	0.21	0.22	0.04	5,770
Strip Mall	1.17	1.08	0.67	8.53	0.03	0.01	3.14	3.15	0.01	0.80	0.81	—	2,606	2,606	0.10	0.10	0.02	2,638
Total	3.65	3.36	2.10	27.0	0.08	0.03	10.0	10.0	0.03	2.54	2.57	—	8,306	8,306	0.30	0.32	0.05	8,408
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	0.45	0.41	0.26	3.45	0.01	< 0.005	1.24	1.24	< 0.005	0.31	0.32	—	954	954	0.03	0.04	0.10	966
Strip Mall	0.21	0.20	0.12	1.59	< 0.005	< 0.005	0.57	0.57	< 0.005	0.14	0.15	—	436	436	0.02	0.02	0.05	442
Total	0.66	0.61	0.38	5.04	0.02	0.01	1.81	1.81	0.01	0.46	0.46	—	1,390	1,390	0.05	0.05	0.15	1,407

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	670	670	0.01	< 0.005	—	671
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	71.8	71.8	< 0.005	< 0.005	—	71.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	742	742	0.01	< 0.005	—	743
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	670	670	0.01	< 0.005	—	671
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	71.8	71.8	< 0.005	< 0.005	—	71.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	742	742	0.01	< 0.005	—	743
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	111	111	< 0.005	< 0.005	—	111

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	11.9	11.9	< 0.005	< 0.005	—	11.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	123	123	< 0.005	< 0.005	—	123

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.08	0.04	0.70	0.30	< 0.005	0.06	—	0.06	0.06	—	0.06	—	890	890	0.08	< 0.005	—	892
Strip Mall	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.2	19.2	< 0.005	< 0.005	—	19.2
Total	0.08	0.04	0.72	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	909	909	0.08	< 0.005	—	912
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.08	0.04	0.70	0.30	< 0.005	0.06	—	0.06	0.06	—	0.06	—	890	890	0.08	< 0.005	—	892
Strip Mall	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.2	19.2	< 0.005	< 0.005	—	19.2
Total	0.08	0.04	0.72	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	909	909	0.08	< 0.005	—	912
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.01	0.13	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	147	147	0.01	< 0.005	—	148
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.18	3.18	< 0.005	< 0.005	—	3.19
Total	0.02	0.01	0.13	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	151	151	0.01	< 0.005	—	151

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.35	5.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.44	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.38	1.30	0.13	14.7	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.7	39.7	< 0.005	< 0.005	—	39.9
Total	7.17	7.09	0.13	14.7	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	39.7	39.7	< 0.005	< 0.005	—	39.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.35	5.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.44	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	5.79	5.79	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.98	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.17	0.16	0.02	1.84	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.50	4.50	< 0.005	< 0.005	—	4.52
Total	1.23	1.22	0.02	1.84	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	4.50	4.50	< 0.005	< 0.005	—	4.52

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	18.0	46.7	64.7	1.84	0.04	—	124
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.42	3.69	5.11	0.15	< 0.005	—	9.78
Total	—	—	—	—	—	—	—	—	—	—	—	19.4	50.4	69.8	1.99	0.05	—	134
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	18.0	46.7	64.7	1.84	0.04	—	124
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.42	3.69	5.11	0.15	< 0.005	—	9.78
Total	—	—	—	—	—	—	—	—	—	—	—	19.4	50.4	69.8	1.99	0.05	—	134
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2.98	7.73	10.7	0.31	0.01	—	20.5
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.23	0.61	0.85	0.02	< 0.005	—	1.62
Total	—	—	—	—	—	—	—	—	—	—	—	3.21	8.34	11.6	0.33	0.01	—	22.1

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	99.6	0.00	99.6	9.96	0.00	—	349
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	5.66	0.00	5.66	0.57	0.00	—	19.8
Total	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	99.6	0.00	99.6	9.96	0.00	—	349

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	5.66	0.00	5.66	0.57	0.00	—	19.8
Total	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	16.5	0.00	16.5	1.65	0.00	—	57.7
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.28
Total	—	—	—	—	—	—	—	—	—	—	—	17.4	0.00	17.4	1.74	0.00	—	61.0

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.72	1.72
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.72	1.72
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06



Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.78	1.78
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.28	0.28
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.29	0.29

## 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)

Equipm ent	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)

Equipm ent 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

### 5.9. Operational Mobile Sources

#### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	1,135	1,135	1,135	414,275	9,735	9,735	9,735	3,553,408
Strip Mall	545	545	545	198,743	4,445	4,445	4,445	1,622,427

### 5.10. Operational Area Sources

#### 5.10.1. Hearths

##### 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	50
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0

Pellet Wood Stoves	0
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### 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)
486000	162,000	15,000	5,000	—

### 5.10.3. Landscape Equipment

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

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	916,459	267	0.0049	0.0005	2,776,711
Strip Mall	98,214	267	0.0049	0.0005	59,869

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	9,381,413	0.00
Strip Mall	740,725	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	185	—
Strip Mall	10.5	—

## 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
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

## 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	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

### 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

### 6.4. Climate Risk Reduction Measures

## 7. Health and Equity Details

### 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9

AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886
Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6

Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9

Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Operations: Hearths	AQMD Rule 445 states no wood stoves or fireplaces are allowed.
Operations: Vehicle Data	Based on ITE 11th edition trip rates

# Anaheim 2045 Operations - Scenario 3 Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Anaheim 2045 Operations - Scenario 3
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.8
Location	33.83348030839879, -117.91401298715893
County	Orange
City	Anaheim
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5721
EDFZ	7
Electric Utility	City of Anaheim Public Utilities Department
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 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
Apartments Mid Rise	100	Dwelling Unit	2.63	96,000	0.00	—	298	—
Condo/Townhouse	200	Dwelling Unit	12.5	212,000	0.00	—	596	—

Strip Mall	5.00	1000sqft	0.11	5,000	0.00	—	—	—
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### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

## 2. Emissions Summary

### 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.	13.5	13.0	4.05	54.2	0.12	0.17	12.5	12.7	0.16	3.17	3.33	145	13,764	13,909	15.1	0.44	4.87	14,421
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.9	11.5	4.11	34.2	0.11	0.16	12.5	12.6	0.16	3.17	3.32	145	13,292	13,437	15.1	0.45	2.31	13,951
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.0	12.5	4.23	46.9	0.11	0.16	12.3	12.5	0.16	3.13	3.29	145	13,439	13,583	15.1	0.45	3.38	14,099
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.37	2.28	0.77	8.56	0.02	0.03	2.25	2.28	0.03	0.57	0.60	24.0	2,225	2,249	2.50	0.08	0.56	2,334

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Mobile	4.51	4.15	2.39	36.3	0.11	0.04	12.5	12.5	0.03	3.17	3.20	—	10,778	10,778	0.36	0.38	2.64	10,902
Area	8.84	8.75	0.16	17.3	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	46.4	46.4	< 0.005	< 0.005	—	46.6
Energy	0.18	0.09	1.50	0.64	0.01	0.12	—	0.12	0.12	—	0.12	—	2,882	2,882	0.19	0.01	—	2,888
Water	—	—	—	—	—	—	—	—	—	—	—	22.3	57.9	80.2	2.29	0.05	—	154
Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	428
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.24	2.24
Total	13.5	13.0	4.05	54.2	0.12	0.17	12.5	12.7	0.16	3.17	3.33	145	13,764	13,909	15.1	0.44	4.87	14,421
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.52	4.15	2.60	33.6	0.10	0.04	12.5	12.5	0.03	3.17	3.20	—	10,353	10,353	0.37	0.39	0.07	10,479
Area	7.24	7.24	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.18	0.09	1.50	0.64	0.01	0.12	—	0.12	0.12	—	0.12	—	2,882	2,882	0.19	0.01	—	2,888
Water	—	—	—	—	—	—	—	—	—	—	—	22.3	57.9	80.2	2.29	0.05	—	154
Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	428
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.24	2.24
Total	11.9	11.5	4.11	34.2	0.11	0.16	12.5	12.6	0.16	3.17	3.32	145	13,292	13,437	15.1	0.45	2.31	13,951
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.48	4.11	2.62	34.4	0.10	0.04	12.3	12.4	0.03	3.13	3.16	—	10,467	10,467	0.37	0.39	1.14	10,595
Area	8.33	8.28	0.11	11.9	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	31.8	31.8	< 0.005	< 0.005	—	31.9
Energy	0.18	0.09	1.50	0.64	0.01	0.12	—	0.12	0.12	—	0.12	—	2,882	2,882	0.19	0.01	—	2,888
Water	—	—	—	—	—	—	—	—	—	—	—	22.3	57.9	80.2	2.29	0.05	—	154
Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	428
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.24	2.24
Total	13.0	12.5	4.23	46.9	0.11	0.16	12.3	12.5	0.16	3.13	3.29	145	13,439	13,583	15.1	0.45	3.38	14,099
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.82	0.75	0.48	6.28	0.02	0.01	2.25	2.26	0.01	0.57	0.58	—	1,733	1,733	0.06	0.07	0.19	1,754
Area	1.52	1.51	0.02	2.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.26	5.26	< 0.005	< 0.005	—	5.28

Energy	0.03	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	477	477	0.03	< 0.005	—	478
Water	—	—	—	—	—	—	—	—	—	—	—	3.69	9.59	13.3	0.38	0.01	—	25.4
Waste	—	—	—	—	—	—	—	—	—	—	—	20.3	0.00	20.3	2.03	0.00	—	70.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37
Total	2.37	2.28	0.77	8.56	0.02	0.03	2.25	2.28	0.03	0.57	0.60	24.0	2,225	2,249	2.50	0.08	0.56	2,334

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.99	0.91	0.52	7.98	0.02	0.01	2.75	2.76	0.01	0.70	0.71	—	2,374	2,374	0.08	0.08	0.58	2,401
Condo/Townhouse	2.94	2.70	1.56	23.7	0.07	0.02	8.17	8.19	0.02	2.07	2.09	—	7,048	7,048	0.24	0.25	1.72	7,129
Strip Mall	0.59	0.54	0.31	4.60	0.01	< 0.005	1.57	1.57	< 0.005	0.40	0.40	—	1,357	1,357	0.05	0.05	0.33	1,372
Total	4.51	4.15	2.39	36.3	0.11	0.04	12.5	12.5	0.03	3.17	3.20	—	10,778	10,778	0.36	0.38	2.64	10,902
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.99	0.91	0.57	7.38	0.02	0.01	2.75	2.76	0.01	0.70	0.71	—	2,280	2,280	0.08	0.09	0.02	2,308



Condo/Townhouse	2.94	2.70	1.70	21.9	0.07	0.02	8.17	8.19	0.02	2.07	2.09	—	6,770	6,770	0.24	0.26	0.04	6,852
Strip Mall	0.59	0.54	0.33	4.26	0.01	< 0.005	1.57	1.57	< 0.005	0.40	0.40	—	1,303	1,303	0.05	0.05	0.01	1,319
Total	4.52	4.15	2.60	33.6	0.10	0.04	12.5	12.5	0.03	3.17	3.20	—	10,353	10,353	0.37	0.39	0.07	10,479
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.18	0.16	0.10	1.38	< 0.005	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	382	382	0.01	0.01	0.04	386
Condo/Townhouse	0.53	0.49	0.31	4.10	0.01	< 0.005	1.47	1.48	< 0.005	0.37	0.38	—	1,133	1,133	0.04	0.04	0.12	1,147
Strip Mall	0.11	0.10	0.06	0.80	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	218	218	0.01	0.01	0.02	221
Total	0.82	0.75	0.48	6.28	0.02	0.01	2.25	2.26	0.01	0.57	0.58	—	1,733	1,733	0.06	0.07	0.19	1,754

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	268	268	< 0.005	< 0.005	—	268
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	672	672	0.01	< 0.005	—	673
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	35.9	35.9	< 0.005	< 0.005	—	36.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	976	976	0.02	< 0.005	—	977

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	268	268	< 0.005	< 0.005	—	268
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	672	672	0.01	< 0.005	—	673
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	35.9	35.9	< 0.005	< 0.005	—	36.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	976	976	0.02	< 0.005	—	977
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	44.4	44.4	< 0.005	< 0.005	—	44.4
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	111	111	< 0.005	< 0.005	—	111
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	5.95	5.95	< 0.005	< 0.005	—	5.95
Total	—	—	—	—	—	—	—	—	—	—	—	—	162	162	< 0.005	< 0.005	—	162

#### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.03	0.02	0.28	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	356	356	0.03	< 0.005	—	357

Condo/Townhouse	0.14	0.07	1.21	0.52	0.01	0.10	—	0.10	0.10	—	0.10	—	1,540	1,540	0.14	< 0.005	—	1,545
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.59	9.59	< 0.005	< 0.005	—	9.62
Total	0.18	0.09	1.50	0.64	0.01	0.12	—	0.12	0.12	—	0.12	—	1,906	1,906	0.17	< 0.005	—	1,911
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.03	0.02	0.28	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	356	356	0.03	< 0.005	—	357
Condo/Townhouse	0.14	0.07	1.21	0.52	0.01	0.10	—	0.10	0.10	—	0.10	—	1,540	1,540	0.14	< 0.005	—	1,545
Strip Mall	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.59	9.59	< 0.005	< 0.005	—	9.62
Total	0.18	0.09	1.50	0.64	0.01	0.12	—	0.12	0.12	—	0.12	—	1,906	1,906	0.17	< 0.005	—	1,911
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	58.9	58.9	0.01	< 0.005	—	59.1
Condo/Townhouse	0.03	0.01	0.22	0.09	< 0.005	0.02	—	0.02	0.02	—	0.02	—	255	255	0.02	< 0.005	—	256
Strip Mall	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.59	1.59	< 0.005	< 0.005	—	1.59
Total	0.03	0.02	0.27	0.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	316	316	0.03	< 0.005	—	316

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	6.70	6.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.54	0.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.60	1.51	0.16	17.3	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.4	46.4	< 0.005	< 0.005	—	46.6
Total	8.84	8.75	0.16	17.3	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	46.4	46.4	< 0.005	< 0.005	—	46.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	6.70	6.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.54	0.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	7.24	7.24	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	1.22	1.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Landscape Equipment	0.20	0.19	0.02	2.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.26	5.26	< 0.005	< 0.005	—	5.28
Total	1.52	1.51	0.02	2.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.26	5.26	< 0.005	< 0.005	—	5.28

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	7.19	18.7	25.9	0.74	0.02	—	49.5
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14.4	37.4	51.8	1.48	0.04	—	99.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.84	2.55	0.07	< 0.005	—	4.89
Total	—	—	—	—	—	—	—	—	—	—	—	22.3	57.9	80.2	2.29	0.05	—	154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	7.19	18.7	25.9	0.74	0.02	—	49.5
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	14.4	37.4	51.8	1.48	0.04	—	99.1

