

**Appendix L:
Alternatives Analysis Supporting Information**

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Appendix L: Air Quality Modeling Outputs for Alternatives 2 and 3

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CalEEMod Modeling for Alternative 2	1
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BYSP - Operational 2042 - Alternative 2 Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	BYSP - Operational 2042 - Alternative 2
Operational Year	2042
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.90
Precipitation (days)	39.0
Location	39.7146, -121.831359
County	Butte
City	Chico
Air District	Butte County AQMD
Air Basin	Sacramento Valley
TAZ	210
EDFZ	3
Electric Utility	User Defined
Gas Utility	User Defined
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	530	Dwelling Unit	73.6	1,033,500	1,602,191	0.00	1,256	2.37 Residents/Household

Condo/Townhouse	115	Dwelling Unit	9.10	121,900	79,462	1.00	254	2.37 Residents/Household
Apartments Mid Rise	635	Dwelling Unit	26.9	609,600	175,873	0.00	1,453	2.37 Residents/Household
Health Club	100	1000sqft	11.1	100,000	72,527	0.00	—	—
Strip Mall	20.0	1000sqft	0.00	20,000	0.00	0.00	—	—
High Turnover (Sit Down Restaurant)	12.8	1000sqft	0.00	12,800	0.00	0.00	—	—
City Park	13.2	Acre	13.2	0.00	411,644	411,644	—	—
Movie Theater (No Matinee)	17.2	1000sqft	0.00	17,200	0.00	0.00	—	Events Center

2. Emissions Summary

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.9	14.3	8.73	63.2	0.14	0.12	34.6	34.7	0.11	8.76	8.87	—	14,139	14,139	0.72	0.96	17.8	14,462
Area	52.3	51.8	0.73	79.5	< 0.005	0.04	—	0.04	0.03	—	0.03	0.00	221	221	0.01	< 0.005	—	222
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.7	0.28	—	489
Waste	—	—	—	—	—	—	—	—	—	—	—	854	0.00	854	85.3	0.00	—	2,987
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.4	33.4
Total	67.2	66.1	9.46	143	0.14	0.16	34.6	34.8	0.14	8.76	8.90	968	14,360	15,328	97.7	1.24	51.1	18,193
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.8	13.1	9.44	62.3	0.13	0.12	34.6	34.7	0.11	8.76	8.87	—	13,127	13,127	0.88	1.03	0.46	13,457

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Area	44.4	44.4	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.7	0.28	—	489
Waste	—	—	—	—	—	—	—	—	—	—	—	854	0.00	854	85.3	0.00	—	2,987
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.4	33.4
Total	58.2	57.5	9.44	62.3	0.13	0.12	34.6	34.7	0.11	8.76	8.87	968	13,127	14,095	97.9	1.31	33.8	16,966
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.8	13.1	8.87	58.8	0.13	0.12	33.7	33.9	0.11	8.54	8.65	—	13,352	13,352	0.79	0.99	7.68	13,676
Area	44.6	44.6	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.45	5.45	< 0.005	< 0.005	—	5.47
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	114	0.00	114	11.7	0.28	—	489
Waste	—	—	—	—	—	—	—	—	—	—	—	854	0.00	854	85.3	0.00	—	2,987
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.4	33.4
Total	58.4	57.8	8.88	60.8	0.13	0.12	33.7	33.9	0.11	8.54	8.65	968	13,357	14,325	97.8	1.27	41.0	17,190
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.51	2.40	1.62	10.7	0.02	0.02	6.16	6.18	0.02	1.56	1.58	—	2,211	2,211	0.13	0.16	1.27	2,264
Area	8.14	8.14	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.90	0.90	< 0.005	< 0.005	—	0.91
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	18.9	0.00	18.9	1.93	0.05	—	80.9
Waste	—	—	—	—	—	—	—	—	—	—	—	141	0.00	141	14.1	0.00	—	494
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.52	5.52
Total	10.7	10.5	1.62	11.1	0.02	0.02	6.16	6.18	0.02	1.56	1.58	160	2,211	2,372	16.2	0.21	6.79	2,846

