Solvang General Plan Update - Alternative 1 Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Solvang General Plan Update - Alternative 1
Construction Start Date	1/1/2024
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	25.4
Location	Solvang, CA 93463, USA
County	Santa Barbara
City	Solvang
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3364
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.21

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	1,891	Dwelling Unit	614	3,687,450	22,149,013	—	5,408	—
Apartments Mid Rise	809	Dwelling Unit	21.3	776,640	0.00	—	2,314	—
General Office Building	2,193	1000sqft	50.4	2,193,300	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	186	46.9	342	0.64	3.36	56.3	59.6	3.29	14.2	17.5	3,188	122,941	126,128	229	4.27	44.5	133,164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	157	45.2	86.5	0.62	3.12	56.3	59.4	3.11	14.2	17.3	3,188	121,301	124,489	229	4.31	37.5	131,528
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	171	46.3	210	0.63	3.24	55.4	58.6	3.20	14.0	17.2	3,188	121,745	124,933	229	4.31	40.4	131,976
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	31.3	8.45	38.3	0.11	0.59	10.1	10.7	0.58	2.55	3.14	528	20,156	20,684	37.9	0.71	6.69	21,850

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.45	7.22	71.0	0.39	0.16	56.3	56.4	0.15	14.2	14.4	—	40,100	40,100	0.21	1.22	7.15	40,475
Area	184	2.22	249	0.01	0.24	—	0.24	0.18	—	0.18	0.00	802	802	0.03	0.01	—	805
Energy	2.15	37.5	21.5	0.23	2.96	—	2.96	2.96	—	2.96	—	79,874	79,874	9.51	0.74	—	80,333
Water	—	—	—	—	—	—	—	—	—	—	1,036	2,165	3,200	3.91	2.31	—	3,985
Waste	—	—	—	—	—	—	—	—	—	—	2,152	0.00	2,152	215	0.00	—	7,529
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.3	37.3
Total	186	46.9	342	0.64	3.36	56.3	59.6	3.29	14.2	17.5	3,188	122,941	126,128	229	4.27	44.5	133,164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.44	7.75	65.0	0.39	0.16	56.3	56.4	0.15	14.2	14.4	—	39,262	39,262	0.21	1.26	0.19	39,644
Area	155	0.00	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	2.15	37.5	21.5	0.23	2.96	—	2.96	2.96	—	2.96	—	79,874	79,874	9.51	0.74	—	80,333
Water	—	—	—	—	—	—	—	—	—	—	1,036	2,165	3,200	3.91	2.31	—	3,985
Waste	—	—	—	—	—	—	—	—	—	—	2,152	0.00	2,152	215	0.00	—	7,529
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.3	37.3
Total	157	45.2	86.5	0.62	3.12	56.3	59.4	3.11	14.2	17.3	3,188	121,301	124,489	229	4.31	37.5	131,528
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.44	7.76	65.3	0.39	0.16	55.4	55.5	0.15	14.0	14.1	—	39,311	39,311	0.21	1.26	3.09	39,695
Area	169	1.09	123	0.01	0.12	—	0.12	0.09	—	0.09	0.00	395	395	0.02	< 0.005	—	397
Energy	2.15	37.5	21.5	0.23	2.96	—	2.96	2.96	—	2.96	—	79,874	79,874	9.51	0.74	—	80,333
Water	—	—	—	—	—	—	—	—	—	—	1,036	2,165	3,200	3.91	2.31	—	3,985
Waste	—	—	—	—	—	—	—	—	—	—	2,152	0.00	2,152	215	0.00	—	7,529

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.3	37.3
Total	171	46.3	210	0.63	3.24	55.4	58.6	3.20	14.0	17.2	3,188	121,745	124,933	229	4.31	40.4	131,976
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.08	1.42	11.9	0.07	0.03	10.1	10.1	0.03	2.55	2.58	—	6,508	6,508	0.03	0.21	0.51	6,572
Area	30.8	0.20	22.4	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	65.5	65.5	< 0.005	< 0.005	—	65.7
Energy	0.39	6.84	3.92	0.04	0.54	—	0.54	0.54	—	0.54	—	13,224	13,224	1.57	0.12	—	13,300
Water	—	—	—	—	—	—	—	—	—	—	171	358	530	0.65	0.38	—	660
Waste	—	—	—	—	—	—	—	—	—	—	356	0.00	356	35.6	0.00	—	1,246
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.18	6.18
Total	31.3	8.45	38.3	0.11	0.59	10.1	10.7	0.58	2.55	3.14	528	20,156	20,684	37.9	0.71	6.69	21,850

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	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	—	—	—	—	—	—	—	—	—	—	—	6,408	6,408	1.04	0.13	—	6,471

Apartments	—	—	—	—	—	—	—	—	—	—	—	1,342	1,342	0.22	0.03	—	1,355
General Office Building	—	—	—	—	—	—	—	—	—	—	—	25,583	25,583	4.14	0.50	—	25,836
Total	—	—	—	—	—	—	—	—	—	—	—	33,333	33,333	5.39	0.65	—	33,662
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6,408	6,408	1.04	0.13	—	6,471
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,342	1,342	0.22	0.03	—	1,355
General Office Building	—	—	—	—	—	—	—	—	—	—	—	25,583	25,583	4.14	0.50	—	25,836
Total	—	—	—	—	—	—	—	—	—	—	—	33,333	33,333	5.39	0.65	—	33,662
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,061	1,061	0.17	0.02	—	1,071
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	222	222	0.04	< 0.005	—	224
General Office Building	—	—	—	—	—	—	—	—	—	—	—	4,236	4,236	0.69	0.08	—	4,277
Total	—	—	—	—	—	—	—	—	—	—	—	5,519	5,519	0.89	0.11	—	5,573

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	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	1.11	19.1	8.11	0.12	1.54	—	1.54	1.54	—	1.54	—	24,181	24,181	2.14	0.05	—	24,248
Apartments Mid Rise	0.30	5.11	2.17	0.03	0.41	—	0.41	0.41	—	0.41	—	6,483	6,483	0.57	0.01	—	6,501
General Office Building	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,878	15,878	1.41	0.03	—	15,922
Total	2.15	37.5	21.5	0.23	2.96	—	2.96	2.96	—	2.96	—	46,542	46,542	4.12	0.09	—	46,671
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.11	19.1	8.11	0.12	1.54	—	1.54	1.54	—	1.54	—	24,181	24,181	2.14	0.05	—	24,248
Apartments Mid Rise	0.30	5.11	2.17	0.03	0.41	—	0.41	0.41	—	0.41	—	6,483	6,483	0.57	0.01	—	6,501
General Office Building	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,878	15,878	1.41	0.03	—	15,922
Total	2.15	37.5	21.5	0.23	2.96	—	2.96	2.96	—	2.96	—	46,542	46,542	4.12	0.09	—	46,671
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.20	3.48	1.48	0.02	0.28	—	0.28	0.28	—	0.28	—	4,003	4,003	0.35	0.01	—	4,015
Apartments Mid Rise	0.05	0.93	0.40	0.01	0.08	—	0.08	0.08	—	0.08	—	1,073	1,073	0.09	< 0.005	—	1,076
General Office Building	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	2,629	2,629	0.23	< 0.005	—	2,636

Total	0.39	6.84	3.92	0.04	0.54	—	0.54	0.54	—	0.54	—	7,706	7,706	0.68	0.01	—	7,727

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	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
Consumer Products	142	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	29.0	2.22	249	0.01	0.24	—	0.24	0.18	—	0.18	—	802	802	0.03	0.01	—	805
Total	184	2.22	249	0.01	0.24	—	0.24	0.18	—	0.18	0.00	802	802	0.03	0.01	—	805
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
Consumer Products	142	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	155	0.00	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
Consumer Products	26.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.61	0.20	22.4	< 0.005	0.02	—	0.02	0.02	—	0.02	—	65.5	65.5	< 0.005	< 0.005	—	65.7
Total	30.8	0.20	22.4	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	65.5	65.5	< 0.005	< 0.005	—	65.7

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	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	—	—	—	—	—	—	—	—	—	—	142	900	1,042	0.63	0.33	—	1,155
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	60.7	85.9	147	0.22	0.13	—	192
General Office Building	—	—	—	—	—	—	—	—	—	—	833	1,179	2,012	3.05	1.84	—	2,637
Total	—	—	—	—	—	—	—	—	—	—	1,036	2,165	3,200	3.91	2.31	—	3,985