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.71	1.84	2.55	0.07	< 0.005	—	4.89
Total	—	—	—	—	—	—	—	—	—	—	—	22.3	57.9	80.2	2.29	0.05	—	154
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1.19	3.09	4.28	0.12	< 0.005	—	8.20
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	2.38	6.19	8.57	0.24	0.01	—	16.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.12	0.31	0.42	0.01	< 0.005	—	0.81
Total	—	—	—	—	—	—	—	—	—	—	—	3.69	9.59	13.3	0.38	0.01	—	25.4

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	39.9	0.00	39.9	3.98	0.00	—	139
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	79.7	0.00	79.7	7.97	0.00	—	279
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.83	0.00	2.83	0.28	0.00	—	9.90
Total	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	428

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	39.9	0.00	39.9	3.98	0.00	—	139
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	79.7	0.00	79.7	7.97	0.00	—	279
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.83	0.00	2.83	0.28	0.00	—	9.90
Total	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	428
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	6.60	0.00	6.60	0.66	0.00	—	23.1
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	13.2	0.00	13.2	1.32	0.00	—	46.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.47	0.00	0.47	0.05	0.00	—	1.64
Total	—	—	—	—	—	—	—	—	—	—	—	20.3	0.00	20.3	2.03	0.00	—	70.9

## 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.69	0.69	—

Condo/T	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.52	1.52
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.24	2.24
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.69	0.69
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.52	1.52
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.24	2.24
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.37	0.37

## 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)

Equipm ent 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)

Equipm ent 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)

Vegetati on	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

### 5.9. Operational Mobile Sources

#### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	454	454	454	165,710	3,894	3,894	3,894	1,421,363

Condo/Townhouse	1,348	1,348	1,348	492,020	11,562	11,562	11,562	4,220,259
Strip Mall	272	272	272	99,371	2,223	2,223	2,223	811,214

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	50
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

### 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)
623700	207,900	7,500	2,500	—

### 5.10.3. Landscape Equipment

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

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	366,583	267	0.0049	0.0005	1,110,684
Condo/Townhouse	918,433	267	0.0049	0.0005	4,806,072
Strip Mall	49,107	267	0.0049	0.0005	29,935

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	3,752,565	0.00
Condo/Townhouse	7,505,130	0.00
Strip Mall	370,363	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	73.9	—
Condo/Townhouse	148	—
Strip Mall	5.25	—

## 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
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

## 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	11.9	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

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

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

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

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

### 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

### 6.4. Climate Risk Reduction Measures

## 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	82.6
AQ-DPM	84.4
Drinking Water	57.1
Lead Risk Housing	82.4
Pesticides	0.00
Toxic Releases	93.9
Traffic	47.5
Effect Indicators	—
CleanUp Sites	96.6
Groundwater	30.9
Haz Waste Facilities/Generators	56.4
Impaired Water Bodies	0.00
Solid Waste	99.2
Sensitive Population	—
Asthma	70.1
Cardio-vascular	64.5
Low Birth Weights	32.0
Socioeconomic Factor Indicators	—
Education	79.6
Housing	46.5
Linguistic	81.4
Poverty	83.9
Unemployment	60.6

## 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	25.74104966
Employed	59.69459772
Median HI	44.60413191
Education	—
Bachelor's or higher	44.59129988
High school enrollment	100
Preschool enrollment	49.42897472
Transportation	—
Auto Access	17.91351213
Active commuting	83.04889003
Social	—
2-parent households	66.02078789
Voting	4.439881945
Neighborhood	—
Alcohol availability	12.54972411
Park access	81.35506224
Retail density	91.19722828
Supermarket access	78.51918388
Tree canopy	20.17194919
Housing	—
Homeownership	9.457205184
Housing habitability	21.69896061
Low-inc homeowner severe housing cost burden	29.62915437
Low-inc renter severe housing cost burden	68.24072886

Uncrowded housing	12.43423585
Health Outcomes	—
Insured adults	22.41755422
Arthritis	92.6
Asthma ER Admissions	38.5
High Blood Pressure	91.1
Cancer (excluding skin)	93.3
Asthma	43.1
Coronary Heart Disease	85.5
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	60.0
Life Expectancy at Birth	45.8
Cognitively Disabled	72.6
Physically Disabled	68.4
Heart Attack ER Admissions	49.6
Mental Health Not Good	31.8
Chronic Kidney Disease	79.8
Obesity	46.0
Pedestrian Injuries	39.4
Physical Health Not Good	40.7
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	32.9
No Leisure Time for Physical Activity	29.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	28.6
Elderly	88.9
English Speaking	15.6
Foreign-born	85.9
Outdoor Workers	24.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.5
Traffic Density	36.6
Traffic Access	58.9
Other Indices	—
Hardship	74.0
Other Decision Support	—
2016 Voting	42.3

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	38.0
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
Operations: Hearths	AQMD Rule 445 states no wood stoves or fireplaces are allowed.
Operations: Vehicle Data	Per ITE 11th generation trip manual

Model Output: OFFROAD2021 (v1.0.7) Emissions Inventory

Region Type: County

	ROG	CO	NOx	CO2	PM10	PM2.5	SOx
Region: Orange	11.33	163.47	18.57	2,390.15	0.92	0.76	0.33
Calendar Year: 2021, 2045	0.73	10.48	1.19	153.16	0.06	0.05	0.02
Scenario: All Adopted Rules - Exhaust	1,452	20,950	2,380	306,328	118	97	43

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	Calendar Yr	Vehicle Cat	Model Year	Horsepower Bin	Fuel	ROG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd
Orange	2021	Agricultural Aggregate	Aggregate	Gasoline	4.39712E-06	5.24414E-05	3.81937E-06	0.0005703	9.13058E-08	8.40013E-08	5.08868E-09	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	0.010655007	0.046359934	0.056470361	6.9242396	0.003775891	0.00347382	6.30713E-05	
Orange	2021	Agricultural Aggregate	Aggregate	Gasoline	0.002078653	0.022591791	0.001082061	0.2671426	7.06023E-05	6.49541E-05	2.38314E-06	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	0.00016202	0.001018573	0.000954034	0.1489314	4.24396E-05	3.90444E-05	1.35825E-06	
Orange	2021	Agricultural Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	1.21605E-07	8.75071E-07	1.08211E-06	0.0001449	4.87714E-08	4.48697E-08	1.32259E-09	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	4.32341E-05	0.000304505	0.000404621	0.0673721	1.69212E-05	1.55675E-05	6.15175E-07	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	0.000122482	0.00080168	0.001134941	0.1429247	5.03078E-05	4.62832E-05	1.30428E-06	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	2.09603E-05	0.000143078	0.000211989	0.0252338	8.77098E-06	8.0693E-06	2.30291E-07	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	0.000181201	0.000930372	0.001149639	0.1399814	6.78966E-05	6.24648E-05	1.27591E-06	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	1.13475E-05	5.03991E-05	0.000101702	0.0160096	4.64382E-06	4.27232E-06	1.46157E-07	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	0.000319828	0.001588327	0.002096253	0.2475745	0.000136911	0.000125958	2.56661E-06	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	6.72983E-05	0.000426382	0.000534236	0.0688889	3.04399E-05	2.80047E-05	6.28453E-07	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	0.000775159	0.003847602	0.005561698	0.5965985	0.000359147	0.000330416	5.43782E-06	
Orange	2021	Agricultural Aggregate	Aggregate	Diesel	4.90175E-05	0.000282246	0.000344043	0.0452813	2.38184E-05	2.19129E-05	4.12969E-07	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000943247	0.005409367	0.007025051	1.0110422	0.000387143	0.000356172	9.57741E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000656083	0.003393233	0.004907687	1.0462015	0.000261127	0.000240237	9.91046E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	2.40752E-06	3.45294E-05	2.97036E-05	0.0058871	6.92486E-07	6.37087E-07	5.57672E-08	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000852913	0.003336396	0.004356313	0.4674872	0.000309073	0.000284347	4.42842E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000447644	0.002002561	0.002381545	0.2791991	0.000154385	0.000142034	2.6448E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	5.67258E-05	0.000297276	0.000390746	0.0831455	2.163E-05	1.98996E-05	7.87622E-07	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000802699	0.004627057	0.005763842	0.7989976	0.000332228	0.00030565	7.56875E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000373322	0.00209099	0.002582384	0.3533689	0.000166567	0.000153242	3.3474E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000334285	0.002235261	0.002331864	0.3545	0.000133109	0.000122461	3.35811E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	9.49117E-06	3.28766E-05	7.04337E-05	0.0150687	3.15945E-06	2.90669E-06	1.42743E-07	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	2.58466E-06	1.80992E-05	2.14472E-05	0.0026883	1.28971E-06	1.18654E-06	2.54657E-08	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000264356	0.001462587	0.001718114	0.2317663	0.000113046	0.000104002	2.19548E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000343415	0.020223374	0.00238923	0.5244308	3.75961E-05	2.84059E-05	5.20967E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000135851	0.015721847	0.001394042	0.457538	3.37528E-05	2.55021E-05	4.67711E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	1.41877E-07	1.44641E-05	1.69661E-06	0.0004698	3.36784E-08	2.54459E-08	4.6668E-09	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	6.22791E-05	7.94593E-06	0.0025246	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	1.46002E-05	0.001393667	0.00016349	0.044438	3.18573E-06	2.407E-06	4.41445E-07	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.002291609	0.182664729	0.014607487	4.6300394	0.000322817	0.000243907	4.47326E-05	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.033661576	0.004038773	0.7605308	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000557498	0.045174344	0.003522758	1.1040653	7.69781E-05	5.81612E-05	1.06668E-05	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.002875269	0.000335541	0.0733179	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000368296	0.029356968	0.002347647	0.7441191	5.18818E-05	3.91996E-05	7.18923E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.000655928	5.94003E-05	0.0183452	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000153758	0.012442419	0.000971413	0.304599	2.12374E-05	1.6046E-05	2.94285E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.003098724	0.000377843	0.0646522	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.004653745	0.43428886	0.0022975179	5.1752576	0.000360831	0.000272628	4.27274E-05	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.002421594	0.000305115	0.0923338	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	2.17596E-05	0.001215512	1.29533E-05	4.758E-07	4.78976E-08	3.61894E-08	1.88713E-08	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000686078	0.035926444	0.004219704	0.8333629	6.14776E-05	4.64497E-05	7.2798E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.001894063	0.000233107	0.063821	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	5.44842E-06	0.000197027	3.74268E-05	0.0113969	7.94622E-07	6.00381E-07	1.1011E-07	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000160709	0.016132086	0.000382988	0.1260232	8.68793E-06	6.56421E-06	1.53221E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.003129771	0.000846886	0.2539939	2.25868E-05	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	1.51084E-06	0.00015132	1.80594E-05	0.0049182	3.52579E-07	2.66393E-07	4.88567E-08	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.000478868	5.8484E-05	0.0154515	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	5.77213E-05	0.003385587	0.000218096	0.0434542	3.02973E-06	2.28913E-06	3.58762E-07	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000238482	0.026604341	0.002347819	0.7841971	5.62186E-05	4.24763E-05	7.79018E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.00092045	0.04157231	0.004844624	0.8671413	6.21648E-05	4.6969E-05	7.36117E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	1.87044E-06	0.000104696	1.11346E-06	4.098E-08	4.12556E-09	3.1171E-09	1.62526E-09	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000205122	0.016411205	0.001423889	0.421825	3.02404E-05	2.28483E-05	4.19039E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.000254789	3.15066E-05	0.0088113	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000310028	0.015672048	0.001505707	0.3774982	2.63201E-05	1.98863E-05	3.64716E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.000395599	4.49392E-05	0.0111736	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000161126	0.013903679	0.001395377	0.4002859	2.86962E-05	2.16816E-05	3.97642E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000133309	0.009608575	0.000296762	0.0963632	6.64319E-06	5.0193E-06	1.1716E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.001476051	0.000498206	0.0871339	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	5.0116E-05	0.00420859	0.000500031	0.129255	9.26621E-06	7.00113E-06	1.14394E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	8.67229E-06	1.10756E-06	0.0003532	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	0.000851044	0.047674258	0.005619947	1.1613144	8.56707E-05	6.4729E-05	1.18713E-05	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	0.005683557	0.000525436	0.1621435	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	7.33556E-06	0.000368753	3.60176E-05	0.0091007	6.34526E-07	4.79419E-07	7.51366E-08	
Orange	2021	Airport Groi Aggregate	Aggregate	Nat Gas	0	2.31074E-05	7.43155E-06	0.0019291	0	0	0	0
Orange	2021	Airport Groi Aggregate	Aggregate	Gasoline	1.44609E-05	0.001093912	0.000129813	0.0322833	2.31437E-06	1.74863E-06	3.207E-07	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	0.000516242	0.002471369	0.003740343	0.6432211	0.0001982	0.000182344	6.09311E-06	
Orange	2021	Airport Groi Aggregate	Aggregate	Diesel	5.64844E-05	0.000194616	0.000251651	0.0272924	1.68754E-05	1.55253E-05	2.58535E-07	
Orange	2021	Commercial Aggregate	Aggregate	Diesel	0.000131091	0.000670655	0.002648986	0.3766127	0.000109738	0.00010491	0	0



Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.003842609	0.012467834	0.025239667	2.7689297	0.001625679	0.001554149	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.000156191	0.000783856	0.002944914	0.4399574	0.000119531	0.000114272	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.002935834	0.011652936	0.038083751	4.388711	0.001683288	0.001609223	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	7.80997E-05	0.000495703	0.001509717	0.2481446	6.3251E-05	6.0468E-05	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	4.43343E-05	0.000159891	0.000260133	0.0307511	2.48043E-05	2.37129E-05	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.000278541	0.001866161	0.005364707	0.8797064	0.000216964	0.000207417	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.004929396	0.017194964	0.06693549	6.0409015	0.002060594	0.001969928	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.028388873	0.095861471	0.326516437	25.103908	0.012276865	0.011736683	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.001976694	0.007129858	0.03964976	4.9891735	0.000778795	0.000744528	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.012438762	0.040183083	0.17980317	17.483605	0.00516745	0.004940082	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.002728863	0.009473913	0.059153817	5.6068536	0.001305579	0.001248133	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.000239982	0.000818385	0.005122465	0.5423782	0.000108272	0.000103508	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.00014743	0.000703365	0.00342169	0.3183785	6.35515E-05	6.07552E-05	0
Orange	2021	Commerci	Aggregate	Aggregate	Diesel	0.001785516	0.006847322	0.035460576	3.5397318	0.000787908	0.000575324	0
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.0080631	0.037159295	0.064210968	9.2535624	0.003393781	0.003122279	8.76572E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000122003	0.000811602	0.000803925	0.2260524	4.56989E-05	4.2043E-05	2.14135E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000155517	0.001494812	0.001236279	0.365879	5.02016E-05	4.61855E-05	3.4659E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	1.39396E-05	0.000126256	0.000132594	0.0335949	4.34171E-06	3.99437E-06	3.18238E-07
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000201272	0.001349038	0.001729111	0.3350233	6.85025E-05	6.30223E-05	3.17361E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000119051	0.000925765	0.001113655	0.163778	6.03741E-05	5.55442E-05	1.55144E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.006027003	0.032658256	0.055040965	7.8637745	0.003018973	0.002777455	7.4492E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.019957387	0.103636737	0.163135638	23.822262	0.009237	0.00849804	0.000225664
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000357836	0.00377642	0.00247258	1.3432176	0.000104359	9.60099E-05	1.2724E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.046633102	0.30518672	0.356892367	77.214109	0.016935918	0.015581044	0.000731434
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.00901192	0.036612153	0.075419183	10.812901	0.004283979	0.00394126	0.000102429
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	5.24935E-06	4.36455E-05	2.3215E-05	0.0226547	1.21585E-06	1.11858E-06	2.14604E-07
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.003226296	0.11992901	0.0027067	0.3224666	0.001156621	0.00087389	4.96531E-06
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.000895567	0.033616166	0.001249405	0.2852781	0.000330522	0.000249727	3.21347E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000255873	0.000938008	0.001614911	0.0024388	5.46222E-05	4.12702E-05	2.31457E-08
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.041455034	1.176343384	0.023539364	4.567E-05	0.011000005	0.008311113	1.94005E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000314061	0.001523226	0.001964722	0.0035758	6.95429E-05	5.25434E-05	3.39371E-08
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.031272702	1.039766746	0.022287521	0.7614327	0.012483642	0.009432087	2.42539E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000185953	0.001216401	0.001243244	0.1397694	5.31797E-05	4.74026E-05	1.75389E-06
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.000329712	0.016358889	0.000851481	0.2535979	1.76682E-05	1.33493E-05	2.57497E-06
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.000220423	0.007612128	0.00014843	2.962E-07	9.59586E-05	0.000072502	1.20798E-07
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.00435223	0.110962234	0.002723956	0.0164899	0.001218733	0.000920819	1.98631E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000031365	0.00010705	0.000198211	0.0002865	6.71933E-06	5.07683E-06	2.71931E-09
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000225004	0.000767971	0.001421848	0.0020555	0.000047815	3.61269E-05	1.9508E-08
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.000143298	0.013210131	0.00050751	0.4071002	2.91847E-05	2.20507E-05	4.04411E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000662078	0.003258865	0.004152833	0.0076131	0.000144908	0.000109486	7.22534E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	5.91249E-05	0.000201742	0.000373755	0.000054	0.000012804	9.67417E-06	5.12528E-09
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.067804532	1.999849234	0.045145171	0.2906387	0.021599691	0.016319769	3.53254E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000100431	0.000342784	0.000634643	0.0009175	2.13188E-05	1.61075E-05	8.00741E-09
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.028116756	0.785534186	0.017480634	3.118E-05	0.007316779	0.005528232	1.28127E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000213829	0.001121625	0.001339085	0.002567	4.70927E-05	3.58121E-05	2.43629E-08
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.0014738018	0.507074106	0.012139041	0.9153887	0.005244925	0.003962833	1.61483E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.001480637	0.006473981	0.009312427	0.0157507	0.000320623	0.000242248	1.49485E-07
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.002089157	0.086603362	0.006128409	1.8355773	0.000128118	9.67999E-05	1.79249E-05
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.001194118	0.055968529	0.003067147	0.9551714	6.65385E-05	5.02735E-05	9.41435E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	3.76918E-05	0.000128648	0.000238183	0.0003443	8.0098E-06	6.05185E-06	3.26791E-09
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.000676486	0.02250063	0.00047915	9.026E-07	0.000281489	0.000212681	3.59256E-07
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.003404031	0.017990049	0.021348601	0.1016115	0.000754836	0.000573423	1.15433E-06
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.022099438	0.742318627	0.016563543	2.6216562	0.007644743	0.005776028	3.77E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.011824991	0.040134816	0.074526326	0.1076706	0.002590136	0.001956992	1.02187E-06
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.036576862	0.948136516	0.02538291	3.79E-05	0.011394559	0.008609223	1.54422E-05
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.003465292	0.133716894	0.00259023	5.892E-06	0.001909164	0.00144248	1.26062E-06
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.000476072	0.034831337	0.0013152	0.6169977	4.30186E-05	3.25029E-05	5.96106E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.001071314	0.003662761	0.006781367	0.0098035	0.000228532	0.000172669	9.30415E-08
Orange	2021	Constructi	Aggregate	Aggregate	Gasoline	0.026535286	0.93522416	0.021407832	1.6808413	0.009673616	0.007308954	3.08187E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.001349817	0.005169963	0.008512334	0.0132126	0.00028922	0.000218522	1.25396E-07
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	1.70796E-06	1.34553E-05	1.23919E-05	0.0020025	1.14958E-06	1.05762E-06	1.89691E-08
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.012350005	0.067155233	0.072909442	13.712474	0.004519173	0.004157639	0.000129896
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.022749805	0.098181841	0.188617911	32.510693	0.008828856	0.008122548	0.000307967
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.011932537	0.065103764	0.098765864	15.444526	0.005282109	0.00485954	0.000146303
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.003114345	0.017360423	0.025196164	4.8574506	0.001303315	0.00119905	4.60137E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.00373998	0.02112223	0.026823824	4.9243578	0.001455776	0.001339314	4.66475E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.003139709	0.02156934	0.022526334	5.4967776	0.001200218	0.0011042	5.20699E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.012852803	0.080297862	0.080870116	12.838294	0.004839348	0.0044522	0.000121615
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.008903163	0.095738994	0.076468898	16.185176	0.003486607	0.003207678	0.000153319
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.003868952	0.023620238	0.031075934	2.8773477	0.00195528	0.001798858	2.72566E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.040213065	0.206784418	0.302773251	55.802583	0.016312399	0.015007407	0.000528607
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.038370699	0.24188514	0.341186421	28.284025	0.020199118	0.018583188	0.000267929
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.019331727	0.163613555	0.151349277	26.870192	0.007145267	0.006573646	0.000254536
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000232629	0.001583625	0.001679171	0.324926	0.000102199	9.40228E-05	3.07796E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	2.72752E-05	9.53294E-05	0.000226492	0.0401827	8.73731E-06	8.03831E-06	3.80643E-07
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000128703	0.000882868	0.000839882	0.2548928	5.05293E-05	4.6487E-05	2.41455E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.001699094	0.008551506	0.013281563	2.598795	0.000697359	0.000641571	2.46179E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000283696	0.001257718	0.001911048	0.5639931	9.11069E-05	8.38184E-05	5.3426E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	2.21245E-05	0.000193737	0.000123382	0.0435599	6.01436E-06	5.53321E-06	4.12635E-06
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.000355972	0.006035339	0.004095461	1.1363706	0.000126784	0.000116641	1.07646E-05
Orange	2021	Constructi	Aggregate	Aggregate	Diesel	0.065463138	0.41386029	0.44193376	74.392796	0.027801745		

Orange	2021	Constructiv	Aggregate	Aggregate	Diesel	0.000605554	0.002977978	0.004607707	0.8342906	0.000225982	0.000207903	7.90307E-06
Orange	2021	Constructiv	Aggregate	Aggregate	Diesel	0.001888964	0.007598969	0.014868692	2.4667248	0.00078882	0.000725715	2.33668E-05
Orange	2021	Forestry - E	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021	Forestry - M	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021	Forestry - M	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.004567337	0.051752519	0.048619677	8.8355907	0.001885717	0.001734859	8.36978E-05
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.0039957	0.052671758	0.046335975	8.9105836	0.001231717	0.001133318	8.44082E-05
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.028167627	0.232139454	0.21906362	39.000362	0.011604964	0.010676567	0.000369443
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.000154041	0.000883034	0.001170098	0.4267326	4.51066E-05	4.1498E-05	4.04236E-06
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	2.47249E-05	0.000155646	0.000152021	0.0783816	6.82031E-06	6.27469E-06	7.42494E-07
Orange	2021	Industrial -	Aggregate	Aggregate	Gasoline	0.018484973	0.653981551	0.01667199	4.8930627	0.005236889	0.003956759	5.77791E-05
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.001075263	0.004360002	0.006796557	0.0109034	0.000245	0.000185111	1.03481E-07
Orange	2021	Industrial -	Aggregate	Aggregate	Nat Gas	0.000248192	0.069841616	0.001919771	6.145E-06	0.000188102	0.000142122	1.49254E-07
Orange	2021	Industrial -	Aggregate	Aggregate	Gasoline	0.152621889	16.71196657	0.689519782	161.42648	0.011257008	0.008505295	0.001617091
Orange	2021	Industrial -	Aggregate	Aggregate	Nat Gas	4.60142E-05	10.46127482	1.129601592	257.63176	0.022934705	1.70487E-05	1.65093E-08
Orange	2021	Industrial -	Aggregate	Aggregate	Gasoline	0.00791961	0.621887341	0.0101391	2.2270148	0.000176351	0.000133243	3.08654E-05
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.000829367	0.0033525	0.005391442	0.0083984	0.000183601	0.000138721	7.97064E-08
Orange	2021	Industrial -	Aggregate	Aggregate	Gasoline	0.0012006	0.058887101	0.005500356	1.3182183	9.18917E-05	6.94293E-05	1.2792E-05
Orange	2021	Industrial -	Aggregate	Aggregate	Gasoline	0.010563909	0.889291025	0.028326696	9.2855752	0.000654524	0.000494529	0.000103794
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.000208767	0.000925754	0.001380416	0.0022412	4.73538E-05	3.57785E-05	2.12707E-08
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.004095157	0.032087015	0.029452714	4.8727939	0.001397128	0.001285358	4.6159E-05
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.01149828	0.05793898	0.077433604	11.708339	0.004508435	0.00414776	0.000110911
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.003793582	0.019923765	0.027210342	7.1461206	0.001313383	0.001208312	6.76938E-05
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.000278347	0.002020664	0.001941429	0.5537979	9.65017E-05	8.87816E-05	5.24602E-06
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.002455543	0.013957043	0.015501345	2.2764369	0.000982086	0.000903519	2.15642E-05
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	1.24595E-05	2.96718E-05	0.000152445	0.0138549	4.86319E-06	4.47413E-06	1.31245E-07
Orange	2021	Industrial -	Aggregate	Aggregate	Diesel	0.011191062	0.091311411	0.070468456	19.071507	0.003566805	0.00328146	0.000180661
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.657615888	1.951670674	0.02093	10.311463	0.008297	0.006266	0.00014972
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.586262653	1.05091809	0.01997	5.5523263	0.004469	0.003375	0.00008818
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.000893	0.04145	0.0003169	0.09641	2.6243E-06	1.9817E-06	1.6014E-06
Orange	2021	Lawn and C	Aggregate	Aggregate	Diesel	0.0000134	0.0000457	0.0000847	0.0111883	0.00000285	0.00000215	0.000000106
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.189887511	8.28820633	0.106741849	23.669033	0.003976932	0.003002738	0.00037844
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	1.107217713	5.490424898	0.03752625	28.263079	0.016270575	0.01228519	0.000387087
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.003497	0.193562119	0.001411	0.4793026	0.000013326	0.000010073	0.000007705
Orange	2021	Lawn and C	Aggregate	Aggregate	Diesel	0.00000587	0.00003247	0.0000407	0.0056008	0.000001425	0.000001075	5.32E-08
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.354550215	17.59203945	0.173888324	37.848817	0.00208479	0.001574791	0.000638031
Orange	2021	Lawn and C	Aggregate	Aggregate	Diesel	0.0051788	0.020896	0.03362	4.5022492	0.0011439	0.000865	0.000042683
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.000219025	0.01375655	0.000104674	0.0266797	9.11701E-07	6.89388E-07	4.98001E-07
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.00860978	0.156512	0.00134594	0.45798	2.16258E-05	1.62965E-05	7.40553E-06
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.704501743	4.200311797	0.0416045	21.379822	0.006189688	0.004674968	0.000290469
Orange	2021	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Lawn and C	Aggregate	Aggregate	Gasoline	0.039306739	1.599246929	0.017089958	4.015484	0.000220984	0.000166801	6.48317E-05
Orange	2021	Light Comn	Aggregate	Aggregate	Gasoline	0.264647364	15.24236174	0.169380474	38.967136	0.001204576	0.001248752	0.000605261
Orange	2021	Light Comn	Aggregate	Aggregate	Diesel	0.003674078	0.024535767	0.021334116	2.9605248	0.001036781	0.000971631	3.65655E-05
Orange	2021	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Light Comn	Aggregate	Aggregate	Nat Gas	0	0.816674426	0.069701455	22.283229	0	0	0
Orange	2021	Light Comn	Aggregate	Aggregate	Gasoline	0.80103456	22.68431626	0.311327754	66.227694	0.002913329	0.003284792	0.001019982
Orange	2021	Light Comn	Aggregate	Aggregate	Diesel	0.012298242	0.075803287	0.08897781	12.503158	0.003322793	0.003532901	0.000142459
Orange	2021	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Light Comn	Aggregate	Aggregate	Nat Gas	0	0.020376381	0.002525008	0.7268126	0	0	0
Orange	2021	Light Comn	Aggregate	Aggregate	Gasoline	0.196208009	11.18361002	0.084780448	24.332274	0.000418184	0.00054993	0.000405689
Orange	2021	Light Comn	Aggregate	Aggregate	Diesel	5.36319E-05	0.000364148	0.000447728	0.0638874	1.5133E-05	1.66062E-05	7.22227E-07
Orange	2021	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Light Comn	Aggregate	Aggregate	Gasoline	0.056859547	2.344083047	0.033434996	11.821949	0.000594184	0.000515392	0.000150255
Orange	2021	Light Comn	Aggregate	Aggregate	Diesel	0.007387768	0.044611597	0.049760682	6.9741903	0.001945604	0.002038834	8.00797E-05
Orange	2021	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Light Comn	Aggregate	Aggregate	Gasoline	0.129775096	6.612281536	0.070505277	19.029936	0.000898633	0.000884599	0.000286335
Orange	2021	Light Comn	Aggregate	Aggregate	Diesel	0.017581717	0.113030921	0.106676731	14.93773	0.004899878	0.004724288	0.000180829
Orange	2021	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2021	Locomotive	Aggregate	Aggregate	Diesel	0.052	0.27	1.15	0	0.028	0.026	0.001
Orange	2021	Locomotive	Aggregate	Aggregate	Diesel	0.00637574	0.036537686	0.121595828	15.050248	0.002282931	0.002100291	0.000119113
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	0.000117962	0.001190308	0.001336303	0.345623	5.71214E-05	5.25517E-05	3.78224E-06
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	3.88762E-05	0.000547587	0.000421887	0.1054823	1.97555E-05	1.8175E-05	1.17282E-06
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	1.56162E-05	0.000159338	0.000177916	0.0471304	7.20342E-06	6.62714E-06	5.32267E-07
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	4.94406E-06	5.35909E-05	4.93649E-05	0.0084161	2.44923E-06	2.25329E-06	1.05801E-07
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	0.000117071	0.001227748	0.001301149	0.3321572	5.77485E-05	5.31286E-05	3.55093E-06
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	6.41743E-06	0.000168357	8.6137E-05	0.03546	1.60135E-06	1.47324E-06	4.02404E-07
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	2.8091E-06	3.55501E-05	3.12133E-05	0.0058352	1.65105E-06	1.51897E-06	7.09291E-07
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	0.000939003	0.011492533	0.010347015	2.6538909	0.000459709	0.000422933	2.9271E-05
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	4.06362E-05	0.000514265	0.000451529	0.0892111	2.3884E-05	2.19733E-05	1.02605E-06
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	1.21302E-06	1.53512E-05	1.34785E-05	0.0019077	7.12955E-07	6.55919E-07	3.06285E-08
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	2.93685E-06	2.31389E-05	2.39281E-05	0.0035909	1.01263E-06	9.3162E-07	4.44129E-08
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	2.8863E-05	0.000333664	0.000318773	0.0857325	1.34053E-05	1.23328E-05	9.4037E-07
Orange	2021	Military Tac	Aggregate	Aggregate	Diesel	2.17581E-06	3.20627E-05	2.33552E-05	0.0060596	1.02689E-06	9.44738E-07	7.0508E-08