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.79	4.60	2.72	19.2	0.04	0.03	10.1	10.2	0.03	2.56	2.60	—	4,170	4,170	0.22	0.29	5.21	4,268
Condo/Townhouse	0.87	0.83	0.52	3.89	0.01	0.01	2.20	2.21	0.01	0.56	0.56	—	893	893	0.04	0.06	1.13	912
Apartments Mid Rise	4.44	4.24	2.77	20.9	0.05	0.04	12.1	12.2	0.04	3.07	3.11	—	4,902	4,902	0.22	0.32	6.24	5,008
Health Club	2.53	2.42	1.56	11.7	0.03	0.02	6.71	6.73	0.02	1.70	1.72	—	2,715	2,715	0.13	0.18	3.45	2,775
Strip Mall	0.95	0.92	0.51	3.41	0.01	0.01	1.65	1.65	0.01	0.42	0.42	—	691	691	0.04	0.05	0.85	708
High Turnover (Sit Down Restaurant)	1.33	1.29	0.66	4.18	0.01	0.01	1.79	1.79	0.01	0.45	0.46	—	769	769	0.06	0.06	0.92	791
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Movie Theater (No Matinee)	0.00	0.00	0.00	0.00	0.00	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	14.9	14.3	8.73	63.2	0.14	0.12	34.6	34.7	0.11	8.76	8.87	—	14,139	14,139	0.72	0.96	17.8	14,462
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	4.42	4.22	2.93	19.2	0.04	0.03	10.1	10.2	0.03	2.56	2.60	—	3,874	3,874	0.28	0.31	0.14	3,975

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Condo/T	0.80	0.76	0.57	3.77	0.01	0.01	2.20	2.21	0.01	0.56	0.56	—	828	828	0.05	0.06	0.03	848
Apartments Mid Rise	4.11	3.89	3.01	20.0	0.04	0.04	12.1	12.2	0.04	3.07	3.11	—	4,546	4,546	0.27	0.34	0.16	4,654
Health Club	2.34	2.22	1.69	11.2	0.02	0.02	6.71	6.73	0.02	1.70	1.72	—	2,519	2,519	0.15	0.19	0.09	2,579
Strip Mall	0.88	0.84	0.54	3.54	0.01	0.01	1.65	1.65	0.01	0.42	0.42	—	643	643	0.05	0.06	0.02	661
High Turnover (Sit Down Restaurant)	1.22	1.18	0.70	4.54	0.01	0.01	1.79	1.79	0.01	0.45	0.46	—	718	718	0.07	0.07	0.02	740
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Movie Theater (No Matinee)	0.00	0.00	0.00	0.00	0.00	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	13.8	13.1	9.44	62.3	0.13	0.12	34.6	34.7	0.11	8.76	8.87	—	13,127	13,127	0.88	1.03	0.46	13,457
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.81	0.77	0.50	3.29	0.01	0.01	1.80	1.81	0.01	0.46	0.46	—	652	652	0.04	0.05	0.37	669
Condo/T ownhou se	0.15	0.14	0.10	0.65	< 0.005	< 0.005	0.39	0.39	< 0.005	0.10	0.10	—	139	139	0.01	0.01	0.08	143
Apartments Mid Rise	0.75	0.71	0.52	3.49	0.01	0.01	2.16	2.17	0.01	0.55	0.55	—	766	766	0.04	0.05	0.45	783
Health Club	0.43	0.41	0.29	1.95	< 0.005	< 0.005	1.19	1.20	< 0.005	0.30	0.31	—	424	424	0.02	0.03	0.25	434
Strip Mall	0.16	0.15	0.09	0.60	< 0.005	< 0.005	0.29	0.29	< 0.005	0.07	0.08	—	108	108	0.01	0.01	0.06	111