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	142	900	1,042	0.63	0.33	—	1,155
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	60.7	85.9	147	0.22	0.13	—	192
General Office Building	—	—	—	—	—	—	—	—	—	—	833	1,179	2,012	3.05	1.84	—	2,637
Total	—	—	—	—	—	—	—	—	—	—	1,036	2,165	3,200	3.91	2.31	—	3,985
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	23.5	149	172	0.10	0.05	—	191
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	10.1	14.2	24.3	0.04	0.02	—	31.8
General Office Building	—	—	—	—	—	—	—	—	—	—	138	195	333	0.51	0.31	—	437
Total	—	—	—	—	—	—	—	—	—	—	171	358	530	0.65	0.38	—	660

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	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	—	—	—	—	—	—	—	—	—	—	730	0.00	730	73.0	0.00	—	2,555
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	322	0.00	322	32.2	0.00	—	1,128
General Office Building	—	—	—	—	—	—	—	—	—	—	1,099	0.00	1,099	110	0.00	—	3,846
Total	—	—	—	—	—	—	—	—	—	—	2,152	0.00	2,152	215	0.00	—	7,529
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	730	0.00	730	73.0	0.00	—	2,555
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	322	0.00	322	32.2	0.00	—	1,128
General Office Building	—	—	—	—	—	—	—	—	—	—	1,099	0.00	1,099	110	0.00	—	3,846
Total	—	—	—	—	—	—	—	—	—	—	2,152	0.00	2,152	215	0.00	—	7,529
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	423
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	53.4	0.00	53.4	5.34	0.00	—	187
General Office Building	—	—	—	—	—	—	—	—	—	—	182	0.00	182	18.2	0.00	—	637
Total	—	—	—	—	—	—	—	—	—	—	356	0.00	356	35.6	0.00	—	1,246

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.4	26.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.56	5.56
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.33	5.33
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.3	37.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.4	26.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.56	5.56
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.33	5.33
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.3	37.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.37	4.37
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.92	0.92
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.88	0.88
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.18	6.18

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	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	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	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	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	0.00	0.00	0.00	0.00	80,429	80,429	80,429	29,356,585

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	809
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	1891
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)
8590839.75	2,863,613	2,831,925	943,975	—

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

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

Single Family Housing	11,465,800	204	0.0330	0.0040	75,451,124
Apartments Mid Rise	2,401,028	204	0.0330	0.0040	20,230,085
General Office Building	45,777,185	204	0.0330	0.0040	49,542,159

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	66,436,645	323,320,172
Apartments Mid Rise	28,422,658	0.00
General Office Building	389,823,429	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	1,355	—
Apartments Mid Rise	598	—
General Office Building	2,040	—

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	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
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
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

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

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

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)

Solvang General Plan Update - Alternative 2 Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Solvang General Plan Update - Alternative 2
Construction Start Date	1/1/2024
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	25.4
Location	Solvang, CA 93463, USA
County	Santa Barbara
City	Solvang
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3364
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.21

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	2,109	Dwelling Unit	685	4,112,550	24,702,415	—	6,032	—
Apartments Mid Rise	903	Dwelling Unit	23.8	866,880	0.00	—	2,583	—
General Office Building	2,011	1000sqft	46.2	2,011,230	0.00	—	—	—
Enclosed Parking Structure	24.0	Space	0.22	9,600	0.00	—	—	—
Parking Lot	119	Space	1.07	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	194	52.0	364	0.77	3.54	69.8	73.3	3.48	17.7	21.1	3,172	135,969	139,142	232	5.20	51.9	146,535
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	164	50.3	97.3	0.74	3.31	69.8	73.1	3.30	17.7	21.0	3,172	134,169	137,342	232	5.25	40.8	144,738
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	179	51.5	226	0.75	3.43	68.6	72.1	3.39	17.4	20.8	3,172	134,630	137,802	232	5.25	45.5	145,203
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	32.7	9.41	41.2	0.14	0.63	12.5	13.2	0.62	3.17	3.79	525	22,289	22,815	38.4	0.87	7.53	24,040

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.55	10.5	82.5	0.51	0.21	69.8	70.0	0.19	17.7	17.8	—	52,060	52,060	0.27	2.26	11.4	52,753
Area	191	2.32	260	0.01	0.23	—	0.23	0.18	—	0.18	0.00	818	818	0.03	0.01	—	821
Energy	2.25	39.2	21.7	0.25	3.11	—	3.11	3.11	—	3.11	—	80,910	80,910	9.52	0.72	—	81,363
Water	—	—	—	—	—	—	—	—	—	—	990	2,180	3,170	3.75	2.21	—	3,922
Waste	—	—	—	—	—	—	—	—	—	—	2,182	0.00	2,182	218	0.00	—	7,636
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.6	40.6
Total	194	52.0	364	0.77	3.54	69.8	73.3	3.48	17.7	21.1	3,172	135,969	139,142	232	5.20	51.9	146,535
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.54	11.2	75.6	0.50	0.21	69.8	70.0	0.19	17.7	17.8	—	51,079	51,079	0.26	2.32	0.29	51,777
Area	162	0.00	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	2.25	39.2	21.7	0.25	3.11	—	3.11	3.11	—	3.11	—	80,910	80,910	9.52	0.72	—	81,363
Water	—	—	—	—	—	—	—	—	—	—	990	2,180	3,170	3.75	2.21	—	3,922
Waste	—	—	—	—	—	—	—	—	—	—	2,182	0.00	2,182	218	0.00	—	7,636
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.6	40.6
Total	164	50.3	97.3	0.74	3.31	69.8	73.1	3.30	17.7	21.0	3,172	134,169	137,342	232	5.25	40.8	144,738
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.54	11.2	75.9	0.50	0.21	68.6	68.8	0.19	17.4	17.6	—	51,136	51,136	0.27	2.32	4.90	51,838
Area	176	1.14	128	0.01	0.11	—	0.11	0.09	—	0.09	0.00	404	404	0.02	< 0.005	—	405

Energy	2.25	39.2	21.7	0.25	3.11	—	3.11	3.11	—	3.11	—	80,910	80,910	9.52	0.72	—	81,363
Water	—	—	—	—	—	—	—	—	—	—	990	2,180	3,170	3.75	2.21	—	3,922
Waste	—	—	—	—	—	—	—	—	—	—	2,182	0.00	2,182	218	0.00	—	7,636
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.6	40.6
Total	179	51.5	226	0.75	3.43	68.6	72.1	3.39	17.4	20.8	3,172	134,630	137,802	232	5.25	45.5	145,203
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.10	2.05	13.8	0.09	0.04	12.5	12.6	0.04	3.17	3.20	—	8,466	8,466	0.04	0.38	0.81	8,582
Area	32.1	0.21	23.4	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	66.8	66.8	< 0.005	< 0.005	—	67.0
Energy	0.41	7.14	3.96	0.04	0.57	—	0.57	0.57	—	0.57	—	13,396	13,396	1.58	0.12	—	13,471
Water	—	—	—	—	—	—	—	—	—	—	164	361	525	0.62	0.37	—	649
Waste	—	—	—	—	—	—	—	—	—	—	361	0.00	361	36.1	0.00	—	1,264
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.71	6.71
Total	32.7	9.41	41.2	0.14	0.63	12.5	13.2	0.62	3.17	3.79	525	22,289	22,815	38.4	0.87	7.53	24,040

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	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	—	—	—	—	—	—	—	—	—	—	—	7,146	7,146	1.16	0.14	—	7,217
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,498	1,498	0.24	0.03	—	1,513
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23,459	23,459	3.80	0.46	—	23,691
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	18.8	18.8	< 0.005	< 0.005	—	19.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	22.8	22.8	< 0.005	< 0.005	—	23.1
Total	—	—	—	—	—	—	—	—	—	—	—	32,145	32,145	5.20	0.63	—	32,463
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7,146	7,146	1.16	0.14	—	7,217
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,498	1,498	0.24	0.03	—	1,513
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23,459	23,459	3.80	0.46	—	23,691
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	18.8	18.8	< 0.005	< 0.005	—	19.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	22.8	22.8	< 0.005	< 0.005	—	23.1
Total	—	—	—	—	—	—	—	—	—	—	—	32,145	32,145	5.20	0.63	—	32,463
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,183	1,183	0.19	0.02	—	1,195
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	248	248	0.04	< 0.005	—	250
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,884	3,884	0.63	0.08	—	3,922
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11	< 0.005	< 0.005	—	3.14
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	3.78	3.78	< 0.005	< 0.005	—	3.82
Total	—	—	—	—	—	—	—	—	—	—	—	5,322	5,322	0.86	0.10	—	5,375