Orange	2021 Military Tac Aggregate	Aggregate	Diesel	5.5302E-05	0.000572942	0.000535729	0.0954952	2.60481E-05	2.39642E-05	1.12726E-06
Orange	2021 Military Tac Aggregate	Aggregate	Diesel	1.63007E-06	1.49209E-05	1.82104E-05	0.0054985	7.25781E-07	6.67719E-07	5.42923E-08
Orange	2021 Military Tac Aggregate	Aggregate	Diesel	5.75442E-05	0.000515212	0.000656507	0.1885216	2.49497E-05	2.29538E-05	2.03279E-06
Orange	2021 Military Tac Aggregate	Aggregate	Diesel	3.15923E-05	0.00035857	0.000325447	0.0607085	1.64707E-05	1.51531E-05	7.10258E-07
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.008646148	0.025131288	0.196189037	7.9090714	0.002918662	0.002685169	0.007164481
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.016306848	0.033535097	0.32032502	13.836249	0.004415641	0.00406239	0.009471652
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.086524325	0.260011081	1.946724069	108.99939	0.036152495	0.033260295	0.090581031
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.063389127	0.165443705	1.280851177	83.397996	0.026751831	0.024611685	0.070168023
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.006481516	0.01260916	0.12456297	5.9954675	0.001812031	0.001667068	0.003903748
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.000570474	0.001252446	0.012736127	0.525968	0.000165964	0.000152687	0.00036962
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.004096104	0.008436678	0.087479895	3.2205702	0.001048815	0.00096491	0.002243486
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.143529778	0.349439569	2.766084212	178.4654	0.05447896	0.050120643	0.129319401
Orange	2021 Ocean Goir Aggregate	Aggregate	Diesel	0.000586681	0.000982906	0.017781336	1.1100866	0.000272605	0.000250796	0.000703705
Orange	2021 Oil Drilling - Aggregate	Aggregate	Diesel	0.002611843	0.015283281	0.020406823	4.4884011	0.001058602	0.000973914	4.25178E-05
Orange	2021 Oil Drilling - Aggregate	Aggregate	Diesel	0.00337951	0.018474025	0.027609443	4.6264321	0.001411636	0.001298705	4.38253E-05
Orange	2021 Oil Drilling - Aggregate	Aggregate	Diesel	5.25972E-06	2.17359E-05	3.99162E-05	0.0038153	1.75749E-06	1.61689E-06	6.40086E-08
Orange	2021 Oil Drilling - Aggregate	Aggregate	Diesel	4.68352E-06	3.20137E-05	2.54832E-05	0.0035909	1.32105E-06	1.21537E-06	4.22839E-08
Orange	2021 Oil Drilling - Aggregate	Aggregate	Diesel	0.006900321	0.0496098	0.053067583	5.3900495	0.00327359	0.003011703	5.10589E-05
Orange	2021 Pleasure Ci Aggregate	Aggregate	Gasoline	1.510390864	7.015232222	0.220270812	29.82743	0.081267232	0.061401915	0.000438584
Orange	2021 Pleasure Ci Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021 Pleasure Ci Aggregate	Aggregate	Gasoline	0.017955918	0.133034374	0.011503122	1.2599544	0.000992492	0.000749883	1.46482E-05
Orange	2021 Pleasure Ci Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021 Pleasure Ci Aggregate	Aggregate	Gasoline	0.188467178	1.896086185	0.084017276	19.338355	0.002006262	0.001515842	0.000220204
Orange	2021 Pleasure Ci Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021 Pleasure Ci Aggregate	Aggregate	Gasoline	0.139374892	0.494599457	0.012841127	2.0704912	0.008279417	0.00625556	3.20752E-05
Orange	2021 Pleasure Ci Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021 Pleasure Ci Aggregate	Aggregate	Gasoline	2.034105417	7.175855512	0.29526971	33.82523	0.190651666	0.144047926	0.000504393
Orange	2021 Pleasure Ci Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021 Pleasure Ci Aggregate	Aggregate	Gasoline	0.276730041	2.286399973	0.237137684	32.203926	0.003305641	0.002497596	0.000354651
Orange	2021 Pleasure Ci Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2021 Portable Eq Aggregate	Aggregate	Diesel	0.001577686	0.024773574	0.019984975	6.3403905	0.000854522	0.00078616	5.87307E-05
Orange	2021 Portable Eq Aggregate	Aggregate	Diesel	0.034515005	0.229060867	0.350828891	75.692486	0.01368821	0.012593153	0.000700746
Orange	2021 Portable Eq Aggregate	Aggregate	Diesel	0.007592031	0.077952214	0.109926073	18.055458	0.003810177	0.003505363	0.00016717
Orange	2021 Portable Eq Aggregate	Aggregate	Diesel	0.001485173	0.019478338	0.022827095	5.8245487	0.000893105	0.000821657	5.39516E-05
Orange	2021 Portable Eq Aggregate	Aggregate	Diesel	0.003961701	0.043198238	0.039415435	19.239836	0.001495633	0.001375983	0.000178238
Orange	2021 Portable Eq Aggregate	Aggregate	Diesel	0.061457201	0.417966334	0.64566293	155.58928	0.023039322	0.021196176	0.001440651
Orange	2021 Portable Eq Aggregate	Aggregate	Diesel	0.005241709	0.057662677	0.047630053	14.435049	0.001791978	0.00164862	0.00013367
Orange	2021 Portable Eq Aggregate	Aggregate	Diesel	0.003245734	0.036226389	0.028687965	10.139984	0.001370042	0.001260439	9.39082E-05
Orange	2021 Recreation: Aggregate	Aggregate	Gasoline	0.002010949	0.028918943	0.000619471	0.485083	6.74305E-05	5.09476E-05	6.44552E-06
Orange	2021 Recreation: Aggregate	Aggregate	Gasoline	0.002867099	0.074162313	0.002073023	0.888313	0.000201576	0.000152302	7.83386E-06
Orange	2021 Recreation: Aggregate	Aggregate	Gasoline	0	0	0	0	0	0	0
Orange	2021 Recreation: Aggregate	Aggregate	Gasoline	0.013576831	0.058476142	0.000439699	0.4068001	0.000200153	0.000151227	1.26294E-05
Orange	2021 Recreation: Aggregate	Aggregate	Gasoline	0	0	0	0	0	0	0
Orange	2021 Transport R Aggregate	Aggregate	Diesel	0.010138489	0.001104204	0.013470585	2.0164993	0.000563173	0.000517602	1.91197E-05
Orange	2021 Transport R Aggregate	Aggregate	Diesel	0.2665751	0.03546165	0.2358661	42.735124	0.009306064	0.00855927	0.000405214
Orange	2021 Transport R Aggregate	Aggregate	Diesel	0.027195	0.0029575	0.032735	5.2017116	0.00169304	0.00155789	4.93221E-05
Orange	2021 Transport R Aggregate	Aggregate	Diesel	0.009036395	0.000983205	0.010763126	1.5897622	0.000498569	0.000458797	1.50733E-05
Orange	2021 Transport R Aggregate	Aggregate	Diesel	0.14954606	0.017333848	0.1435941	23.348587	0.006923252	0.00636755	0.000221391
Orange	2021 Transport R Aggregate	Aggregate	Diesel	0.004182716	0.000455575	0.00596653	0.9085341	0.000292283	0.000268999	8.61413E-06

Model Output: OFFROAD2021 (v1.0.7) Emissions Inventory

Region Type: County	ROG	CO	NOx	CO2	PM10	PM2.5	SOx
Region: Orange	County Tons/Day: 9.65	200.68	11.15	2,912.46	0.56	0.44	0.44
Calendar Year: 2021, 2045	Anaheim Tons/Day: 0.62	12.86	0.71	186.63	0.04	0.03	0.03
Scenario: All Adopted Rules - Exhaust	Anaheim Pounds/Day: 1,237	25,720	1,429	373,268	72	57	56

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	Calendar Ye	Vehicle Ca	Model Year	Horsepower	Bir Fuel	ROG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd
Orange	2045	Agricultura	Aggregate	Aggregate	Gasoline	2.37582E-06	2.95137E-05	1.47905E-06	0.00044455	7.28642E-08	6.70351E-08	3.9926E-09
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	0.003686924	0.034345725	0.017726663	5.92578752	0.000895414	0.000823781	5.41113E-05
Orange	2045	Agricultura	Aggregate	Aggregate	Gasoline	0.00117782	0.016787045	0.000651614	0.2485944	6.04187E-05	5.55852E-05	2.23644E-06
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	6.11336E-05	0.000833139	0.000684901	0.13511223	1.01981E-05	9.38225E-06	1.23434E-06
Orange	2045	Agricultura	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	3.3016E-08	6.04856E-07	1.40518E-07	0.00010587	7.01651E-09	6.45519E-09	9.67583E-10
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	1.49524E-05	0.0001055	6.23918E-05	0.05564726	2.66071E-06	2.44785E-06	5.0863E-07
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	2.79224E-05	0.000529463	9.71031E-05	0.10630957	5.16096E-06	4.74808E-06	9.71712E-07
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	7.22379E-06	4.4545E-05	4.81468E-05	0.0189743	1.77947E-06	1.63711E-06	1.73377E-07
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	5.07437E-05	0.000638066	0.000453536	0.10663039	9.40981E-06	8.65702E-06	9.74081E-07
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	3.23115E-06	2.45006E-05	1.34636E-05	0.01175231	5.91518E-07	5.44197E-07	1.07417E-07
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	0.000113927	0.001418069	0.000651571	0.24356936	3.72545E-05	3.42741E-05	2.22508E-06
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	1.80203E-05	0.000310164	7.85431E-05	0.05376355	5.06133E-06	4.65642E-06	4.91324E-07
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	0.000281905	0.002580477	0.00230221	0.45000013	7.00117E-05	6.44108E-05	4.10912E-06
Orange	2045	Agricultura	Aggregate	Aggregate	Diesel	1.14885E-05	0.000204275	4.88107E-05	0.03571334	3.67193E-06	3.37817E-06	3.26382E-07
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	0.000365791	0.005148004	0.00165305	1.02786614	3.26789E-05	3.00646E-05	9.73678E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	0.000318027	0.002968057	0.00048773	1.03237071	2.94302E-05	2.70758E-05	9.77945E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	2.70615E-06	3.3887E-05	2.8769E-05	0.0055848	2.1357E-07	1.96484E-07	5.29037E-08
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	0.000192793	0.003082897	0.00132314	0.51760992	1.97449E-05	1.81653E-05	4.90322E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	0.000126563	0.001863364	0.000978789	0.30597922	1.11724E-05	1.02786E-05	2.89848E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	2.57235E-05	0.000197795	4.36831E-05	0.0811584	2.30616E-06	2.12167E-06	7.68798E-07
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	0.000265712	0.00452464	0.00070308	0.82202751	2.37393E-05	2.1801E-05	7.78691E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	0.000148268	0.002027544	0.001160668	0.36598571	1.33303E-05	1.26239E-05	3.46691E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	0.000126019	0.002053183	0.000413622	0.36094892	1.32796E-05	1.22173E-05	3.4192E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	5.18619E-06	3.07389E-05	8.97687E-06	0.01426098	5.15758E-07	4.74497E-07	1.35091E-07
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	9.64975E-07	1.66159E-05	1.76472E-06	0.00259963	1.06704E-07	9.81675E-08	2.46258E-08
Orange	2045	Airport Gro	Aggregate	Aggregate	Diesel	9.1145E-05	0.001413848	0.000542182	0.24006981	8.98975E-06	8.27057E-06	2.27413E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000317443	0.02586733	0.002214867	0.66714773	4.78274E-05	3.61362E-05	6.62741E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.0001747	0.020053788	0.001776996	0.58205101	4.29382E-05	3.24422E-05	5.94992E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	1.21441E-07	1.8464E-05	1.67054E-06	0.00059763	4.28436E-08	3.23707E-08	5.93681E-09
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	7.92261E-05	7.57037E-06	0.00321165	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	1.26457E-05	0.001779502	0.000160232	0.05653126	4.05269E-06	3.06203E-06	5.61579E-07
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.00295014	0.23741995	0.018708106	5.89004438	0.000410668	0.000310283	5.6906E-05
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.04279659	0.00425919	0.96749935	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000718435	0.058800773	0.004514573	1.40452238	9.79267E-05	7.3989E-05	1.35696E-05
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.003656099	0.000346112	0.09327046	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000474133	0.03815707	0.003006683	0.94662156	6.60007E-05	4.98672E-05	9.14568E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.000839296	7.62335E-05	0.02333755	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000197814	0.016175798	0.001244004	0.38749166	2.70168E-05	2.04127E-05	3.74371E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.003939299	0.000403428	0.08224643	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.005378122	0.565915681	0.028376214	6.58363618	0.000459027	0.00034682	5.43552E-05
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.003080224	0.000287745	0.1174612	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	2.76232E-05	0.0015346	1.64439E-05	6.0069E-07	6.04714E-08	4.56896E-08	2.38324E-08
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000642827	0.045977854	0.003862282	1.06015169	7.82079E-05	5.90904E-05	9.2609E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.002408756	0.000215535	0.08118902	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	4.62557E-06	0.000205549	3.65423E-05	0.01449847	1.01087E-06	7.63767E-07	1.40075E-07
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000206705	0.020899495	0.000493376	0.16031879	1.10522E-05	8.35058E-06	1.94918E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.004001291	0.00108194	0.32311498	2.87358E-05	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	1.27151E-06	0.000193304	1.74891E-05	0.00625656	4.48529E-07	3.38888E-07	6.21524E-08
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.000608958	5.37168E-05	0.01965636	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	4.2688E-05	0.004396685	0.000229469	0.0552797	3.85423E-06	2.91209E-06	4.56395E-07
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000307371	0.03395795	0.002994351	0.99760589	7.15177E-05	5.40356E-05	9.91017E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000875387	0.05323796	0.004342248	1.10312236	7.90821E-05	5.97509E-05	9.36442E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	2.39356E-06	0.000133113	1.42487E-06	5.2105E-08	5.24536E-09	3.96316E-09	2.06714E-09
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000257778	0.0210063	0.001790289	0.53661915	3.84699E-05	2.90661E-05	5.33075E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.000324038	2.92502E-05	0.01120912	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000240148	0.019353033	0.001523383	0.48022935	3.34827E-05	2.52981E-05	4.63969E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.000503102	4.53207E-05	0.01421438	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.00017285	0.017728711	0.001556722	0.50921846	3.65055E-05	2.7582E-05	5.05855E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000134892	0.012137656	0.000314685	0.1225872	8.45105E-06	6.38524E-06	1.49044E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	0.001876466	0.000487835	0.11084623	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	4.38824E-05	0.005377875	0.000479619	0.16443004	1.17879E-05	8.9064E-06	1.45525E-06
Orange	2045	Airport Gro	Aggregate	Aggregate	Nat Gas	0	1.10322E-05	0.15606E-06	0.00044934	0	0	0
Orange	2045	Airport Gro	Aggregate	Aggregate	Gasoline	0.000791622	0.060988991	0.005180329	1.47735076	0.000108985	8.23441E-05	1.5102E-05