High Turnover (Sit Down Restaurant)	0.22	0.22	0.12	0.75	< 0.005	< 0.005	0.32	0.32	< 0.005	0.08	0.08	—	121	121	0.01	0.01	0.07	124
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Movie Theater (No Matinee)	0.00	0.00	0.00	0.00	0.00	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	2.51	2.40	1.62	10.7	0.02	0.02	6.16	6.18	0.02	1.56	1.58	—	2,211	2,211	0.13	0.16	1.27	2,264

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Movie Theater (No Matinee)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG Appendix L	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R ₁₀	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Apartment Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	0.00	0.00	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	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/T ownhou se	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartment Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

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City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	41.2	41.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	3.22	3.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	7.82	7.38	0.73	79.5	< 0.005	0.04	—	0.04	0.03	—	0.03	—	221	221	0.01	< 0.005	—	222
Total	52.3	51.8	0.73	79.5	< 0.005	0.04	—	0.04	0.03	—	0.03	0.00	221	221	0.01	< 0.005	—	222
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer	41.2	41.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	3.22	3.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	44.4	44.4	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	7.52	7.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.04	0.03	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.90	0.90	< 0.005	< 0.005	—	0.91
Total	8.14	8.14	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.90	0.90	< 0.005	< 0.005	—	0.91

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
Single Family Housing	4,680	4,680	4,680	1,708,163	14,447	14,447	14,447	5,273,101
Condo/Townhouse	822	822	822	300,037	3,134	3,134	3,134	1,144,042
Apartments Mid Rise	4,147	4,147	4,147	1,513,491	17,299	17,299	17,299	6,314,283

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Health Club	2,380	2,380	2,380	868,700	9,562	9,562	9,562	3,490,266
Strip Mall	959	959	959	349,962	2,350	2,350	2,350	857,646
High Turnover (Sit Down Restaurant)	1,372	1,372	1,372	500,838	2,547	2,547	2,547	929,525
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Movie Theater (No Matinee)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	117
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	56
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	260
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)
3574125	1,191,375	225,000	75,000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	9.00

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	4,650,428	0.00	0.0000	0.0000	0.00
Condo/Townhouse	542,708	0.00	0.0000	0.0000	0.00
Apartments Mid Rise	2,955,331	0.00	0.0000	0.0000	0.00
Health Club	1,537,193	0.00	0.0000	0.0000	0.00
Strip Mall	414,021	0.00	0.0000	0.0000	0.00
High Turnover (Sit Down Restaurant)	1,039,718	0.00	0.0000	0.0000	0.00
City Park	0.00	0.00	0.0000	0.0000	0.00
Movie Theater (No Matinee)	203,382	0.00	0.0000	0.0000	0.00

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	2042 Operations
Characteristics: Utility Information	0 PGE Goal 2040 Carbon Free Electricity
Land Use	2.37 Residents per DU 11.5 VMT per resident Changes per Site Plan
Operations: Hearths	No Woodstoves or Fireplaces
Operations: Landscape Equipment	95% ZEE as per SORE Modeling Projections
Operations: Energy Use	No Natural Gas - PDF
Operations: Refrigerants	SNAP Rules - Don't Report. Refrigerants have been banned.
Operations: Architectural Coatings	No
Operations: Fleet Mix	See Notes

Operations: Vehicle Data	Trip Rates from Traffic Study Using ITE Trip Generation Manual, 11th Edition. Retail Trips - 40% pass-by ; Restauant Trips = 43% Pass-By Resident Home-Based Trip length to match 11.5 VMT per resident. Employee H-W Trip = 2.5 mile to match transportation information
Operations: Consumer Products	—
Construction: Construction Phases	Single Family Housing Defaults
Construction: Off-Road Equipment	Higher HP for Excavators from CalEEMod 2020
Construction: Off-Road Equipment EF	Tier 3+ EMFAC2021 Factors (2024 factors for all years)
Construction: Dust From Material Movement	—
Construction: Paving	asphalt driveways
Operations: Vehicle EF	ACC2 Off-Model Revisions for LDV Only