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	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	1.24	21.2	9.04	0.14	1.72	—	1.72	1.72	—	1.72	—	26,969	26,969	2.39	0.05	—	27,043
Apartments Mid Rise	0.33	5.70	2.43	0.04	0.46	—	0.46	0.46	—	0.46	—	7,237	7,237	0.64	0.01	—	7,257
General Office Building	0.67	12.2	10.3	0.07	0.93	—	0.93	0.93	—	0.93	—	14,560	14,560	1.29	0.03	—	14,600
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	2.25	39.2	21.7	0.25	3.11	—	3.11	3.11	—	3.11	—	48,765	48,765	4.32	0.09	—	48,900
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.24	21.2	9.04	0.14	1.72	—	1.72	1.72	—	1.72	—	26,969	26,969	2.39	0.05	—	27,043
Apartments Mid Rise	0.33	5.70	2.43	0.04	0.46	—	0.46	0.46	—	0.46	—	7,237	7,237	0.64	0.01	—	7,257
General Office Building	0.67	12.2	10.3	0.07	0.93	—	0.93	0.93	—	0.93	—	14,560	14,560	1.29	0.03	—	14,600
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	2.25	39.2	21.7	0.25	3.11	—	3.11	3.11	—	3.11	—	48,765	48,765	4.32	0.09	—	48,900
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.23	3.88	1.65	0.02	0.31	—	0.31	0.31	—	0.31	—	4,465	4,465	0.40	0.01	—	4,477
Apartments Mid Rise	0.06	1.04	0.44	0.01	0.08	—	0.08	0.08	—	0.08	—	1,198	1,198	0.11	< 0.005	—	1,201
General Office Building	0.12	2.23	1.87	0.01	0.17	—	0.17	0.17	—	0.17	—	2,410	2,410	0.21	< 0.005	—	2,417
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.41	7.14	3.96	0.04	0.57	—	0.57	0.57	—	0.57	—	8,074	8,074	0.71	0.02	—	8,096

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	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
Consumer Products	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	29.3	2.32	260	0.01	0.23	—	0.23	0.18	—	0.18	—	818	818	0.03	0.01	—	821
Total	191	2.32	260	0.01	0.23	—	0.23	0.18	—	0.18	0.00	818	818	0.03	0.01	—	821
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
Consumer Products	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	162	0.00	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
Consumer Products	27.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.64	0.21	23.4	< 0.005	0.02	—	0.02	0.02	—	0.02	—	66.8	66.8	< 0.005	< 0.005	—	67.0
Total	32.1	0.21	23.4	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	66.8	66.8	< 0.005	< 0.005	—	67.0

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	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	—	—	—	—	—	—	—	—	—	—	158	1,004	1,162	0.71	0.37	—	1,289
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	67.8	95.9	164	0.25	0.15	—	215

General Office Building	—	—	—	—	—	—	—	—	—	—	764	1,081	1,845	2.80	1.69	—	2,418
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	990	2,180	3,170	3.75	2.21	—	3,922
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	158	1,004	1,162	0.71	0.37	—	1,289
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	67.8	95.9	164	0.25	0.15	—	215
General Office Building	—	—	—	—	—	—	—	—	—	—	764	1,081	1,845	2.80	1.69	—	2,418
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	990	2,180	3,170	3.75	2.21	—	3,922
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	26.2	166	192	0.12	0.06	—	213
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	11.2	15.9	27.1	0.04	0.02	—	35.5

General Office Building	—	—	—	—	—	—	—	—	—	—	126	179	305	0.46	0.28	—	400
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	164	361	525	0.62	0.37	—	649

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	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	—	—	—	—	—	—	—	—	—	—	814	0.00	814	81.4	0.00	—	2,849
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	360	0.00	360	36.0	0.00	—	1,259
General Office Building	—	—	—	—	—	—	—	—	—	—	1,008	0.00	1,008	101	0.00	—	3,527
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	2,182	0.00	2,182	218	0.00	—	7,636

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	814	0.00	814	81.4	0.00	—	2,849
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	360	0.00	360	36.0	0.00	—	1,259
General Office Building	—	—	—	—	—	—	—	—	—	—	1,008	0.00	1,008	101	0.00	—	3,527
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	2,182	0.00	2,182	218	0.00	—	7,636
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	135	0.00	135	13.5	0.00	—	472
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	59.6	0.00	59.6	5.96	0.00	—	208
General Office Building	—	—	—	—	—	—	—	—	—	—	167	0.00	167	16.7	0.00	—	584
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	361	0.00	361	36.1	0.00	—	1,264

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.5	29.5
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.21	6.21
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.89	4.89
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.6	40.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.5	29.5
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.21	6.21
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.89	4.89
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.6	40.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.88	4.88
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.03	1.03
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.81	0.81
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.71	6.71

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	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	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	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	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	0.00	0.00	0.00	0.00	99,261	99,261	99,261	36,230,265

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	903
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	2109
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)
8590839.75	2,863,613	2,831,925	943,975	3,364

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

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

Single Family Housing	12,787,611	204	0.0330	0.0040	84,149,350
Apartments Mid Rise	2,680,010	204	0.0330	0.0040	22,580,676
General Office Building	41,977,134	204	0.0330	0.0040	45,429,570
Enclosed Parking Structure	33,614	204	0.0330	0.0040	0.00
Parking Lot	40,868	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	74,095,655	360,593,452
Apartments Mid Rise	31,725,167	0.00
General Office Building	357,463,446	0.00
Enclosed Parking Structure	0.00	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	1,511	—
Apartments Mid Rise	668	—
General Office Building	1,870	—
Enclosed Parking Structure	0.00	—
Parking Lot	0.00	—

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	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
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
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

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

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

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)

Solvang General Plan Update - Alternative 3 Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Solvang General Plan Update - Alternative 3
Construction Start Date	1/1/2024
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	25.4
Location	Solvang, CA 93463, USA
County	Santa Barbara
City	Solvang
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3364
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.21

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	2,069	Dwelling Unit	672	4,034,550	24,233,901	—	5,917	—
Apartments Mid Rise	885	Dwelling Unit	23.3	849,600	0.00	—	2,531	—
General Office Building	2,011	1000sqft	46.2	2,011,230	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	191	49.8	365	0.74	3.49	69.2	72.7	3.42	17.5	20.9	3,145	132,302	135,448	229	4.41	48.7	142,545
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	162	48.2	101	0.72	3.26	69.2	72.4	3.24	17.5	20.7	3,145	130,465	133,610	229	4.47	40.1	140,713
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	177	49.3	228	0.72	3.37	68.0	71.4	3.33	17.2	20.5	3,145	130,923	134,068	229	4.47	43.7	141,175
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	32.2	9.00	41.6	0.13	0.61	12.4	13.0	0.61	3.14	3.74	521	21,676	22,197	38.0	0.74	7.23	23,373

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.55	8.87	87.2	0.48	0.19	69.2	69.4	0.18	17.5	17.7	—	49,288	49,288	0.26	1.49	8.79	49,749
Area	189	2.28	256	0.01	0.23	—	0.23	0.17	—	0.17	0.00	808	808	0.03	0.01	—	811
Energy	2.22	38.6	21.5	0.24	3.06	—	3.06	3.06	—	3.06	—	80,047	80,047	9.42	0.72	—	80,496
Water	—	—	—	—	—	—	—	—	—	—	986	2,160	3,145	3.74	2.20	—	3,893
Waste	—	—	—	—	—	—	—	—	—	—	2,160	0.00	2,160	216	0.00	—	7,556
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.9	39.9
Total	191	49.8	365	0.74	3.49	69.2	72.7	3.42	17.5	20.9	3,145	132,302	135,448	229	4.41	48.7	142,545
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.54	9.52	79.9	0.47	0.19	69.2	69.4	0.18	17.5	17.7	—	48,258	48,258	0.25	1.55	0.23	48,728
Area	160	0.00	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	2.22	38.6	21.5	0.24	3.06	—	3.06	3.06	—	3.06	—	80,047	80,047	9.42	0.72	—	80,496
Water	—	—	—	—	—	—	—	—	—	—	986	2,160	3,145	3.74	2.20	—	3,893
Waste	—	—	—	—	—	—	—	—	—	—	2,160	0.00	2,160	216	0.00	—	7,556
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.9	39.9
Total	162	48.2	101	0.72	3.26	69.2	72.4	3.24	17.5	20.7	3,145	130,465	133,610	229	4.47	40.1	140,713
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.54	9.54	80.2	0.47	0.19	68.0	68.2	0.18	17.2	17.4	—	48,318	48,318	0.26	1.55	3.79	48,790
Area	174	1.13	126	0.01	0.11	—	0.11	0.09	—	0.09	0.00	398	398	0.02	< 0.005	—	400
Energy	2.22	38.6	21.5	0.24	3.06	—	3.06	3.06	—	3.06	—	80,047	80,047	9.42	0.72	—	80,496
Water	—	—	—	—	—	—	—	—	—	—	986	2,160	3,145	3.74	2.20	—	3,893
Waste	—	—	—	—	—	—	—	—	—	—	2,160	0.00	2,160	216	0.00	—	7,556