Orange	2045 Airport Gro Aggregate	Aggregate	Nat Gas	0	0.007294648	0.000617513	0.20626874	0	0	0
Orange	2045 Airport Gro Aggregate	Aggregate	Gasoline	5.70321E-06	0.000454158	3.64146E-05	0.01157739	8.07203E-07	6.09887E-07	9.55841E-08
Orange	2045 Airport Gro Aggregate	Aggregate	Nat Gas	0	2.94181E-05	7.9923E-06	0.00245407	0	0	0
Orange	2045 Airport Gro Aggregate	Aggregate	Gasoline	1.28951E-05	0.001398223	0.000123486	0.04106873	2.94419E-06	2.2245E-06	4.07975E-07
Orange	2045 Airport Gro Aggregate	Aggregate	Diesel	0.000228851	0.002285347	0.001052464	0.63975625	2.28171E-05	2.09917E-05	6.06029E-06
Orange	2045 Airport Gro Aggregate	Aggregate	Diesel	1.53074E-05	0.000174316	0.000115776	0.03023703	1.2091E-06	1.11237E-06	2.86429E-07
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.000133871	0.000574924	0.002368644	0.37340972	7.90089E-05	7.55325E-05	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.001063239	0.004783922	0.017730429	2.88564872	0.000103397	9.88473E-05	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.000184799	0.000849336	0.002736228	0.45513743	2.16086E-05	2.06578E-05	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.001354273	0.006723888	0.025827616	4.41969467	0.000131613	0.000125822	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	7.17127E-05	0.000376373	0.001456289	0.17957471	4.64474E-06	4.44037E-06	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	1.04734E-05	4.80772E-05	0.000188804	0.03143395	1.21982E-06	1.16614E-06	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.00016401	0.001180956	0.002989716	0.81028106	5.94942E-05	5.68764E-05	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.002058747	0.006873567	0.042277696	6.03279753	0.00055862	0.000534041	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.000550639	0.028049087	0.110089723	25.3229234	0.000718356	0.000686748	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.000635956	0.005452152	0.012482517	5.15163675	8.85713E-05	8.46742E-05	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.004923319	0.019759509	0.096848808	17.4632019	0.000361887	0.000345964	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.000562677	0.005892792	0.01170237	3.63856229	6.4653E-05	6.18082E-05	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.000105736	0.00035531	0.002184461	0.32914666	5.91883E-06	5.68411E-06	0
Orange	2045 Commerci Aggregate	Aggregate	Diesel	0.001153252	0.004202808	0.023157141	3.27679809	0.000149424	0.00014285	0
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.003136342	0.029620994	0.007668674	9.3275982	0.000316297	0.000290993	8.83585E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	7.42736E-05	0.000762258	0.000213353	0.21429704	7.5839E-06	6.97719E-06	2.02999E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000109321	0.001463103	0.000312333	0.34734373	1.04931E-05	9.65368E-06	3.29032E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	1.12343E-05	0.000127712	3.99903E-05	0.03214746	1.07182E-06	9.86077E-07	3.04527E-07
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000105043	0.001301032	0.000161003	0.32710206	8.73738E-06	8.03839E-06	3.09857E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	3.95857E-05	0.000730617	0.000179591	0.16225011	5.20748E-06	4.79089E-06	1.53696E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.001813067	0.019297122	0.004830655	8.22938476	0.000238504	0.000219424	7.79554E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.006863975	0.074326153	0.016240269	24.3434164	0.00075157	0.000691445	0.0002306
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000365224	0.003680967	0.0100265	1.23781399	3.65482E-05	3.36243E-05	1.17256E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.02642628	0.28665217	0.085562027	74.7528922	0.002430205	0.002235788	0.00070812
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.002927832	0.031566305	0.00546169	11.0638672	0.000315297	0.000290073	0.000104806
Orange	2045 Constructi Aggregate	Aggregate	Diesel	6.39566E-06	4.29613E-05	9.265E-06	0.02097649	6.10153E-07	5.61341E-07	1.98706E-07
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.00347005	0.132718039	0.002640392	0.32246712	0.001301415	0.000983292	5.15151E-06
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.000874497	0.034832949	0.000805623	0.28527819	0.000354918	0.000268161	3.24502E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000322039	0.001180494	0.002032514	0.00306932	6.87788E-05	5.19662E-05	2.91299E-06
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.043520596	1.301834684	0.027586174	5.1612E-05	0.012432383	0.009393355	2.11547E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000394344	0.001920846	0.002474115	0.00450286	8.62256E-05	6.51483E-05	4.27352E-08
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.036031132	1.169709637	0.025216273	0.76143785	0.014096537	0.010650718	2.63355E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000143688	0.001429104	0.001240578	0.17563133	1.52617E-05	1.22684E-05	2.21437E-06
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.000204157	0.016950494	0.000461696	0.25359785	1.76682E-05	1.33493E-05	2.57497E-06
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.000247224	0.00847314	0.000166465	3.2966E-07	0.00010681	8.70006E-05	1.34523E-07
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.004717647	0.123773238	0.003106366	0.01649042	0.001377327	0.001040647	2.17942E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	3.98843E-05	0.000136131	0.000252037	0.00036436	8.47571E-06	6.40387E-06	3.458E-09
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000284226	0.000970103	0.001796084	0.0025965	6.04001E-05	4.56357E-05	2.46426E-08
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.000143232	0.013209385	0.000507377	0.40710022	2.91848E-05	2.20507E-05	4.04411E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000851021	0.004186048	0.005338055	0.00978127	0.000186253	0.000140724	9.2831E-08
Orange	2045 Constructi Aggregate	Aggregate	Diesel	7.56702E-05	0.000258274	0.000478177	0.00069127	1.60805E-05	1.21497E-05	6.56067E-09
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.077276897	2.257046734	0.051381375	0.29064889	0.02440198	0.004437052	3.95071E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000124084	0.000423516	0.000784112	0.00113355	2.63687E-05	1.09231E-05	1.07582E-08
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.032044234	0.887639064	0.019933816	3.5233E-05	0.008267814	0.006246793	1.4487E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.000269875	0.001415608	0.001690065	0.00323986	0.000059436	4.49072E-05	3.07485E-08
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.016052263	0.57045463	0.01201506	0.91539096	0.00594136	0.004489028	1.70695E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.001831153	0.0080039	0.011517069	0.01947517	0.000396531	0.000299602	1.84833E-07
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.001212205	0.088934596	0.003193528	1.83557723	0.000128118	9.67999E-05	1.79249E-05
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.000732042	0.058373179	0.001837611	0.95517136	6.65385E-05	5.02735E-05	9.41435E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	5.06268E-05	0.000172797	0.000319922	0.00046249	1.07586E-05	8.12871E-06	4.38938E-09
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.000770407	0.025443848	0.000545731	1.0207E-06	0.000318344	0.000240526	4.06427E-07
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.004258247	0.022672661	0.026825499	0.12852756	0.000931122	0.000703832	1.45756E-06
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.024319803	0.801805526	0.017970896	2.62165855	0.008374334	0.006327274	3.8659E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.014026088	0.047873078	0.088633935	0.12813324	0.002980651	0.002252047	1.21607E-06
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.041674352	1.071465488	0.02892302	4.2829E-05	0.012876698	0.009729062	1.74619E-05
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.003937582	0.151107758	0.002943102	6.6588E-06	0.002157456	0.00163008	2.44233E-06
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.000462044	0.035119227	0.001267135	0.61699775	4.30186E-05	3.25029E-05	5.96106E-06
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.001364885	0.004658551	0.008625008	0.0124687	0.000290049	0.000219148	1.18337E-07
Orange	2045 Constructi Aggregate	Aggregate	Gasoline	0.029453417	1.064590538	0.021670375	1.68084582	0.011144892	0.008420586	3.2694E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.001478631	0.005648483	0.009325137	0.01445019	0.000316758	0.000239328	1.37142E-07
Orange	2045 Constructi Aggregate	Aggregate	Diesel	7.39973E-07	1.24576E-05	1.4063E-06	0.00193373	1.13184E-07	1.04129E-07	1.83178E-08
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.00546983	0.057481451	0.015241342	13.6043077	0.000484813	0.000446028	0.000128871
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.010605736	0.071853126	0.00729318	32.4794552	0.001114296	0.001025152	0.000307672
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.004527003	0.048665345	0.018169385	15.7346289	0.000536388	0.000493477	0.000149051
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.001416482	0.015252157	0.004955371	4.75612005	0.000159901	0.000147109	4.50538E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.001626424	0.019930011	0.005725377	4.82051853	0.000184361	0.000169613	4.56638E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.001689034	0.020265735	0.004712782	5.35800947	0.000174067	0.000160142	5.07554E-05
Orange	2045 Constructi Aggregate	Aggregate	Diesel	0.004756345	0.073772064	0.020961241	13.0189275	0.000497434	0.00045764	0.000123326