BYSP - Operational 2042 - Alternative 3 Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	BYSP - Operational 2042 - Alternative 3
Operational Year	2042
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.90
Precipitation (days)	39.0
Location	39.7146, -121.831359
County	Butte
City	Chico
Air District	Butte County AQMD
Air Basin	Sacramento Valley
TAZ	210
EDFZ	3
Electric Utility	User Defined
Gas Utility	User Defined
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	105	Dwelling Unit	73.6	204,750	1,602,191	0.00	1,256	2.37 Residents/Household

Condo/Townhouse	135	Dwelling Unit	9.10	143,100	79,462	1.00	254	2.37 Residents/Household
Apartments Mid Rise	856	Dwelling Unit	26.9	821,760	175,873	0.00	1,453	2.37 Residents/Household
Health Club	130	1000sqft	11.1	130,000	72,527	0.00	—	—
Strip Mall	40.0	1000sqft	0.00	40,000	0.00	0.00	—	—
High Turnover (Sit Down Restaurant)	22.8	1000sqft	0.00	22,800	0.00	0.00	—	—
City Park	13.2	Acre	13.2	0.00	411,644	411,644	—	—
Movie Theater (No Matinee)	17.2	1000sqft	0.00	17,200	0.00	0.00	—	Events Center

2. Emissions Summary

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.5	14.9	9.10	66.0	0.15	0.12	36.2	36.3	0.11	9.15	9.26	—	14,763	14,763	0.75	1.01	18.6	15,100
Area	40.3	39.9	0.65	71.6	< 0.005	0.04	—	0.04	0.03	—	0.03	0.00	204	204	0.01	< 0.005	—	205
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	124	0.00	124	12.7	0.30	—	532
Waste	—	—	—	—	—	—	—	—	—	—	—	1,021	0.00	1,021	102	0.00	—	3,573
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.0	45.0
Total	55.9	54.8	9.75	138	0.15	0.17	36.2	36.3	0.15	9.15	9.30	1,145	14,967	16,112	116	1.31	63.6	19,455
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.3	13.6	9.84	64.9	0.14	0.12	36.2	36.3	0.11	9.15	9.26	—	13,706	13,706	0.91	1.08	0.48	14,050

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Area	33.0	33.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	124	0.00	124	12.7	0.30	—	532
Waste	—	—	—	—	—	—	—	—	—	—	—	1,021	0.00	1,021	102	0.00	—	3,573
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.0	45.0
Total	47.3	46.6	9.84	64.9	0.14	0.12	36.2	36.3	0.11	9.15	9.26	1,145	13,706	14,851	116	1.38	45.5	18,200
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.3	13.7	9.24	61.3	0.14	0.12	35.2	35.4	0.12	8.92	9.03	—	13,941	13,941	0.83	1.04	8.02	14,278
Area	33.2	33.2	0.02	1.77	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.03	5.03	< 0.005	< 0.005	—	5.04
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	124	0.00	124	12.7	0.30	—	532
Waste	—	—	—	—	—	—	—	—	—	—	—	1,021	0.00	1,021	102	0.00	—	3,573
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	45.0	45.0
Total	47.5	46.8	9.26	63.1	0.14	0.12	35.2	35.4	0.12	8.92	9.04	1,145	13,946	15,091	116	1.34	53.0	18,434
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.62	2.50	1.69	11.2	0.03	0.02	6.43	6.45	0.02	1.63	1.65	—	2,308	2,308	0.14	0.17	1.33	2,364
Area	6.06	6.05	< 0.005	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.83	0.83	< 0.005	< 0.005	—	0.83
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	20.6	0.00	20.6	2.11	0.05	—	88.2
Waste	—	—	—	—	—	—	—	—	—	—	—	169	0.00	169	16.9	0.00	—	592
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.45	7.45
Total	8.67	8.55	1.69	11.5	0.03	0.02	6.43	6.45	0.02	1.63	1.65	190	2,309	2,498	19.1	0.22	8.78	3,052