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.9	39.9
Total	177	49.3	228	0.72	3.37	68.0	71.4	3.33	17.2	20.5	3,145	130,923	134,068	229	4.47	43.7	141,175
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.10	1.74	14.6	0.09	0.03	12.4	12.5	0.03	3.14	3.17	—	8,000	8,000	0.04	0.26	0.63	8,078
Area	31.7	0.21	23.0	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	66.0	66.0	< 0.005	< 0.005	—	66.2
Energy	0.40	7.05	3.92	0.04	0.56	—	0.56	0.56	—	0.56	—	13,253	13,253	1.56	0.12	—	13,327
Water	—	—	—	—	—	—	—	—	—	—	163	358	521	0.62	0.36	—	645
Waste	—	—	—	—	—	—	—	—	—	—	358	0.00	358	35.7	0.00	—	1,251
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.60	6.60
Total	32.2	9.00	41.6	0.13	0.61	12.4	13.0	0.61	3.14	3.74	521	21,676	22,197	38.0	0.74	7.23	23,373

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	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	—	—	—	—	—	—	—	—	—	—	—	7,011	7,011	1.13	0.14	—	7,080

Apartments	—	—	—	—	—	—	—	—	—	—	—	1,468	1,468	0.24	0.03	—	1,482
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23,459	23,459	3.80	0.46	—	23,691
Total	—	—	—	—	—	—	—	—	—	—	—	31,938	31,938	5.17	0.63	—	32,254
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7,011	7,011	1.13	0.14	—	7,080
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,468	1,468	0.24	0.03	—	1,482
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23,459	23,459	3.80	0.46	—	23,691
Total	—	—	—	—	—	—	—	—	—	—	—	31,938	31,938	5.17	0.63	—	32,254
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,161	1,161	0.19	0.02	—	1,172
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	243	243	0.04	< 0.005	—	245
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,884	3,884	0.63	0.08	—	3,922
Total	—	—	—	—	—	—	—	—	—	—	—	5,288	5,288	0.86	0.10	—	5,340

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	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	1.22	20.8	8.87	0.13	1.69	—	1.69	1.69	—	1.69	—	26,457	26,457	2.34	0.05	—	26,531
Apartments Mid Rise	0.33	5.59	2.38	0.04	0.45	—	0.45	0.45	—	0.45	—	7,093	7,093	0.63	0.01	—	7,112
General Office Building	0.67	12.2	10.3	0.07	0.93	—	0.93	0.93	—	0.93	—	14,560	14,560	1.29	0.03	—	14,600
Total	2.22	38.6	21.5	0.24	3.06	—	3.06	3.06	—	3.06	—	48,109	48,109	4.26	0.09	—	48,243
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.22	20.8	8.87	0.13	1.69	—	1.69	1.69	—	1.69	—	26,457	26,457	2.34	0.05	—	26,531
Apartments Mid Rise	0.33	5.59	2.38	0.04	0.45	—	0.45	0.45	—	0.45	—	7,093	7,093	0.63	0.01	—	7,112
General Office Building	0.67	12.2	10.3	0.07	0.93	—	0.93	0.93	—	0.93	—	14,560	14,560	1.29	0.03	—	14,600
Total	2.22	38.6	21.5	0.24	3.06	—	3.06	3.06	—	3.06	—	48,109	48,109	4.26	0.09	—	48,243
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.22	3.80	1.62	0.02	0.31	—	0.31	0.31	—	0.31	—	4,380	4,380	0.39	0.01	—	4,392
Apartments Mid Rise	0.06	1.02	0.43	0.01	0.08	—	0.08	0.08	—	0.08	—	1,174	1,174	0.10	< 0.005	—	1,178
General Office Building	0.12	2.23	1.87	0.01	0.17	—	0.17	0.17	—	0.17	—	2,410	2,410	0.21	< 0.005	—	2,417

Total	0.40	7.05	3.92	0.04	0.56	—	0.56	0.56	—	0.56	—	7,965	7,965	0.70	0.01	—	7,987

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	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
Consumer Products	148	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	28.9	2.28	256	0.01	0.23	—	0.23	0.17	—	0.17	—	808	808	0.03	0.01	—	811
Total	189	2.28	256	0.01	0.23	—	0.23	0.17	—	0.17	0.00	808	808	0.03	0.01	—	811
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
Consumer Products	148	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	160	0.00	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
Consumer Products	26.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.60	0.21	23.0	< 0.005	0.02	—	0.02	0.02	—	0.02	—	66.0	66.0	< 0.005	< 0.005	—	66.2
Total	31.7	0.21	23.0	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	66.0	66.0	< 0.005	< 0.005	—	66.2

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	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	—	—	—	—	—	—	—	—	—	—	155	985	1,140	0.69	0.36	—	1,264
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	66.4	94.0	160	0.24	0.15	—	210
General Office Building	—	—	—	—	—	—	—	—	—	—	764	1,081	1,845	2.80	1.69	—	2,418
Total	—	—	—	—	—	—	—	—	—	—	986	2,160	3,145	3.74	2.20	—	3,893

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	155	985	1,140	0.69	0.36	—	1,264
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	66.4	94.0	160	0.24	0.15	—	210
General Office Building	—	—	—	—	—	—	—	—	—	—	764	1,081	1,845	2.80	1.69	—	2,418
Total	—	—	—	—	—	—	—	—	—	—	986	2,160	3,145	3.74	2.20	—	3,893
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	25.7	163	189	0.11	0.06	—	209
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	11.0	15.6	26.6	0.04	0.02	—	34.8
General Office Building	—	—	—	—	—	—	—	—	—	—	126	179	305	0.46	0.28	—	400
Total	—	—	—	—	—	—	—	—	—	—	163	358	521	0.62	0.36	—	645

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	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	—	—	—	—	—	—	—	—	—	—	799	0.00	799	79.8	0.00	—	2,795
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	353	0.00	353	35.2	0.00	—	1,234
General Office Building	—	—	—	—	—	—	—	—	—	—	1,008	0.00	1,008	101	0.00	—	3,527
Total	—	—	—	—	—	—	—	—	—	—	2,160	0.00	2,160	216	0.00	—	7,556
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	799	0.00	799	79.8	0.00	—	2,795
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	353	0.00	353	35.2	0.00	—	1,234
General Office Building	—	—	—	—	—	—	—	—	—	—	1,008	0.00	1,008	101	0.00	—	3,527
Total	—	—	—	—	—	—	—	—	—	—	2,160	0.00	2,160	216	0.00	—	7,556
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	132	0.00	132	13.2	0.00	—	463
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	58.4	0.00	58.4	5.84	0.00	—	204
General Office Building	—	—	—	—	—	—	—	—	—	—	167	0.00	167	16.7	0.00	—	584
Total	—	—	—	—	—	—	—	—	—	—	358	0.00	358	35.7	0.00	—	1,251

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.9	28.9
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.08	6.08
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.89	4.89
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.9	39.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.9	28.9
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.08	6.08
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.89	4.89
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.9	39.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.78	4.78
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.01	1.01
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.81	0.81
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.60	6.60

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	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	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	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	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	0.00	0.00	0.00	0.00	98,858	98,858	98,858	36,083,170

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	885
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	2069
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)
8590839.75	2,863,613	2,831,925	943,975	—

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

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

Single Family Housing	12,545,077	204	0.0330	0.0040	82,553,345
Apartments Mid Rise	2,626,588	204	0.0330	0.0040	22,130,563
General Office Building	41,977,134	204	0.0330	0.0040	45,429,570

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	72,690,332	353,754,320
Apartments Mid Rise	31,092,771	0.00
General Office Building	357,463,446	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	1,482	—
Apartments Mid Rise	654	—
General Office Building	1,870	—

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	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
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
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

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

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

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)

Solvang General Plan Update - Alternative 4 Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Solvang General Plan Update - Alternative 4
Construction Start Date	1/1/2024
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	25.4
Location	Solvang, CA 93463, USA
County	Santa Barbara
City	Solvang
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3364
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.21

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	2,033	Dwelling Unit	660	3,964,350	23,812,238	—	5,814	—
Apartments Mid Rise	870	Dwelling Unit	22.9	835,200	0.00	—	2,488	—
General Office Building	2,011	1000sqft	46.2	2,011,230	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	189	49.3	361	0.73	3.45	69.0	72.4	3.38	17.4	20.8	3,122	131,417	134,539	227	4.40	48.0	141,578
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	161	47.7	101	0.71	3.22	69.0	72.2	3.21	17.4	20.6	3,122	129,590	132,712	227	4.45	39.5	139,757
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	175	48.8	226	0.72	3.33	67.9	71.2	3.29	17.1	20.4	3,122	130,045	133,166	227	4.45	43.0	140,215
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	31.9	8.91	41.3	0.13	0.61	12.4	13.0	0.60	3.13	3.73	517	21,530	22,047	37.6	0.74	7.13	23,214