Orange	2045 Constructi	Aggregate	Diesel	0.004632936	0.093010093	0.019251621	15.8653808	0.000514512	0.000473351	0.00015029
Orange	2045 Constructi	Aggregate	Diesel	0.001039825	0.00855297	0.001904996	3.32510769	9.21141E-05	8.4745E-05	3.14981E-05
Orange	2045 Constructi	Aggregate	Diesel	0.018269123	0.177079657	0.031646496	55.5198769	0.001632101	0.001501533	0.000525929
Orange	2045 Constructi	Aggregate	Diesel	0.007949412	0.067734179	0.012597719	33.6100105	0.000828434	0.000762159	0.000318381
Orange	2045 Constructi	Aggregate	Diesel	0.011060007	0.155741079	0.088008688	26.1154027	0.001179256	0.001084916	0.000247386
Orange	2045 Constructi	Aggregate	Diesel	0.000128556	0.00117837	0.000399009	0.31337431	1.16018E-05	1.06736E-05	2.96853E-06
Orange	2045 Constructi	Aggregate	Diesel	1.29244E-05	9.19291E-05	2.10769E-05	0.0396766	1.01027E-06	9.2945E-07	3.75849E-07
Orange	2045 Constructi	Aggregate	Diesel	7.57116E-05	0.000716384	0.000113688	0.24591467	7.10649E-06	6.53797E-06	2.3295E-06
Orange	2045 Constructi	Aggregate	Diesel	0.00080427	0.006509709	0.002355996	2.59951719	8.67887E-05	7.98456E-05	2.46247E-05
Orange	2045 Constructi	Aggregate	Diesel	0.000182026	0.001177059	0.000251787	0.52401441	1.67402E-05	1.54009E-05	4.96389E-06
Orange	2045 Constructi	Aggregate	Diesel	1.4058E-05	0.000186426	4.17981E-05	0.04008097	1.56867E-06	1.44317E-06	3.79679E-07
Orange	2045 Constructi	Aggregate	Diesel	0.000308037	0.00588667	0.001716862	1.06378534	3.25828E-05	2.99762E-05	1.0077E-05
Orange	2045 Constructi	Aggregate	Diesel	0.025405243	0.381719472	0.091099196	74.0277709	0.002967857	0.002730428	0.000701251
Orange	2045 Constructi	Aggregate	Diesel	0.001023163	0.011572582	0.006996832	2.59028147	0.000133419	0.000122745	2.45372E-05
Orange	2045 Constructi	Aggregate	Diesel	0.00027855	0.002812585	0.000610261	0.8161756	3.00161E-05	2.76148E-05	7.73147E-06
Orange	2045 Constructi	Aggregate	Diesel	0.000799236	0.005482675	0.001525532	2.47588474	7.29081E-05	6.70755E-05	2.34536E-05
Orange	2045 Forestry - E	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Forestry - F	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Forestry - F	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Industrial -	Aggregate	Diesel	0.003163198	0.050589823	0.033434104	8.64967864	0.000321612	0.000295883	8.19367E-05
Orange	2045 Industrial -	Aggregate	Diesel	0.004158987	0.052735668	0.03910459	8.43672148	0.000314931	0.000289737	7.99194E-05
Orange	2045 Industrial -	Aggregate	Diesel	0.013264785	0.222099569	0.068270756	38.2950726	0.001370829	0.001261163	0.000362762
Orange	2045 Industrial -	Aggregate	Diesel	0.000120215	0.000853528	0.000389442	0.40589999	1.18647E-05	1.09155E-05	3.84501E-06
Orange	2045 Industrial -	Aggregate	Diesel	2.27506E-05	0.000151085	2.7496E-05	0.0733396	1.90838E-06	1.75571E-06	6.94732E-07
Orange	2045 Industrial -	Aggregate	Gasoline	0.021571224	0.755033363	0.019271548	5.52355119	0.006090258	0.004601529	6.54635E-05
Orange	2045 Industrial -	Aggregate	Diesel	0.00119785	0.004863121	0.007545454	0.01215608	0.000257819	0.000194797	1.15369E-07
Orange	2045 Industrial -	Aggregate	Nat Gas	0.000309413	0.086679939	0.002382831	7.6211E-06	0.000233651	0.000176537	1.85299E-07
Orange	2045 Industrial -	Aggregate	Gasoline	0.173610976	19.06149496	0.782660107	182.226821	0.012707507	0.009601228	0.001825454
Orange	2045 Industrial -	Aggregate	Nat Gas	5.37273E-05	12.53805561	1.353934001	308.733446	0.027483087	0.000019859	1.92196E-08
Orange	2045 Industrial -	Aggregate	Gasoline	0.008949767	0.702748949	0.011478501	2.51397279	0.000199441	0.000150689	4.8278E-05
Orange	2045 Industrial -	Aggregate	Diesel	0.00095977	0.003882585	0.006239086	0.00971853	0.000212466	0.000160529	9.22355E-08
Orange	2045 Industrial -	Aggregate	Gasoline	0.000785347	0.065386183	0.00479173	1.48807524	0.000103732	7.83755E-05	1.44403E-05
Orange	2045 Industrial -	Aggregate	Gasoline	0.011960369	1.008283926	0.032062596	10.4820538	0.000738868	0.000558256	0.000117171
Orange	2045 Industrial -	Aggregate	Diesel	0.000239851	0.00106074	0.001585131	0.00257045	5.43644E-05	4.10753E-05	2.3935E-08
Orange	2045 Industrial -	Aggregate	Diesel	0.002705757	0.030591395	0.020186659	4.58599963	0.000261967	0.00024101	4.34423E-05
Orange	2045 Industrial -	Aggregate	Diesel	0.004424515	0.044658489	0.020924602	11.7196291	0.00048323	0.000444572	0.000111018
Orange	2045 Industrial -	Aggregate	Diesel	0.002459707	0.01814842	0.006006461	6.77870784	0.000253833	0.000233527	6.42134E-05
Orange	2045 Industrial -	Aggregate	Diesel	0.000165914	0.001935673	0.000398032	0.51959153	1.64063E-05	1.50938E-05	4.92199E-06
Orange	2045 Industrial -	Aggregate	Diesel	0.000851383	0.012518519	0.006493747	2.26395288	0.00010926	0.00010052	2.1446E-05
Orange	2045 Industrial -	Aggregate	Diesel	4.56148E-06	3.02135E-05	4.37811E-06	0.014713	3.40929E-07	3.13655E-07	1.39373E-07
Orange	2045 Industrial -	Aggregate	Diesel	0.006787341	0.085854543	0.008743164	17.9528831	0.000561685	0.00051675	0.000170064
Orange	2045 Lawn and (	Aggregate	Gasoline	0.733207832	2.171889878	0.02381	11.6299568	0.009225	0.006973	0.00016799
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	0.68221879	1.169496162	0.02355	6.26228446	0.004979	0.003757	0.00009971
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	0.00109	0.04935	0.0003663	0.11430162	1.8169E-06	1.3731E-06	1.8971E-06
Orange	2045 Lawn and (	Aggregate	Diesel	0.0000173	5.89E-05	0.000109	0.01441593	0.00000367	0.00000277	0.000000137
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	0.187652734	9.377329385	0.11374153	25.9785608	0.000576097	0.000435147	0.00041664
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	1.163458699	5.757966376	0.0393728	29.6231059	0.017048242	0.012891168	0.00040578
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	0.004073	0.2338	0.001594	0.57636229	0.00000866	0.00000654	0.000009236
Orange	2045 Lawn and (	Aggregate	Diesel	0.0000077	0.00004241	0.00005324	0.00733082	0.000001863	0.000001404	6.958E-08
Orange	2045 Lawn and (	Aggregate	Gasoline	0.351143162	21.84588415	0.176754128	46.4157909	0.000666011	0.000502857	0.000778771
Orange	2045 Lawn and (	Aggregate	Diesel	0.006654	0.026825705	0.043218	5.78247168	0.001471	0.0011106	0.00005549
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	0.00026317	0.01782783	0.000118958	0.0339325	5.59431E-07	4.23308E-07	6.42037E-07
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	0.01059375	0.189137287	0.001535395	0.54739625	1.85687E-05	1.40247E-05	8.78739E-06
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	0.740634344	4.382123776	0.043782562	22.3189088	0.006453247	0.004876138	0.000303282
Orange	2045 Lawn and (	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Lawn and (	Aggregate	Gasoline	0.037335467	2.019493545	0.01797782	5.22287388	8.12143E-05	6.144E-05	8.16641E-05
Orange	2045 Light Comr	Aggregate	Gasoline	0.320615151	19.74391292	0.19158954	48.7939425	0.001175755	0.001166083	0.000766893
Orange	2045 Light Comr	Aggregate	Diesel	0.002263653	0.025808018	0.018420046	3.32545305	0.000128764	0.000134216	4.12355E-05
Orange	2045 Light Comr	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Light Comr	Aggregate	Nat Gas	0	0.922576859	0.078778838	25.1545025	0	0	0
Orange	2045 Light Comr	Aggregate	Gasoline	1.169498212	33.41203895	0.422976955	92.6655561	0.002603945	0.002801727	0.001449761
Orange	2045 Light Comr	Aggregate	Diesel	0.009354319	0.079814261	0.083237401	13.9610066	0.001217738	0.001535348	0.000159619
Orange	2045 Light Comr	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Light Comr	Aggregate	Nat Gas	0	0.023028481	0.002060111	0.82046487	0	0	0
Orange	2045 Light Comr	Aggregate	Gasoline	0.243869296	14.05985044	0.104835183	30.4403527	0.000380008	0.000498831	0.000508259
Orange	2045 Light Comr	Aggregate	Diesel	4.31198E-05	0.0003875	0.000421609	0.07138541	6.53445E-06	8.34187E-06	8.08328E-07
Orange	2045 Light Comr	Aggregate	Electric	0	0	0	0	0	0	0

Orange	2045 Light Comr Aggregate	Aggregate	Gasoline	0.066540274	3.18040932	0.03311814	14.4822994	0.000618418	0.000512544	0.000188313
Orange	2045 Light Comr Aggregate	Aggregate	Diesel	0.0053929	0.046912613	0.046059909	7.79094654	0.00064485	0.000806334	8.9783E-05
Orange	2045 Light Comr Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Light Comr Aggregate	Aggregate	Gasoline	0.143630009	8.539192304	0.071001092	23.2169016	0.000787293	0.000697969	0.00035466
Orange	2045 Light Comr Aggregate	Aggregate	Diesel	0.011004883	0.118210186	0.093982603	16.7482003	0.000847132	0.000966637	0.000203585
Orange	2045 Light Comr Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Locomotiv Aggregate	Aggregate	Diesel	0.01	0.26	0.2	0	0.003	0.003	0.001
Orange	2045 Locomotiv Aggregate	Aggregate	Diesel	0.002161912	0.012699405	0.047821367	5.43928824	0.000797927	0.000734057	0.0000416
Orange	2045 Locomotiv Aggregate	Aggregate	Electric	0	0	0	0	0	0	0
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	5.95617E-05	0.001166791	0.000447052	0.34517414	6.31936E-06	5.81381E-06	3.78224E-06
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	1.7111E-05	0.000545028	0.000104048	0.10537013	1.94379E-06	1.78828E-06	1.17282E-06
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	7.8042E-06	0.000156695	4.92883E-05	0.04713041	8.51888E-07	7.83737E-07	5.32267E-07
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	2.23513E-06	5.17676E-05	2.75203E-05	0.00841614	1.87339E-07	1.72349E-07	1.05801E-07
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	5.8665E-05	0.001203925	0.000462496	0.33204495	6.15663E-06	5.6641E-06	3.55093E-06
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	5.45138E-06	0.000168308	6.05394E-05	0.03546002	5.95691E-07	5.48036E-07	4.02404E-07
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	1.28601E-06	3.49588E-05	1.4848E-05	0.00583519	1.26925E-07	1.16771E-07	7.09291E-08
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	0.000440682	0.01137462	0.002876724	2.65063664	4.85399E-05	4.46567E-05	2.9271E-05
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	1.86033E-05	0.00050571	0.00021479	0.0889867	1.83609E-06	1.6892E-06	1.02605E-06
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	5.55323E-07	1.50598E-05	6.41164E-06	0.00190766	5.48087E-08	5.0424E-08	3.06285E-08
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	1.30033E-06	2.12981E-05	1.76913E-05	0.00359089	7.63623E-08	7.02533E-08	4.44129E-08
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	1.38814E-05	0.000329955	7.96304E-05	0.08573246	1.54374E-06	1.42024E-06	9.40369E-07
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	9.40182E-07	3.20627E-05	3.2406E-06	0.00605962	1.13556E-07	1.04471E-07	7.0508E-08
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	2.49178E-05	0.000550238	0.000311926	0.09482189	1.98903E-06	1.8299E-06	1.12726E-06
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	8.69324E-07	1.46034E-05	5.2745E-06	0.00549855	9.45224E-08	8.69606E-08	5.42923E-08
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	3.03042E-05	0.000504324	0.000173103	0.18852164	3.31901E-06	3.05349E-06	2.03279E-06
Orange	2045 Military Tar Aggregate	Aggregate	Diesel	1.43332E-05	0.000348325	0.000173361	0.06059624	1.26183E-06	1.16088E-06	7.10258E-07
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.013906787	0.040422101	0.138760102	12.7212451	0.004694484	0.004318926	0.011523618
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.02047026	0.042097169	0.150524769	17.3688745	0.005543028	0.005099586	0.011889923
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.115644712	0.352062254	0.992159574	153.367109	0.050244568	0.046225003	0.126461401
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.101957433	0.266105818	0.989023168	134.140443	0.043028642	0.039586351	0.112860862
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.017366824	0.03378547	0.120509724	16.0644867	0.004855225	0.004466807	0.010459852
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.001491912	0.003275417	0.028095923	1.37551936	0.000434033	0.00039931	0.000966635
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.004618417	0.009512477	0.075990848	3.63123981	0.001182554	0.00108795	0.002529563
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.151113412	0.367902789	1.041544302	187.894916	0.057357446	0.052768851	0.136152207
Orange	2045 Ocean Goi Aggregate	Aggregate	Diesel	0.000943639	0.001580942	0.027286107	1.7855047	0.000438468	0.00040339	0.001131866
Orange	2045 Oil Drilling Aggregate	Aggregate	Diesel	0.001389043	0.011853365	0.003056635	4.40805147	0.000130395	0.000119963	4.17566E-05
Orange	2045 Oil Drilling Aggregate	Aggregate	Diesel	0.001495572	0.012582982	0.003568469	4.65200517	0.000146482	0.000134763	4.40675E-05
Orange	2045 Oil Drilling Aggregate	Aggregate	Diesel	5.02969E-06	2.07721E-05	3.84582E-05	0.00381532	1.43689E-06	1.32194E-06	6.40086E-08
Orange	2045 Oil Drilling Aggregate	Aggregate	Diesel	2.59483E-06	2.96954E-05	1.87879E-05	0.00359089	1.08466E-07	9.97886E-08	4.22839E-08
Orange	2045 Oil Drilling Aggregate	Aggregate	Diesel	0.002224479	0.013454896	0.002395787	6.40702416	0.000171882	0.000158131	6.06925E-05
Orange	2045 Pleasure C Aggregate	Aggregate	Gasoline	0.644034409	8.795436908	0.23969856	45.8798559	0.004802959	0.003628903	0.000587293
Orange	2045 Pleasure C Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Pleasure C Aggregate	Aggregate	Gasoline	0.006714017	0.058969125	0.003966689	0.48015749	0.000301771	0.000228005	5.67938E-06
Orange	2045 Pleasure C Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Pleasure C Aggregate	Aggregate	Gasoline	0.140222812	1.988329266	0.052596631	28.252205	0.002945571	0.002225543	0.00030389
Orange	2045 Pleasure C Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Pleasure C Aggregate	Aggregate	Gasoline	0.058902324	0.550876744	0.018017485	3.61067491	0.002211479	0.001670894	4.45891E-05
Orange	2045 Pleasure C Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Pleasure C Aggregate	Aggregate	Gasoline	0.757300597	7.845523086	0.284237703	40.4628308	0.129161475	0.097588659	0.000530591
Orange	2045 Pleasure C Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Pleasure C Aggregate	Aggregate	Gasoline	0.280153461	3.06499976	0.163064641	48.8281841	0.00504435	0.003811286	0.000521823
Orange	2045 Pleasure C Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Portable Et Aggregate	Aggregate	Diesel	0.00172744	0.039708907	0.004750737	10.1981202	0.000193603	0.000178115	9.44847E-05
Orange	2045 Portable Et Aggregate	Aggregate	Diesel	0.033357404	0.361606618	0.195255696	121.746614	0.003721344	0.003423637	0.001127656
Orange	2045 Portable Et Aggregate	Aggregate	Diesel	0.004857645	0.094896853	0.045855576	29.0410706	0.00074303	0.000683588	0.000269064
Orange	2045 Portable Et Aggregate	Aggregate	Diesel	0.001427033	0.031274608	0.006793326	9.36842106	0.0001887	0.000173604	8.68016E-05
Orange	2045 Portable Et Aggregate	Aggregate	Diesel	0.00490419	0.068685838	0.013311542	30.9460688	0.000576723	0.000530585	0.000286721
Orange	2045 Portable Et Aggregate	Aggregate	Diesel	0.065173166	0.671926361	0.411879798	250.255587	0.007503003	0.006902763	0.002318031
Orange	2045 Portable Et Aggregate	Aggregate	Diesel	0.006169446	0.092627173	0.024604628	23.2178704	0.000593445	0.000545969	0.000215056
Orange	2045 Portable Et Aggregate	Aggregate	Diesel	0.003790848	0.058223148	0.008827048	16.3095285	0.000328703	0.000302407	0.000151081
Orange	2045 Recreation Aggregate	Aggregate	Gasoline	0.001780964	0.039292852	0.000888908	0.69011463	8.63401E-05	6.52347E-05	8.49712E-06
Orange	2045 Recreation Aggregate	Aggregate	Gasoline	0.003617984	0.104139996	0.002934971	1.25634912	0.000281419	0.000212627	1.05156E-05
Orange	2045 Recreation Aggregate	Aggregate	Gasoline	0	0	0	0	0	0	0
Orange	2045 Recreation Aggregate	Aggregate	Gasoline	0.015581579	0.071428676	0.000507577	0.49928529	0.000204198	0.000181483	9.8462E-06
Orange	2045 Recreation Aggregate	Aggregate	Gasoline	0	0	0	0	0	0	0
Orange	2045 Transport F Aggregate	Aggregate	Diesel	0.012356	0.00134426	0.01608299	2.68055907	8.84117E-05	8.13272E-05	2.54162E-05
Orange	2045 Transport F Aggregate	Aggregate	Diesel	0.2956	0.0394283	0.260477	58.8105678	0.00209889	0.00193207	0.000557642
Orange	2045 Transport F Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0
Orange	2045 Transport F Aggregate	Aggregate	Diesel	0.010115	0.00110091	0.0128945	2.14962379	0.000071056	0.000065359	2.03819E-05
Orange	2045 Transport F Aggregate	Aggregate	Diesel	0.182106	0.0228123	0.14529	32.7630745	0.001082398	0.000995687	0.000310659
Orange	2045 Transport F Aggregate	Aggregate	Diesel	0.0075228	0.00081877	0.0077367	1.28734575	4.34397E-05	0.00003997	1.22059E-05

# We Can Model Regional Emissions, But Are the Results Meaningful for CEQA?

Authors: AEP Climate Change Committee (Michael Hendrix, Dave Mitchell, Haseeb Qureshi, Jennifer Reed, Brian Schuster, Nicole Vermillion, and Rich Walters)

On December 24, 2018, the California Supreme Court, *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S219783 (*Friant Ranch*), held that simply identifying that a project exceeds an emissions threshold is not sufficient to identify a project's significant effect on the environment relative to the health effects of project emissions. The Court found that an EIR should make a reasonable effort to substantively connect a project's criteria pollutant emissions to likely health consequences, or explain why it is not currently feasible to provide such an analysis. In 2019, there were several CEQA documents that included health effects modeling to provide additional analysis for projects with criteria air pollutant emissions that exceed a significance threshold. While it is technically possible to conduct this modeling, we argue that this additional layer of quantitative analysis may not always provide decision-makers and the public with additional meaningful information. It is the air districts that are best suited to provide frameworks for how to identify health effects of regional criteria pollutant emissions under CEQA.