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Appendix L

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.95	0.91	0.54	3.80	0.01	0.01	2.01	2.02	0.01	0.51	0.51	—	826	826	0.04	0.06	1.03	846
Condo/Townhouse	1.02	0.97	0.62	4.56	0.01	0.01	2.58	2.59	0.01	0.65	0.66	—	1,048	1,048	0.05	0.07	1.33	1,071
Apartments Mid Rise	5.99	5.71	3.73	28.2	0.07	0.05	16.4	16.4	0.05	4.14	4.19	—	6,608	6,608	0.30	0.43	8.41	6,752
Health Club	3.29	3.15	2.03	15.2	0.03	0.03	8.72	8.75	0.03	2.21	2.23	—	3,530	3,530	0.16	0.23	4.48	3,607
Strip Mall	1.91	1.84	1.02	6.82	0.01	0.01	3.30	3.31	0.01	0.83	0.85	—	1,381	1,381	0.09	0.10	1.69	1,416
High Turnover (Sit Down Restaurant)	2.37	2.30	1.18	7.44	0.01	0.01	3.18	3.19	0.01	0.81	0.82	—	1,370	1,370	0.10	0.11	1.64	1,409
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Movie Theater (No Matinee)	0.00	0.00	0.00	0.00	0.00	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	15.5	14.9	9.10	66.0	0.15	0.12	36.2	36.3	0.11	9.15	9.26	—	14,763	14,763	0.75	1.01	18.6	15,100
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.88	0.84	0.58	3.81	0.01	0.01	2.01	2.02	0.01	0.51	0.51	—	767	767	0.05	0.06	0.03	787

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Condo/T	0.94	0.89	0.67	4.42	0.01	0.01	2.58	2.59	0.01	0.65	0.66	—	972	972	0.06	0.07	0.03	996
Apartments Mid Rise	5.54	5.25	4.05	26.9	0.06	0.05	16.4	16.4	0.05	4.14	4.19	—	6,129	6,129	0.36	0.46	0.22	6,274
Health Club	3.05	2.89	2.20	14.6	0.03	0.03	8.72	8.75	0.03	2.21	2.23	—	3,274	3,274	0.20	0.25	0.12	3,353
Strip Mall	1.76	1.69	1.09	7.09	0.01	0.01	3.30	3.31	0.01	0.83	0.85	—	1,285	1,285	0.11	0.11	0.04	1,321
High Turnover (Sit Down Restaurant)	2.18	2.10	1.25	8.08	0.01	0.01	3.18	3.19	0.01	0.81	0.82	—	1,278	1,278	0.13	0.12	0.04	1,318
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Movie Theater (No Matinee)	0.00	0.00	0.00	0.00	0.00	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	14.3	13.6	9.84	64.9	0.14	0.12	36.2	36.3	0.11	9.15	9.26	—	13,706	13,706	0.91	1.08	0.48	14,050
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.16	0.15	0.10	0.65	< 0.005	< 0.005	0.36	0.36	< 0.005	0.09	0.09	—	129	129	0.01	0.01	0.07	132
Condo/T ownhouse	0.17	0.16	0.11	0.77	< 0.005	< 0.005	0.46	0.46	< 0.005	0.12	0.12	—	164	164	0.01	0.01	0.09	168
Apartments Mid Rise	1.01	0.96	0.70	4.70	0.01	0.01	2.91	2.92	0.01	0.74	0.75	—	1,032	1,032	0.05	0.07	0.60	1,056
Health Club	0.56	0.53	0.38	2.54	0.01	0.01	1.55	1.56	< 0.005	0.39	0.40	—	551	551	0.03	0.04	0.32	564
Strip Mall	0.32	0.31	0.19	1.20	< 0.005	< 0.005	0.59	0.59	< 0.005	0.15	0.15	—	216	216	0.02	0.02	0.12	222