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.55	8.85	87.0	0.48	0.19	69.0	69.2	0.18	17.4	17.6	—	49,157	49,157	0.26	1.49	8.76	49,616
Area	187	2.26	253	0.01	0.23	—	0.23	0.17	—	0.17	0.00	800	800	0.03	0.01	—	803
Energy	2.19	38.2	21.3	0.24	3.03	—	3.03	3.03	—	3.03	—	79,320	79,320	9.35	0.71	—	79,766
Water	—	—	—	—	—	—	—	—	—	—	982	2,141	3,123	3.72	2.19	—	3,867
Waste	—	—	—	—	—	—	—	—	—	—	2,140	0.00	2,140	214	0.00	—	7,486
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.3	39.3
Total	189	49.3	361	0.73	3.45	69.0	72.4	3.38	17.4	20.8	3,122	131,417	134,539	227	4.40	48.0	141,578
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.54	9.50	79.7	0.47	0.19	69.0	69.2	0.18	17.4	17.6	—	48,130	48,130	0.25	1.55	0.23	48,598
Area	158	0.00	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	2.19	38.2	21.3	0.24	3.03	—	3.03	3.03	—	3.03	—	79,320	79,320	9.35	0.71	—	79,766
Water	—	—	—	—	—	—	—	—	—	—	982	2,141	3,123	3.72	2.19	—	3,867
Waste	—	—	—	—	—	—	—	—	—	—	2,140	0.00	2,140	214	0.00	—	7,486
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.3	39.3
Total	161	47.7	101	0.71	3.22	69.0	72.2	3.21	17.4	20.6	3,122	129,590	132,712	227	4.45	39.5	139,757
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.54	9.51	80.0	0.47	0.19	67.9	68.1	0.18	17.1	17.3	—	48,189	48,189	0.26	1.55	3.78	48,660
Area	172	1.11	125	0.01	0.11	—	0.11	0.09	—	0.09	0.00	395	395	0.02	< 0.005	—	396
Energy	2.19	38.2	21.3	0.24	3.03	—	3.03	3.03	—	3.03	—	79,320	79,320	9.35	0.71	—	79,766
Water	—	—	—	—	—	—	—	—	—	—	982	2,141	3,123	3.72	2.19	—	3,867
Waste	—	—	—	—	—	—	—	—	—	—	2,140	0.00	2,140	214	0.00	—	7,486

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.3	39.3
Total	175	48.8	226	0.72	3.33	67.9	71.2	3.29	17.1	20.4	3,122	130,045	133,166	227	4.45	43.0	140,215
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.10	1.74	14.6	0.09	0.03	12.4	12.4	0.03	3.13	3.16	—	7,978	7,978	0.04	0.26	0.63	8,056
Area	31.4	0.20	22.8	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	65.3	65.3	< 0.005	< 0.005	—	65.6
Energy	0.40	6.97	3.89	0.04	0.55	—	0.55	0.55	—	0.55	—	13,132	13,132	1.55	0.12	—	13,206
Water	—	—	—	—	—	—	—	—	—	—	163	354	517	0.62	0.36	—	640
Waste	—	—	—	—	—	—	—	—	—	—	354	0.00	354	35.4	0.00	—	1,239
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.50	6.50
Total	31.9	8.91	41.3	0.13	0.61	12.4	13.0	0.60	3.13	3.73	517	21,530	22,047	37.6	0.74	7.13	23,214

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	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	—	—	—	—	—	—	—	—	—	—	—	6,889	6,889	1.11	0.14	—	6,957

Apartments	—	—	—	—	—	—	—	—	—	—	—	1,443	1,443	0.23	0.03	—	1,457
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23,459	23,459	3.80	0.46	—	23,691
Total	—	—	—	—	—	—	—	—	—	—	—	31,791	31,791	5.14	0.62	—	32,106
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6,889	6,889	1.11	0.14	—	6,957
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,443	1,443	0.23	0.03	—	1,457
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23,459	23,459	3.80	0.46	—	23,691
Total	—	—	—	—	—	—	—	—	—	—	—	31,791	31,791	5.14	0.62	—	32,106
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,141	1,141	0.18	0.02	—	1,152
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	239	239	0.04	< 0.005	—	241
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,884	3,884	0.63	0.08	—	3,922
Total	—	—	—	—	—	—	—	—	—	—	—	5,263	5,263	0.85	0.10	—	5,315

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	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	1.20	20.5	8.72	0.13	1.66	—	1.66	1.66	—	1.66	—	25,997	25,997	2.30	0.05	—	26,069
Apartments Mid Rise	0.32	5.49	2.34	0.04	0.44	—	0.44	0.44	—	0.44	—	6,972	6,972	0.62	0.01	—	6,992
General Office Building	0.67	12.2	10.3	0.07	0.93	—	0.93	0.93	—	0.93	—	14,560	14,560	1.29	0.03	—	14,600
Total	2.19	38.2	21.3	0.24	3.03	—	3.03	3.03	—	3.03	—	47,529	47,529	4.21	0.09	—	47,660
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.20	20.5	8.72	0.13	1.66	—	1.66	1.66	—	1.66	—	25,997	25,997	2.30	0.05	—	26,069
Apartments Mid Rise	0.32	5.49	2.34	0.04	0.44	—	0.44	0.44	—	0.44	—	6,972	6,972	0.62	0.01	—	6,992
General Office Building	0.67	12.2	10.3	0.07	0.93	—	0.93	0.93	—	0.93	—	14,560	14,560	1.29	0.03	—	14,600
Total	2.19	38.2	21.3	0.24	3.03	—	3.03	3.03	—	3.03	—	47,529	47,529	4.21	0.09	—	47,660
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.22	3.74	1.59	0.02	0.30	—	0.30	0.30	—	0.30	—	4,304	4,304	0.38	0.01	—	4,316
Apartments Mid Rise	0.06	1.00	0.43	0.01	0.08	—	0.08	0.08	—	0.08	—	1,154	1,154	0.10	< 0.005	—	1,158
General Office Building	0.12	2.23	1.87	0.01	0.17	—	0.17	0.17	—	0.17	—	2,410	2,410	0.21	< 0.005	—	2,417

Total	0.40	6.97	3.89	0.04	0.55	—	0.55	0.55	—	0.55	—	7,869	7,869	0.70	0.01	—	7,891

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	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
Consumer Products	146	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	28.7	2.26	253	0.01	0.23	—	0.23	0.17	—	0.17	—	800	800	0.03	0.01	—	803
Total	187	2.26	253	0.01	0.23	—	0.23	0.17	—	0.17	0.00	800	800	0.03	0.01	—	803
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
Consumer Products	146	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	158	0.00	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
Consumer Products	26.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.58	0.20	22.8	< 0.005	0.02	—	0.02	0.02	—	0.02	—	65.3	65.3	< 0.005	< 0.005	—	65.6
Total	31.4	0.20	22.8	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	65.3	65.3	< 0.005	< 0.005	—	65.6

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	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	—	—	—	—	—	—	—	—	—	—	153	967	1,120	0.68	0.35	—	1,242
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	65.3	92.4	158	0.24	0.14	—	207
General Office Building	—	—	—	—	—	—	—	—	—	—	764	1,081	1,845	2.80	1.69	—	2,418
Total	—	—	—	—	—	—	—	—	—	—	982	2,141	3,123	3.72	2.19	—	3,867

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	153	967	1,120	0.68	0.35	—	1,242
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	65.3	92.4	158	0.24	0.14	—	207
General Office Building	—	—	—	—	—	—	—	—	—	—	764	1,081	1,845	2.80	1.69	—	2,418
Total	—	—	—	—	—	—	—	—	—	—	982	2,141	3,123	3.72	2.19	—	3,867
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	25.3	160	185	0.11	0.06	—	206
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	10.8	15.3	26.1	0.04	0.02	—	34.2
General Office Building	—	—	—	—	—	—	—	—	—	—	126	179	305	0.46	0.28	—	400
Total	—	—	—	—	—	—	—	—	—	—	163	354	517	0.62	0.36	—	640

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	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	—	—	—	—	—	—	—	—	—	—	785	0.00	785	78.5	0.00	—	2,746
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	347	0.00	347	34.7	0.00	—	1,213
General Office Building	—	—	—	—	—	—	—	—	—	—	1,008	0.00	1,008	101	0.00	—	3,527
Total	—	—	—	—	—	—	—	—	—	—	2,140	0.00	2,140	214	0.00	—	7,486
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	785	0.00	785	78.5	0.00	—	2,746
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	347	0.00	347	34.7	0.00	—	1,213
General Office Building	—	—	—	—	—	—	—	—	—	—	1,008	0.00	1,008	101	0.00	—	3,527
Total	—	—	—	—	—	—	—	—	—	—	2,140	0.00	2,140	214	0.00	—	7,486
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	130	0.00	130	13.0	0.00	—	455
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	57.4	0.00	57.4	5.74	0.00	—	201
General Office Building	—	—	—	—	—	—	—	—	—	—	167	0.00	167	16.7	0.00	—	584
Total	—	—	—	—	—	—	—	—	—	—	354	0.00	354	35.4	0.00	—	1,239