## Introduction

Significance thresholds for regional criteria pollutants used by California air districts and lead agencies represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard (AAQS). By analyzing the project's emissions against these thresholds, the CEQA document assesses whether these emissions directly contribute to any regional or local exceedances of the applicable AAQS and exposure levels. The basis of the ruling in *Friant Ranch* was that the EIR did not provide a meaningful analysis of the adverse health effects that would be associated with the project's criteria pollutant emissions, which were identified as being far above the relevant thresholds. The discussion of the adverse health effects in the EIR was general in nature and did not connect the levels of the pollutants that would be emitted by the project to adverse health effects.

The process of correlating project-related criteria pollutant emissions to health-based consequences is called a health impact assessment (HIA). An HIA involves two steps: 1) running a regional photochemical grid model (PGM) to estimate the small increases in concentrations of ozone and particulate matter (PM) in the region as a result of a project's emissions of criteria and precursor pollutants; and 2) running the U.S. EPA Benefits Mapping and Analysis Program (BenMAP) to estimate the resulting health impacts from these increases in concentrations of ozone and PM.

## Limitations of Regional-Scale Dispersion Models

It is technically feasible to conduct regional-scale criteria pollutant modeling for a development project. Particulate matter (PM) can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur oxides (SO<sub>x</sub>) and NO<sub>x</sub>. Ozone (O<sub>3</sub>) is a secondary pollutant formed from the oxidation of reactive organic gases (ROGs) and nitrogen oxides (NO<sub>x</sub>) in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of PM and ozone can occur far from the original emissions source from regional transport due to wind and topography (e.g. low-level jet stream). As such, modeling concentrations of secondary PM and ozone require photochemical grid models (PGMs), such as CMAQ and CAMx. These models have a much larger "grid" system and much lower resolution than localized dispersion modeling (e.g., AERMOD). For example, common grid cells in PGMs are 4x4 kilometers, while AERMOD can identify concentrations at the meter-level.



Photochemical modeling also depends on all emission sources in the entire domain. Low resolution and spatial averaging produces “noise” and model uncertainty that can exceed a project’s specific emissions. Additionally, regional-scale models are highly contingent upon background concentrations. Factors such as meteorology and topography greatly affect the certainty levels of predicted concentrations at receptor points. As a result, there are statistical ranges of uncertainty through all the modeling steps. Due to these factors, it is difficult to predict ground-level secondary PM and ozone concentrations associated with relatively small emission sources with a high degree of certainty. While it is possible to use a regional-scale model to predict these regional concentrations, when a project’s emissions are less than the regional model’s resolution, the resultant ambient air quality concentrations will be within the margin of uncertainty. In CEQA terms, this would fit the definition of “speculative”. Only when the scale of emissions would result in changes in ambient air quality beyond the model margin of uncertainty would the results not be “speculative” as defined by CEQA.

## **Identifying Health Effects due to Ambient Air Quality Changes**

BenMap is a model developed by the USEPA to understand the health effects from changes in ozone and PM concentrations. If there is an acceptable level of confidence that the results provided by the regional dispersion modeling are valid, then these concentrations can be translated into health outcomes using BenMap. The health outcomes in BenMap are based on changes in ambient air concentrations and the population exposed to these changes. Data provided by this analysis may indicate increased number of workdays lost to illness, hospital admissions (respiratory), emergency room visits (asthma), or mortality, among other health effects. These are called “health incidences.”

Translating the incremental increase in PM and ozone concentrations to specific health effects is also subject to uncertainty. For example, regional models assign the same toxicity to PM regardless of the source of PM (such as road dust as exhaust), and thus potentially overpredict adverse health effects of PM. BenMap also assumes that health effects can occur at any concentration, including small incremental concentrations, and assumes that impacts seen at large concentration differences can be linearly scaled down to small increases in concentration, with no consideration of potential thresholds below which health impacts may not occur. Additionally, BenMap is used for assessing impacts over large areas and populations and was not intended to be used for individual projects. For health incidences, the number of hospitalizations or increase in morbidity predicted by BenMap is greatly affected by the population characteristics.<sup>1</sup> Small increases in emissions in an area with a high population have a much greater affect than large increases in emissions over an area with a small population. As a result, the same amount of emissions generated in an urban area could result in greater health consequences than if the same emissions occurred on the urban periphery, where fewer people may be affected. This will also depend on other factors including meteorology and photochemistry, as discussed above. Emissions in areas with conditions that favor high air dispersion or unfavorable ozone formation will likely have relatively lower effects on ambient air quality and health outcomes.

While BenMap provides additional statistical information about health consequences requested by the Court in the Friant Ranch decision, this information is only meaningful when presented with the full health context of the region or locality at hand. For example, if the BenMap analysis says that the project would result in two additional hospital admissions, this result alone is not useful unless one identifies how many hospital admissions are caused by poor air quality now (without the project) and how many hospital admissions occur

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<sup>1</sup> BenMap assigns prevalence rate for asthma and other health effects based on indicators such as gender, race, age, ethnicity, etc. The BenMap user manual specifically states that there are a wide range of variables that can be included in the health effect function. The health effect function was developed based on epidemiological studies, and specifically states that “there are a number of issues that arise when deriving and choosing between health effect functions that go well beyond this user manual. Hence, it is important to have a trained health researcher assist in developing the impact function data file.”

overall (due to air quality and other causes). Because health is not solely influenced by ambient air quality, and has many factors that are highly variable across geographies and populations, there is an added level of uncertainty in using a generalized identification of health effects due to air quality conditions overlaid onto a specific diverse set of health conditions and other factors. Regardless of the uncertainty levels, if regional health effects are identified for a project, then the CEQA analysis needs to provide a full health baseline for decision-makers and the public to be able to understand the marginal change due to project criteria pollutant emissions. Given the margin of uncertainty at each step in the process (regional scale modeling, existing ambient air quality effects on health, population health conditions vulnerability, and marginal health effects of air pollution), the identification of marginal health effects due to individual projects using regional air quality modelling and tools such as BenMap are likely to be within the level of uncertainty and thus defined as “speculative” per CEQA.

## The Role of Air Districts

Regional, community, multiscale air quality modeling conducted by the air districts for each individual air basin or locality within the air basin would be the most appropriate indicator of health effects for projects. The AQMPs provide a forecast of regional emissions based on regional dispersion modeling for all sources within the air basin. Regional-scale models attempt to account for all emissions sources within an air basin.

The regional scale model requires inputs such as existing and future regional sources of pollutants and global meteorological data, which are generally not accessible by CEQA practitioners. Modeling of future years should consider future concentrations of air pollutants based on regional growth projections and existing programs, rules, and regulations adopted by Federal, State, and local air districts. In general, air pollution in California is decreasing as a result of Federal and State laws. Based on the air quality management plans (AQMPs) required for air districts in a nonattainment area, air quality in the air basins are anticipated to improve despite an increase in population and employment growth. Air districts are charged with assessing programs, rules, and regulations so that the increase in population and employment does not conflict with the mandate to achieve the AAQS. Because emissions forecasting and health outcomes based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should also fall on the air districts to identify the potential health outcomes associated with individual project’s criteria pollutant emissions.

The South Coast Air Quality Management District (South Coast AQMD) and the Sacramento Metropolitan Air Quality Management District (Sacramento Metropolitan AQMD) are exploring concepts for project-level analysis in light of Friant Ranch to assist local lead agencies.

- » South Coast AQMD is looking at the largest land use development project they have had in the air basin and doing a sensitivity analysis (using CAMx for photochemical grid modeling and BenMap for health outcomes) to see how locating a very large project in different parts of the air basin (Los Angeles, Inland Empire, v. Orange County) would affect the health incidence.
- » Sacramento Metropolitan AQMD is also looking at a screening process. Rather than looking at the upper end (i.e., largest project in the air basin), Sacramento Metropolitan AQMD is starting at the smallest project that exceeds the regional significance threshold and running CAMx and BenMap at different locations in the air basin to see how it affects regional health incidences.

Guidance from Air Districts would be the most effective way to incorporate meaningful information concerning regional health effects of project criteria pollutants in CEQA analyses, including guidance as to when modelling is and is not useful and meaningful, how modelling should be conducted, and how to best present additional information to inform decision-makers and the public about a project’s impacts.

## **So...until air districts do their part, what should we do?**

### **PROJECTS WITH CRITERIA POLLUTANT EMISSIONS BELOW AIR DISTRICT THRESHOLDS**

The Friant Ranch ruling was about providing disclosure of health effects of project emissions that were well over the significance thresholds. Since the air district thresholds are tied to a level the air districts find to not have a significant effect on ambient air quality, there should be no need to discuss the health effects of criteria pollutant emissions that are less than the significance thresholds.

### **PROJECTS WITH CRITERIA POLLUTANT EMISSIONS ABOVE AIR DISTRICT THRESHOLDS**

Pursuant to Section 15125 of the CEQA Guidelines, the environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. For CEQA, the health effects associated with buildout of a project would occur at the project's horizon year. Because CEQA requires an analysis of the change from existing conditions, the change in effects would be associated with changes in ambient air quality and associated health outcomes between existing conditions and the project's horizon year. Therefore, in order to show how a project affects health outcomes in an air basin, the CEQA documents will need to qualitatively or quantitatively address: (1) existing ambient criteria pollutant concentrations, health incidences due to existing air quality, and health incidences overall; 2) future (without project) ambient criteria pollutant concentrations and health incidences, and 3) future (with project) ambient criteria pollutant concentrations and health incidences.

Projects with significant criteria pollutant emissions could use regional modelling and BenMap to identify health effects of project emissions, but it is likely that many (or most) projects that are not regionally substantial in scale will be shown to have minimal regional changes in PM and ozone concentrations and therefore minimal changes in associated health effects. In addition, many projects may have emissions that are less than the uncertainty level of regional air quality models and BenMap health effects modeling; in these cases, quantitative results will not be meaningful. Thus, absent better direction from air districts, CEQA lead agencies will have to determine on a case by case basis whether a qualitative discussion of health effects will suffice, or whether regional modeling, despite its limitations, should be conducted for the project.

Where a project has substantial criteria pollutant emissions when considered on a regional scale, and there is reason to believe that the modeling of ambient air quality and regional health effects would produce non-speculative results when considering modeling uncertainties, then CEQA lead agencies should use regional modelling.

## **Conclusion**

The purpose of CEQA is to inform the public as to the potential for a project to result in one or more significant adverse effects on the environment (including health effects). A CEQA document must provide an understandable and clear environmental analysis and provide an adequate basis for decision making and public disclosure. Regional dispersion modeling of criteria pollutants and secondary pollutants like PM and ozone can provide additional information, but that information may be within the margin of modelling uncertainty and/or may not be meaningful for the public and decision-makers unless a full health context is presented in the CEQA document. Simply providing health outcomes based on use of a regional-scale model and BenMap may not satisfy the goal to provide decision-makers and the public with information that would assist in weighting the environmental consequences of a project. A CEQA document must provide an analysis that is understandable for decision making and public disclosure. Regional scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation.

In order to accurately connect the dots, we urge California air districts to provide more guidance on how to identify and describe the health effects of exceeding regional criteria pollutant thresholds. The air districts are the primary agency responsible for ensuring that the air basins attain the AAQS and ensure the health and welfare of its residents relative to air quality. Because emissions forecasting and health outcomes are based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should fall on the air districts to identify the potential health outcomes associated with exceeding the CEQA thresholds for projects. The air districts should provide lead agencies with a consistent, reliable, and meaningful analytical approach to correlate specific health effects that may result from a project's criteria pollutant emissions.

## **Glossary**

AAQS – Ambient Air Quality Standards

BenMap – Benefits Mapping and Analysis Program

CAMx – Comprehensive Air Quality Model with extensions

CMAQ – Community Multiscale Air Quality

NOx – Nitrogen Oxides

PM – Particulate Matter

SOx – Sulfur Oxides

State – California

USEPA – United States Environmental Protection Agency

**Existing (2021) Operational Fuel**

<b>Vehicle Type</b>	<b>Existing Annual VMT<sup>1</sup></b>	<b>MPG<sup>2</sup></b>	<b>Existing (2021) Annual Fuel Consumption (Gallons)</b>	<b>Fuel Type</b>
All Vehicles	6,055,827,785	22.58	268,194,322	Gas, Diesel, Plug-in Hybrid, Natural Gas

Notes:

<sup>1</sup> Total annual operational VMT based on annual VMT from the traffic study.

<sup>2</sup> Miles per gallon (MPG) calculated based on the annual VMT and fuel consumption for Orange County in year 2021 per EMFAC2021.

Existing (2021) Operational Water Energy

Existing Operational  
Water Energy

Indoor	18,548	million gallons per year
Energy Intensity Factor <sup>1</sup>	6,807	kWh/MG
Operational Water Energy	126,253,655	kWh
Operational Water Energy	126	GWh

Land Use <sup>2</sup>	Gallons/Year	Acre Feet
Single Family Housing	18,547,620,800	56,921
<b>Total Operational Water</b>	<b>18,547,620,800</b>	<b>56,921</b>

Notes:

<sup>1</sup> Water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32. Factor includes supply, treatment, distribution, and wastewater.