High Turnover (Sit Down Restaurant)	0.40	0.38	0.21	1.34	< 0.005	< 0.005	0.57	0.57	< 0.005	0.14	0.15	—	215	215	0.02	0.02	0.12	221
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Movie Theater (No Matinee)	0.00	0.00	0.00	0.00	0.00	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	2.62	2.50	1.69	11.2	0.03	0.02	6.43	6.45	0.02	1.63	1.65	—	2,308	2,308	0.14	0.17	1.33	2,364

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Movie Theater (No Matinee)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG Appendix L	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R 28	CO2e
----------	-------------------	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---------	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Apartment Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	0.00	0.00	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	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

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City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Movie Theater (No Matinee)	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	29.8	29.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	7.33	6.90	0.65	71.6	< 0.005	0.04	—	0.04	0.03	—	0.03	—	204	204	0.01	< 0.005	—	205
Total	40.3	39.9	0.65	71.6	< 0.005	0.04	—	0.04	0.03	—	0.03	0.00	204	204	0.01	< 0.005	—	205
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer	29.8	29.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	33.0	33.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.43	5.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.03	< 0.005	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.83	0.83	< 0.005	< 0.005	—	0.83
Total	6.06	6.05	< 0.005	0.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.83	0.83	< 0.005	< 0.005	—	0.83

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
Single Family Housing	927	927	927	338,410	2,862	2,862	2,862	1,044,671
Condo/Townhouse	965	965	965	352,218	3,679	3,679	3,679	1,343,006
Apartments Mid Rise	5,590	5,590	5,590	2,040,233	23,320	23,320	23,320	8,511,853

Appendix L

Health Club	3,094	3,094	3,094	1,129,310	12,431	12,431	12,431	4,537,346
Strip Mall	1,918	1,918	1,918	699,924	4,699	4,699	4,699	1,715,291
High Turnover (Sit Down Restaurant)	2,444	2,444	2,444	892,118	4,536	4,536	4,536	1,655,716
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Movie Theater (No Matinee)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	117
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	56
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	260
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)
3514185	1,171,395	315,000	105,000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	9.00

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	4,650,428	0.00	0.0000	0.0000	0.00
Condo/Townhouse	542,708	0.00	0.0000	0.0000	0.00
Apartments Mid Rise	2,955,331	0.00	0.0000	0.0000	0.00
Health Club	1,537,193	0.00	0.0000	0.0000	0.00
Strip Mall	414,021	0.00	0.0000	0.0000	0.00
High Turnover (Sit Down Restaurant)	1,039,718	0.00	0.0000	0.0000	0.00
City Park	0.00	0.00	0.0000	0.0000	0.00
Movie Theater (No Matinee)	203,382	0.00	0.0000	0.0000	0.00

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	2042 Operations
Characteristics: Utility Information	0 PGE Goal 2040 Carbon Free Electricity
Land Use	2.37 Residents per DU 11.5 VMT per resident Changes per Site Plan
Operations: Hearths	No Woodstoves or Fireplaces
Operations: Landscape Equipment	95% ZEE as per SORE Modeling Projections
Operations: Energy Use	No Natural Gas - PDF
Operations: Refrigerants	SNAP Rules - Don't Report. Refrigerants have been banned.
Operations: Architectural Coatings	No
Operations: Fleet Mix	See Notes

Operations: Vehicle Data	Trip Rates from Traffic Study Using ITE Trip Generation Manual, 11th Edition. Retail Trips - 40% pass-by ; Restauant Trips = 43% Pass-By Resident Home-Based Trip length to match 11.5 VMT per resident. Employee H-W Trip = 2.5 mile to match transportation information
Operations: Consumer Products	—
Construction: Construction Phases	Single Family Housing Defaults
Construction: Off-Road Equipment	Higher HP for Excavators from CalEEMod 2020
Construction: Off-Road Equipment EF	Tier 3+ EMFAC2021 Factors (2024 factors for all years)
Construction: Dust From Material Movement	—
Construction: Paving	asphalt driveways
Operations: Vehicle EF	ACC2 Off-Model Revisions for LDV Only

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