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.4	28.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.98	5.98
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.89	4.89
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.3	39.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.4	28.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.98	5.98
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.89	4.89
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39.3	39.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.70	4.70
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.99	0.99
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.81	0.81
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.50	6.50

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	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	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	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	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	0.00	0.00	0.00	0.00	98,595	98,595	98,595	35,987,175

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	870
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	2033
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)
8590839.75	2,863,613	2,831,925	943,975	—

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

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

Single Family Housing	12,326,797	204	0.0330	0.0040	81,116,941
Apartments Mid Rise	2,582,069	204	0.0330	0.0040	21,755,469
General Office Building	41,977,134	204	0.0330	0.0040	45,429,570

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	71,425,541	347,599,095
Apartments Mid Rise	30,565,775	0.00
General Office Building	357,463,446	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	1,457	—
Apartments Mid Rise	643	—
General Office Building	1,870	—

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	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
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
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

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

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

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)

Solvang General Plan Update - Existing Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Solvang General Plan Update - Existing
Construction Start Date	1/1/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	25.4
Location	Solvang, CA 93463, USA
County	Santa Barbara
City	Solvang
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3364
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.21

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	1,797	Dwelling Unit	583	3,504,150	21,048,004	—	5,139	—
Apartments Mid Rise	769	Dwelling Unit	20.2	738,240	0.00	—	2,199	—
General Office Building	1,888	1000sqft	43.3	1,887,950	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	174	62.5	379	0.81	3.36	55.9	59.3	3.28	14.2	17.4	2,856	134,836	137,693	207	5.86	310	144,936
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	147	62.0	141	0.79	3.14	55.9	59.0	3.11	14.2	17.3	2,856	133,083	135,940	207	5.94	42.1	142,937
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	160	63.1	253	0.80	3.25	55.0	58.2	3.19	13.9	17.1	2,856	133,501	136,358	207	5.94	154	143,467
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	29.3	11.5	46.3	0.15	0.59	10.0	10.6	0.58	2.54	3.13	473	22,103	22,576	34.3	0.98	25.4	23,753

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.08	25.9	132	0.58	0.41	55.9	56.3	0.38	14.2	14.5	—	59,963	59,963	0.90	3.17	275	61,206
Area	170	2.14	227	0.01	0.22	—	0.22	0.17	—	0.17	0.00	727	727	0.03	0.01	—	729
Energy	1.97	34.4	19.4	0.22	2.73	—	2.73	2.73	—	2.73	—	72,195	72,195	8.54	0.66	—	72,604
Water	—	—	—	—	—	—	—	—	—	—	910	1,951	2,861	3.44	2.03	—	3,551
Waste	—	—	—	—	—	—	—	—	—	—	1,947	0.00	1,947	195	0.00	—	6,810
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.0	35.0
Total	174	62.5	379	0.81	3.36	55.9	59.3	3.28	14.2	17.4	2,856	134,836	137,693	207	5.86	310	144,936
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.03	27.5	122	0.57	0.41	55.9	56.3	0.38	14.2	14.5	—	58,937	58,937	0.88	3.26	7.13	59,937
Area	143	0.00	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	1.97	34.4	19.4	0.22	2.73	—	2.73	2.73	—	2.73	—	72,195	72,195	8.54	0.66	—	72,604
Water	—	—	—	—	—	—	—	—	—	—	910	1,951	2,861	3.44	2.03	—	3,551
Waste	—	—	—	—	—	—	—	—	—	—	1,947	0.00	1,947	195	0.00	—	6,810
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.0	35.0
Total	147	62.0	141	0.79	3.14	55.9	59.0	3.11	14.2	17.3	2,856	133,083	135,940	207	5.94	42.1	142,937
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.05	27.7	122	0.57	0.41	55.0	55.4	0.38	13.9	14.3	—	58,996	58,996	0.88	3.25	119	60,107
Area	156	1.05	112	0.01	0.11	—	0.11	0.08	—	0.08	0.00	358	358	0.02	< 0.005	—	360
Energy	1.97	34.4	19.4	0.22	2.73	—	2.73	2.73	—	2.73	—	72,195	72,195	8.54	0.66	—	72,604
Water	—	—	—	—	—	—	—	—	—	—	910	1,951	2,861	3.44	2.03	—	3,551
Waste	—	—	—	—	—	—	—	—	—	—	1,947	0.00	1,947	195	0.00	—	6,810

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.0	35.0
Total	160	63.1	253	0.80	3.25	55.0	58.2	3.19	13.9	17.1	2,856	133,501	136,358	207	5.94	154	143,467
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.37	5.05	22.3	0.10	0.07	10.0	10.1	0.07	2.54	2.61	—	9,768	9,768	0.15	0.54	19.6	9,951
Area	28.6	0.19	20.4	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	59.3	59.3	< 0.005	< 0.005	—	59.6
Energy	0.36	6.28	3.54	0.04	0.50	—	0.50	0.50	—	0.50	—	11,953	11,953	1.41	0.11	—	12,020
Water	—	—	—	—	—	—	—	—	—	—	151	323	474	0.57	0.34	—	588
Waste	—	—	—	—	—	—	—	—	—	—	322	0.00	322	32.2	0.00	—	1,128
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.79	5.79
Total	29.3	11.5	46.3	0.15	0.59	10.0	10.6	0.58	2.54	3.13	473	22,103	22,576	34.3	0.98	25.4	23,753

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	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	—	—	—	—	—	—	—	—	—	—	—	6,089	6,089	0.99	0.12	—	6,149

Apartments	—	—	—	—	—	—	—	—	—	—	—	1,275	1,275	0.21	0.03	—	1,288
General Office Building	—	—	—	—	—	—	—	—	—	—	—	22,021	22,021	3.56	0.43	—	22,239
Total	—	—	—	—	—	—	—	—	—	—	—	29,386	29,386	4.75	0.58	—	29,677
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6,089	6,089	0.99	0.12	—	6,149
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,275	1,275	0.21	0.03	—	1,288
General Office Building	—	—	—	—	—	—	—	—	—	—	—	22,021	22,021	3.56	0.43	—	22,239
Total	—	—	—	—	—	—	—	—	—	—	—	29,386	29,386	4.75	0.58	—	29,677
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,008	1,008	0.16	0.02	—	1,018
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	211	211	0.03	< 0.005	—	213
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,646	3,646	0.59	0.07	—	3,682
Total	—	—	—	—	—	—	—	—	—	—	—	4,865	4,865	0.79	0.10	—	4,913

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	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	1.06	18.1	7.70	0.12	1.46	—	1.46	1.46	—	1.46	—	22,979	22,979	2.03	0.04	—	23,043
Apartments Mid Rise	0.28	4.86	2.07	0.03	0.39	—	0.39	0.39	—	0.39	—	6,163	6,163	0.55	0.01	—	6,180
General Office Building	0.63	11.5	9.62	0.07	0.87	—	0.87	0.87	—	0.87	—	13,667	13,667	1.21	0.03	—	13,705
Total	1.97	34.4	19.4	0.22	2.73	—	2.73	2.73	—	2.73	—	42,809	42,809	3.79	0.08	—	42,928
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.06	18.1	7.70	0.12	1.46	—	1.46	1.46	—	1.46	—	22,979	22,979	2.03	0.04	—	23,043
Apartments Mid Rise	0.28	4.86	2.07	0.03	0.39	—	0.39	0.39	—	0.39	—	6,163	6,163	0.55	0.01	—	6,180
General Office Building	0.63	11.5	9.62	0.07	0.87	—	0.87	0.87	—	0.87	—	13,667	13,667	1.21	0.03	—	13,705
Total	1.97	34.4	19.4	0.22	2.73	—	2.73	2.73	—	2.73	—	42,809	42,809	3.79	0.08	—	42,928
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.19	3.30	1.41	0.02	0.27	—	0.27	0.27	—	0.27	—	3,804	3,804	0.34	0.01	—	3,815
Apartments Mid Rise	0.05	0.89	0.38	0.01	0.07	—	0.07	0.07	—	0.07	—	1,020	1,020	0.09	< 0.005	—	1,023
General Office Building	0.11	2.09	1.76	0.01	0.16	—	0.16	0.16	—	0.16	—	2,263	2,263	0.20	< 0.005	—	2,269