<sup>2</sup> Operational water use values per CalEEMod (5.12 Operational Water and Wastewater Consumption).

Existing (2021) Electricity/Natural Gas Energy

	Residential Existing Annual Energy	Nonresidential Existing Annual Energy
Electricity (kWh/yr)	720,451,646	1,309,647,354
Electricity (GWh/yr)	720	1,310
Natural Gas (kBtu/yr)	4,194,291,484	2,914,375,116
Natural Gas (therms/yr)	41,942,915	29,143,751

Land Use	Electricity <sup>1</sup> (kWh/yr)	Natural Gas <sup>2</sup> (kBtu/yr)
	Unmitigated	Unmitigated
Single Family Housing	257,391,069	1,743,724,701
Single Family Housing	203,923,924	1,381,505,524
Apartments Mid Rise	231,949,037	856,325,470
Mobile Home Park	27,187,617	212,735,788
Strip Mall	213,166,201	158,336,160
General Office Building	334,294,219	579,375,460
Government Office Building	36,414,269	63,110,675
Elementary School	80,658,354	329,684,976
Unrefrigerated Warehouse-No Rail	130,814,841	656,487,046
Hospital	454,252,455	1,032,585,950
Refrigerated Warehouse-No Rail	60,047,014	94,794,851
<b>Total Residential Energy</b>	<b>720,451,646</b>	<b>4,194,291,484</b>
<b>Total Nonresidential Energy</b>	<b>1,309,647,354</b>	<b>2,914,375,116</b>

Notes:

<sup>1</sup> Electricity use per CalEEMod (5.11 Operational Energy Consumption).

<sup>2</sup> Natural Gas use per CalEEMod (5.11 Operational Energy Consumption).

Project (2045) Operational Fuel

Vehicle Type	Project (2045) Annual VMT <sup>1</sup>	MPG <sup>2</sup>	Project (2045) Annual Fuel (Gallons)	Fuel Type	Existing Annual Fuel Consumption (Gallons) <sup>3</sup>	Project Percent Decrease from Existing Fuel Consumption (Gallons)
All Vehicles	7,416,759,485	33.4	222,058,667	Gas, Diesel, Plug-in Hybrid, Natural Gas	268,194,322	17.20%

Notes:

<sup>1</sup> Total annual operational VMT based on annual VMT from the traffic study.

<sup>2</sup> Miles per gallon (MPG) calculated based on the annual VMT and fuel consumption for Orange County in year 2045 per EMFAC2021.

<sup>3</sup> Existing (2045) annual fuel consumption calculated based on the VMT from the traffic study and miles per gallon from EMFAC2021 for Orange County.



**Project (2045) Operational Water Energy**

**Project Operational  
Water Energy**

Indoor	21,602	million gallons
Energy Intensity Factor <sup>1</sup>	6,807	kWh/MG
Operational Water Energy	147,042,462	kWh
Operational Water Energy	147	GWh

Land Use <sup>2</sup>	Gallons/Year	Acre Feet
Single Family Housing	21,601,654,433	66,293
<b>Total Operational Water</b>	<b>21,601,654,433</b>	<b>66,293</b>

Notes:

<sup>1</sup> Water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32. Factor includes supply, treatment, distribution, and wastewater.

<sup>2</sup> Operational water use values per CalEEMod (5.12 Operational Water and Wastewater Consumption).

**Project (2045) Electricity/Natural Gas Energy**

	<b>Residential Annual Energy</b>	<b>Nonresidential Annual Energy</b>
Project Electricity (kWh/yr)	795,083,201	1,941,389,603
Project Electricity (GWh/yr)	795	1,941
Project Natural Gas (kBTU/yr)	4,156,695,231	4,608,853,001
Project Natural Gas (therms/yr)	41,566,952	46,088,530

Land Use	Electricity <sup>1</sup> (kWh/yr)	Natural Gas <sup>2</sup> (kBTU/yr)
	Unmitigated	Unmitigated
Single Family Housing	380,663,005	2,578,844,281
Single Family Housing	15,527,033	105,189,626
Apartments Mid Rise	398,893,163	1,472,661,324
Strip Mall	285,943,628	212,393,971
General Office Building	448,720,552	777,691,210
Government Office Building	56,090,069	97,211,401
Unrefrigerated Warehouse-No Rail	247,658,174	1,242,858,850
Elementary School	168,139,207	687,256,408
Refrigerated Warehouse-No Rail	113,695,575	179,488,611
Hospital	621,142,398	1,411,952,551
<b>Total Residential Energy</b>	<b>795,083,201</b>	<b>4,156,695,231</b>
<b>Total Nonresidential Energy</b>	<b>1,941,389,603</b>	<b>4,608,853,001</b>

Notes:

<sup>1</sup> Electricity use per CalEEMod (5.11 Operational Energy Consumption).

<sup>2</sup> Natural Gas use per CalEEMod (5.11 Operational Energy Consumption).

<sup>3</sup> County total energy values from California Energy Commission energy reports available through [ecdms.energy.ca.gov](http://ecdms.energy.ca.gov) (year 2021).

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: County

Region: Orange

Calendar Year: 2021

Season: Annual

Vehicle Classification: EMFAC2007 Categories

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

Region	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Fuel Consumption	Total VMT:	30,470,689,307
Orange	HHDT	Aggregate	Aggregate	Gasoline	12.89761328	218038.1156	56.55916833	Total Fuel Consumption (gal/year):	1,349,467,796
Orange	HHDT	Aggregate	Aggregate	Diesel	10124.46001	376365025.8	64903.61861	Average MPG:	22.58
Orange	HHDT	Aggregate	Aggregate	Natural Gas	1134.45158	24372940.57	4373.186119		
Orange	LDA	Aggregate	Aggregate	Gasoline	1098889.828	14782139860	521368.6059		
Orange	LDA	Aggregate	Aggregate	Diesel	3962.001207	43954254.31	1049.193963		
Orange	LDA	Aggregate	Aggregate	Electricity	44294.18587	654739278.2	0		
Orange	LDA	Aggregate	Aggregate	Plug-in Hybrid	22574.81209	365206101.9	6742.496415		
Orange	LDT1	Aggregate	Aggregate	Gasoline	102523.449	1241329510	51850.70663		
Orange	LDT1	Aggregate	Aggregate	Diesel	42.58947452	235455.1265	9.895247625		
Orange	LDT1	Aggregate	Aggregate	Electricity	140.3238171	1552849.4	0		
Orange	LDT1	Aggregate	Aggregate	Plug-in Hybrid	23.3316832	430662.9918	7.62803946		
Orange	LDT2	Aggregate	Aggregate	Gasoline	503142.934	6926095791	304735.967		
Orange	LDT2	Aggregate	Aggregate	Diesel	1846.123046	27567650.03	899.9837883		
Orange	LDT2	Aggregate	Aggregate	Electricity	531.6371243	6794903.951	0		
Orange	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1738.317605	31083626.43	560.9805114		
Orange	LHDT1	Aggregate	Aggregate	Gasoline	41441.97753	521651849.2	40339.35496		
Orange	LHDT1	Aggregate	Aggregate	Diesel	18981.08789	253750463.4	12589.22822		
Orange	LHDT2	Aggregate	Aggregate	Gasoline	6812.798295	82254779.13	7144.09281		
Orange	LHDT2	Aggregate	Aggregate	Diesel	7682.248801	103610209.7	6170.171854		
Orange	MCY	Aggregate	Aggregate	Gasoline	47706.37507	102781384.1	2482.499945		
Orange	MDV	Aggregate	Aggregate	Gasoline	320297.633	4207068343	226269.2548		
Orange	MDV	Aggregate	Aggregate	Diesel	4611.608949	64550015.36	2791.447197		
Orange	MDV	Aggregate	Aggregate	Electricity	543.3903066	6951810.932	0		
Orange	MDV	Aggregate	Aggregate	Plug-in Hybrid	1395.731207	22201834.65	418.6546279		
Orange	MH	Aggregate	Aggregate	Gasoline	6751.780832	20673546.51	4224.928492		
Orange	MH	Aggregate	Aggregate	Diesel	2890.685667	9673727.942	952.9381335		
Orange	MHDT	Aggregate	Aggregate	Gasoline	7844.68263	142991745.2	28132.02197		
Orange	MHDT	Aggregate	Aggregate	Diesel	26339.58064	351627887.1	39545.88915		
Orange	MHDT	Aggregate	Aggregate	Natural Gas	228.2220494	3420836.164	411.1105903		
Orange	OBUS	Aggregate	Aggregate	Gasoline	922.0645125	12679127.15	2528.352141		
Orange	OBUS	Aggregate	Aggregate	Diesel	459.4672223	10458394.26	1466.33657		
Orange	OBUS	Aggregate	Aggregate	Natural Gas	85.89206567	1574255.674	179.3755602		
Orange	SBUS	Aggregate	Aggregate	Gasoline	640.7909102	9221563.446	1049.882341		
Orange	SBUS	Aggregate	Aggregate	Diesel	918.1496099	6219476.767	852.497293		
Orange	SBUS	Aggregate	Aggregate	Natural Gas	646.3086951	5476702.906	1302.61578		
Orange	UBUS	Aggregate	Aggregate	Gasoline	254.0729926	13706953.39	1192.91321		
Orange	UBUS	Aggregate	Aggregate	Electricity	4.037405551	25414.45858	0		
Orange	UBUS	Aggregate	Aggregate	Natural Gas	573.2164337	36033039.29	12865.40864		

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: County

Region: Orange

Calendar Year: 2045

Season: Annual

Vehicle Classification: EMFAC2007 Categories

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

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Fuel Consumption	Total VMT:	
Orange	2045	HHDT	Aggregate	Aggregate	Gasoline	3.021599619	106892.2962	20.16053527	Total Fuel Consumption (gal/year):	35,303,769,927
Orange	2045	HHDT	Aggregate	Aggregate	Diesel	13605.34593	532194697.3	71490.12981	Average MPG:	1,056,918,009
Orange	2045	HHDT	Aggregate	Aggregate	Electricity	5243.318962	138365842.1	0		33.40
Orange	2045	HHDT	Aggregate	Aggregate	Natural Gas	1509.207773	27759030.7	4058.341088		
Orange	2045	LDA	Aggregate	Aggregate	Gasoline	1053318.987	14572296528	391447.8883		
Orange	2045	LDA	Aggregate	Aggregate	Diesel	679.3299689	8590033.97	155.0171841		
Orange	2045	LDA	Aggregate	Aggregate	Electricity	144842.7147	2091898240	0		
Orange	2045	LDA	Aggregate	Aggregate	Plug-in Hybrid	49485.10516	695312308.4	9873.557564		
Orange	2045	LDT1	Aggregate	Aggregate	Gasoline	83122.44447	1064310068	33342.94865		
Orange	2045	LDT1	Aggregate	Aggregate	Diesel	0.910754106	12337.25161	0.414685339		
Orange	2045	LDT1	Aggregate	Aggregate	Electricity	2348.590894	33674501.95	0		
Orange	2045	LDT1	Aggregate	Aggregate	Plug-in Hybrid	1796.834707	25155492.16	358.8399825		
Orange	2045	LDT2	Aggregate	Aggregate	Gasoline	610149.1402	8297214548	268273.1697		
Orange	2045	LDT2	Aggregate	Aggregate	Diesel	2337.693552	31852690.66	794.9122647		
Orange	2045	LDT2	Aggregate	Aggregate	Electricity	23920.81456	239544097.3	0		
Orange	2045	LDT2	Aggregate	Aggregate	Plug-in Hybrid	16404.81617	227507613.5	3260.125707		
Orange	2045	LHDT1	Aggregate	Aggregate	Gasoline	28028.45698	335868996.7	19423.49328		
Orange	2045	LHDT1	Aggregate	Aggregate	Diesel	21564.90573	251663559.8	11372.06826		
Orange	2045	LHDT1	Aggregate	Aggregate	Electricity	32280.93111	479473860.8	0		
Orange	2045	LHDT2	Aggregate	Aggregate	Gasoline	4126.514322	46510729.97	3031.67237		
Orange	2045	LHDT2	Aggregate	Aggregate	Diesel	10358.61512	116630475.6	6158.955049		
Orange	2045	LHDT2	Aggregate	Aggregate	Electricity	8793.777363	125095831.6	0		
Orange	2045	MCY	Aggregate	Aggregate	Gasoline	64546.68766	131037165.9	3016.04614		
Orange	2045	MDV	Aggregate	Aggregate	Gasoline	355590.3642	4689872943	184351.4487		
Orange	2045	MDV	Aggregate	Aggregate	Diesel	3907.347015	51010588.39	1661.478391		
Orange	2045	MDV	Aggregate	Aggregate	Electricity	21911.56215	216825723.9	0		
Orange	2045	MDV	Aggregate	Aggregate	Plug-in Hybrid	10391.91603	140043320.5	2037.55286		
Orange	2045	MH	Aggregate	Aggregate	Gasoline	4301.551601	15488485.58	3153.071494		
Orange	2045	MH	Aggregate	Aggregate	Diesel	2907.227563	9006283.998	885.3983204		
Orange	2045	MHDT	Aggregate	Aggregate	Gasoline	2636.7267	33314820.79	5574.135239		
Orange	2045	MHDT	Aggregate	Aggregate	Diesel	22128.4898	271867232.3	27094.28678		
Orange	2045	MHDT	Aggregate	Aggregate	Electricity	20616.91275	282080342.2	0		
Orange	2045	MHDT	Aggregate	Aggregate	Natural Gas	332.0885426	4168464.419	476.3879204		
Orange	2045	OBUS	Aggregate	Aggregate	Gasoline	477.1715307	4928271.802	829.46347		
Orange	2045	OBUS	Aggregate	Aggregate	Diesel	556.7230919	11582486.33	1415.793703		
Orange	2045	OBUS	Aggregate	Aggregate	Electricity	302.3263576	5711475.735	0		
Orange	2045	OBUS	Aggregate	Aggregate	Natural Gas	123.6361038	1883645.978	188.1845388		
Orange	2045	SBUS	Aggregate	Aggregate	Gasoline	445.9335707	6475933.969	664.5575816		
Orange	2045	SBUS	Aggregate	Aggregate	Diesel	289.9769752	1913225.777	232.2894957		
Orange	2045	SBUS	Aggregate	Aggregate	Electricity	755.7029732	7349672.708	0		
Orange	2045	SBUS	Aggregate	Aggregate	Natural Gas	775.2656206	5102046.136	1104.829569		
Orange	2045	UBUS	Aggregate	Aggregate	Gasoline	344.7669392	18886435.91	1171.390461		
Orange	2045	UBUS	Aggregate	Aggregate	Electricity	876.0960749	54182985.69	0		