Total	0.36	6.28	3.54	0.04	0.50	—	0.50	0.50	—	0.50	—	7,088	7,088	0.63	0.01	—	7,107

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	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
Consumer Products	131	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	26.8	2.14	227	0.01	0.22	—	0.22	0.17	—	0.17	—	727	727	0.03	0.01	—	729
Total	170	2.14	227	0.01	0.22	—	0.22	0.17	—	0.17	0.00	727	727	0.03	0.01	—	729
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
Consumer Products	131	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	143	0.00	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
Consumer Products	23.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.41	0.19	20.4	< 0.005	0.02	—	0.02	0.02	—	0.02	—	59.3	59.3	< 0.005	< 0.005	—	59.6
Total	28.6	0.19	20.4	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	59.3	59.3	< 0.005	< 0.005	—	59.6

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	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	—	—	—	—	—	—	—	—	—	—	135	855	990	0.60	0.31	—	1,098
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	57.7	81.7	139	0.21	0.13	—	183
General Office Building	—	—	—	—	—	—	—	—	—	—	717	1,015	1,732	2.63	1.59	—	2,270
Total	—	—	—	—	—	—	—	—	—	—	910	1,951	2,861	3.44	2.03	—	3,551

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	135	855	990	0.60	0.31	—	1,098
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	57.7	81.7	139	0.21	0.13	—	183
General Office Building	—	—	—	—	—	—	—	—	—	—	717	1,015	1,732	2.63	1.59	—	2,270
Total	—	—	—	—	—	—	—	—	—	—	910	1,951	2,861	3.44	2.03	—	3,551
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	22.3	142	164	0.10	0.05	—	182
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	9.56	13.5	23.1	0.04	0.02	—	30.3
General Office Building	—	—	—	—	—	—	—	—	—	—	119	168	287	0.44	0.26	—	376
Total	—	—	—	—	—	—	—	—	—	—	151	323	474	0.57	0.34	—	588

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	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	—	—	—	—	—	—	—	—	—	—	694	0.00	694	69.3	0.00	—	2,428
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	306	0.00	306	30.6	0.00	—	1,072
General Office Building	—	—	—	—	—	—	—	—	—	—	946	0.00	946	94.6	0.00	—	3,311
Total	—	—	—	—	—	—	—	—	—	—	1,947	0.00	1,947	195	0.00	—	6,810
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	694	0.00	694	69.3	0.00	—	2,428
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	306	0.00	306	30.6	0.00	—	1,072
General Office Building	—	—	—	—	—	—	—	—	—	—	946	0.00	946	94.6	0.00	—	3,311
Total	—	—	—	—	—	—	—	—	—	—	1,947	0.00	1,947	195	0.00	—	6,810
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	115	0.00	115	11.5	0.00	—	402
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	50.7	0.00	50.7	5.07	0.00	—	177
General Office Building	—	—	—	—	—	—	—	—	—	—	157	0.00	157	15.7	0.00	—	548
Total	—	—	—	—	—	—	—	—	—	—	322	0.00	322	32.2	0.00	—	1,128

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.1	25.1
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.29	5.29
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.59	4.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.0	35.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.1	25.1
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.29	5.29
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.59	4.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.0	35.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.16	4.16
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.88	0.88
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.76	0.76
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.79	5.79

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	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	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	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	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	0.00	0.00	0.00	0.00	79,225	79,225	79,225	28,917,125

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	769
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	1797
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)
8590839.75	2,863,613	2,831,925	943,975	—

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

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

Single Family Housing	10,895,845	204	0.0330	0.0040	71,700,513
Apartments Mid Rise	2,282,312	204	0.0330	0.0040	19,229,834
General Office Building	39,404,111	204	0.0330	0.0040	42,644,927

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	63,134,136	307,248,195
Apartments Mid Rise	27,017,335	0.00
General Office Building	335,552,430	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	1,287	—
Apartments Mid Rise	569	—
General Office Building	1,756	—

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	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
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
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

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

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

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)

Solvang General Plan Update - Proposed Project Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Solvang General Plan Update - Proposed Project
Construction Start Date	1/1/2024
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	25.4
Location	Solvang, CA 93463, USA
County	Santa Barbara
City	Solvang
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3364
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.21

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	2,145	Dwelling Unit	696	4,182,750	25,124,078	—	6,135	—
Apartments Mid Rise	918	Dwelling Unit	24.2	881,280	0.00	—	2,625	—
General Office Building	2,011	1000sqft	46.2	2,011,230	0.00	—	—	—
Enclosed Parking Structure	24.0	Space	0.22	9,600	0.00	—	—	—
Parking Lot	226	Space	2.03	0.00	0.00	—	—	—
Hotel	50.0	Room	1.67	72,600	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	198	52.9	370	0.77	3.62	69.1	72.8	3.55	17.5	21.0	3,214	137,130	140,344	235	5.20	166	147,944
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	168	51.2	97.2	0.75	3.38	69.1	72.5	3.37	17.5	20.9	3,214	135,319	138,532	235	5.25	155	146,135
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	183	52.4	229	0.75	3.50	68.0	71.5	3.46	17.2	20.7	3,214	135,789	139,003	235	5.25	160	146,610

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	33.3	9.57	41.7	0.14	0.64	12.4	13.0	0.63	3.14	3.77	532	22,481	23,013	39.0	0.87	26.4	24,273

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.55	10.4	81.7	0.50	0.20	69.1	69.3	0.19	17.5	17.7	—	51,579	51,579	0.27	2.24	11.3	52,265
Area	195	2.37	266	0.01	0.24	—	0.24	0.18	—	0.18	0.00	839	839	0.04	0.01	—	842
Energy	2.30	40.1	22.3	0.25	3.18	—	3.18	3.18	—	3.18	—	82,509	82,509	9.69	0.73	—	82,970
Water	—	—	—	—	—	—	—	—	—	—	997	2,203	3,200	3.78	2.22	—	3,956
Waste	—	—	—	—	—	—	—	—	—	—	2,217	0.00	2,217	222	0.00	—	7,756
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	155	155
Total	198	52.9	370	0.77	3.62	69.1	72.8	3.55	17.5	21.0	3,214	137,130	140,344	235	5.20	166	147,944
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.53	11.1	74.9	0.49	0.20	69.1	69.3	0.19	17.5	17.7	—	50,606	50,606	0.26	2.30	0.29	51,298
Area	165	0.00	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	2.30	40.1	22.3	0.25	3.18	—	3.18	3.18	—	3.18	—	82,509	82,509	9.69	0.73	—	82,970
Water	—	—	—	—	—	—	—	—	—	—	997	2,203	3,200	3.78	2.22	—	3,956
Waste	—	—	—	—	—	—	—	—	—	—	2,217	0.00	2,217	222	0.00	—	7,756
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	155	155
Total	168	51.2	97.2	0.75	3.38	69.1	72.5	3.37	17.5	20.9	3,214	135,319	138,532	235	5.25	155	146,135
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.54	11.1	75.2	0.49	0.20	68.0	68.2	0.19	17.2	17.4	—	50,663	50,663	0.26	2.30	4.86	51,358
Area	180	1.17	131	0.01	0.12	—	0.12	0.09	—	0.09	0.00	414	414	0.02	< 0.005	—	415
Energy	2.30	40.1	22.3	0.25	3.18	—	3.18	3.18	—	3.18	—	82,509	82,509	9.69	0.73	—	82,970
Water	—	—	—	—	—	—	—	—	—	—	997	2,203	3,200	3.78	2.22	—	3,956
Waste	—	—	—	—	—	—	—	—	—	—	2,217	0.00	2,217	222	0.00	—	7,756
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	155	155
Total	183	52.4	229	0.75	3.50	68.0	71.5	3.46	17.2	20.7	3,214	135,789	139,003	235	5.25	160	146,610
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.10	2.03	13.7	0.09	0.04	12.4	12.4	0.04	3.14	3.17	—	8,388	8,388	0.04	0.38	0.80	8,503
Area	32.8	0.21	23.9	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	68.5	68.5	< 0.005	< 0.005	—	68.7
Energy	0.42	7.32	4.08	0.05	0.58	—	0.58	0.58	—	0.58	—	13,660	13,660	1.60	0.12	—	13,737
Water	—	—	—	—	—	—	—	—	—	—	165	365	530	0.63	0.37	—	655
Waste	—	—	—	—	—	—	—	—	—	—	367	0.00	367	36.7	0.00	—	1,284
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.6	25.6
Total	33.3	9.57	41.7	0.14	0.64	12.4	13.0	0.63	3.14	3.77	532	22,481	23,013	39.0	0.87	26.4	24,273

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	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	—	—	—	—	—	—	—	—	—	—	—	7,268	7,268	1.18	0.14	—	7,340
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,523	1,523	0.25	0.03	—	1,538
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23,459	23,459	3.80	0.46	—	23,691
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	18.8	18.8	< 0.005	< 0.005	—	19.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	43.4	43.4	0.01	< 0.005	—	43.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	251	251	0.04	< 0.005	—	253
Total	—	—	—	—	—	—	—	—	—	—	—	32,563	32,563	5.27	0.64	—	32,885
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7,268	7,268	1.18	0.14	—	7,340
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,523	1,523	0.25	0.03	—	1,538
General Office Building	—	—	—	—	—	—	—	—	—	—	—	23,459	23,459	3.80	0.46	—	23,691
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	18.8	18.8	< 0.005	< 0.005	—	19.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	43.4	43.4	0.01	< 0.005	—	43.8

Hotel	—	—	—	—	—	—	—	—	—	—	—	251	251	0.04	< 0.005	—	253
Total	—	—	—	—	—	—	—	—	—	—	—	32,563	32,563	5.27	0.64	—	32,885
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,203	1,203	0.19	0.02	—	1,215
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	252	252	0.04	< 0.005	—	255
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,884	3,884	0.63	0.08	—	3,922
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	3.11	3.11	< 0.005	< 0.005	—	3.14
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	7.18	7.18	< 0.005	< 0.005	—	7.25
Hotel	—	—	—	—	—	—	—	—	—	—	—	41.5	41.5	0.01	< 0.005	—	41.9
Total	—	—	—	—	—	—	—	—	—	—	—	5,391	5,391	0.87	0.11	—	5,444

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	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	1.26	21.6	9.20	0.14	1.75	—	1.75	1.75	—	1.75	—	27,429	27,429	2.43	0.05	—	27,505
Apartments Mid Rise	0.34	5.80	2.47	0.04	0.47	—	0.47	0.47	—	0.47	—	7,357	7,357	0.65	0.01	—	7,377

General Office Building	0.67	12.2	10.3	0.07	0.93	—	0.93	0.93	—	0.93	—	14,560	14,560	1.29	0.03	—	14,600
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Hotel	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	601	601	0.05	< 0.005	—	603
Total	2.30	40.1	22.3	0.25	3.18	—	3.18	3.18	—	3.18	—	49,946	49,946	4.42	0.09	—	50,085
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.26	21.6	9.20	0.14	1.75	—	1.75	1.75	—	1.75	—	27,429	27,429	2.43	0.05	—	27,505
Apartments Mid Rise	0.34	5.80	2.47	0.04	0.47	—	0.47	0.47	—	0.47	—	7,357	7,357	0.65	0.01	—	7,377
General Office Building	0.67	12.2	10.3	0.07	0.93	—	0.93	0.93	—	0.93	—	14,560	14,560	1.29	0.03	—	14,600
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Hotel	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	601	601	0.05	< 0.005	—	603
Total	2.30	40.1	22.3	0.25	3.18	—	3.18	3.18	—	3.18	—	49,946	49,946	4.42	0.09	—	50,085
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.23	3.94	1.68	0.03	0.32	—	0.32	0.32	—	0.32	—	4,541	4,541	0.40	0.01	—	4,554

Apartments Mid Rise	0.06	1.06	0.45	0.01	0.09	—	0.09	0.09	—	0.09	—	1,218	1,218	0.11	< 0.005	—	1,221
General Office Building	0.12	2.23	1.87	0.01	0.17	—	0.17	0.17	—	0.17	—	2,410	2,410	0.21	< 0.005	—	2,417
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Hotel	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.5	99.5	0.01	< 0.005	—	99.8
Total	0.42	7.32	4.08	0.05	0.58	—	0.58	0.58	—	0.58	—	8,269	8,269	0.73	0.02	—	8,292

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	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
Consumer Products	153	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	30.1	2.37	266	0.01	0.24	—	0.24	0.18	—	0.18	—	839	839	0.04	0.01	—	842

Total	195	2.37	266	0.01	0.24	—	0.24	0.18	—	0.18	0.00	839	839	0.04	0.01	—	842
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
Consumer Products	153	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	12.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	165	0.00	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
Consumer Products	27.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.71	0.21	23.9	< 0.005	0.02	—	0.02	0.02	—	0.02	—	68.5	68.5	< 0.005	< 0.005	—	68.7
Total	32.8	0.21	23.9	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	68.5	68.5	< 0.005	< 0.005	—	68.7

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	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	—	—	—	—	—	—	—	—	—	—	161	1,021	1,182	0.72	0.37	—	1,311
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	68.9	97.5	166	0.25	0.15	—	218
General Office Building	—	—	—	—	—	—	—	—	—	—	764	1,081	1,845	2.80	1.69	—	2,418
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Hotel	—	—	—	—	—	—	—	—	—	—	2.71	3.84	6.55	0.01	0.01	—	8.58
Total	—	—	—	—	—	—	—	—	—	—	997	2,203	3,200	3.78	2.22	—	3,956
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	161	1,021	1,182	0.72	0.37	—	1,311
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	68.9	97.5	166	0.25	0.15	—	218
General Office Building	—	—	—	—	—	—	—	—	—	—	764	1,081	1,845	2.80	1.69	—	2,418
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Hotel	—	—	—	—	—	—	—	—	—	—	2.71	3.84	6.55	0.01	0.01	—	8.58
Total	—	—	—	—	—	—	—	—	—	—	997	2,203	3,200	3.78	2.22	—	3,956
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	26.7	169	196	0.12	0.06	—	217
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	11.4	16.1	27.6	0.04	0.03	—	36.1
General Office Building	—	—	—	—	—	—	—	—	—	—	126	179	305	0.46	0.28	—	400
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Hotel	—	—	—	—	—	—	—	—	—	—	0.45	0.63	1.08	< 0.005	< 0.005	—	1.42
Total	—	—	—	—	—	—	—	—	—	—	165	365	530	0.63	0.37	—	655

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	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	—	—	—	—	—	—	—	—	—	—	828	0.00	828	82.8	0.00	—	2,898

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	366	0.00	366	36.6	0.00	—	1,280
General Office Building	—	—	—	—	—	—	—	—	—	—	1,008	0.00	1,008	101	0.00	—	3,527
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Hotel	—	—	—	—	—	—	—	—	—	—	14.8	0.00	14.8	1.47	0.00	—	51.6
Total	—	—	—	—	—	—	—	—	—	—	2,217	0.00	2,217	222	0.00	—	7,756
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	828	0.00	828	82.8	0.00	—	2,898
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	366	0.00	366	36.6	0.00	—	1,280
General Office Building	—	—	—	—	—	—	—	—	—	—	1,008	0.00	1,008	101	0.00	—	3,527
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Hotel	—	—	—	—	—	—	—	—	—	—	14.8	0.00	14.8	1.47	0.00	—	51.6
Total	—	—	—	—	—	—	—	—	—	—	2,217	0.00	2,217	222	0.00	—	7,756
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	60.6	0.00	60.6	6.05	0.00	—	212
General Office Building	—	—	—	—	—	—	—	—	—	—	167	0.00	167	16.7	0.00	—	584
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Hotel	—	—	—	—	—	—	—	—	—	—	2.44	0.00	2.44	0.24	0.00	—	8.55
Total	—	—	—	—	—	—	—	—	—	—	367	0.00	367	36.7	0.00	—	1,284

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.0	30.0
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.31	6.31
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.89	4.89

Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	113	113
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	155	155
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.0	30.0
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.31	6.31
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.89	4.89
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	113	113
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	155	155
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.96	4.96
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.04	1.04
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.81	0.81
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.8	18.8
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.6	25.6

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	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	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	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	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	0.00	0.00	0.00	0.00	98,343	98,343	98,343	35,895,195

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	918
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	2145
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)
8590839.75	2,863,613	2,831,925	943,975	5,881

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	13,005,892	204	0.0330	0.0040	85,585,754
Apartments Mid Rise	2,724,528	204	0.0330	0.0040	22,955,771
General Office Building	41,977,134	204	0.0330	0.0040	45,429,570
Enclosed Parking Structure	33,614	204	0.0330	0.0040	0.00
Parking Lot	77,615	204	0.0330	0.0040	0.00
Hotel	448,338	204	0.0330	0.0040	1,875,022

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	75,360,446	366,748,677

Apartments Mid Rise	32,252,163	0.00
General Office Building	357,463,446	0.00
Enclosed Parking Structure	0.00	0.00
Parking Lot	0.00	0.00
Hotel	1,268,339	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	1,537	—
Apartments Mid Rise	679	—
General Office Building	1,870	—
Enclosed Parking Structure	0.00	—
Parking Lot	0.00	—
Hotel	27.4	—

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	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

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
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
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	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

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

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)