

## APPENDIX I

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### Air Quality and Greenhouse Gas Emissions Calculations

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## Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Sustainability Update of the Santa Cruz County GP - Existing Scenario****Santa Cruz County, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	19,315.90	1000sqft	443.43	19,315,900.00	0
General Office Building	6,135.02	1000sqft	140.84	6,135,020.00	0
General Heavy Industry	1,162.93	1000sqft	26.70	1,162,930.00	0
Manufacturing	1,162.93	1000sqft	26.70	1,162,930.00	0
Apartments Mid Rise	25,969.00	Dwelling Unit	683.39	25,969,000.00	74271
Single Family Housing	25,772.00	Dwelling Unit	8,367.53	46,389,600.00	73708
Regional Shopping Center	6,473.54	1000sqft	148.61	6,473,540.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	1.8	<b>Precipitation Freq (Days)</b>	61
<b>Climate Zone</b>	5			<b>Operational Year</b>	2019
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Existing land uses based on information from the County. "General Heavy Industry" selected in place of "General Light Industry" based on CalEEMod land use size limitation.

Construction Phase - Modeling operations only for Plan level analysis

Off-road Equipment - Modeling operations only for Plan level analysis

Trips and VMT - Modeling operations only for Plan level analysis

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Architectural Coating - Modeling operations only for Plan level analysis

Vehicle Trips - Trip lengths adjusted to match total weekday VMT for the scenario. Assumed same trip lengths for weekend days.

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Road Dust - Default

Woodstoves - Defaults

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Default

Water And Wastewater - Default

Solid Waste - Default

Fleet Mix - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,125,160.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	51,375,480.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	48,842,055.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	146,526,165.00	0.00
tblConstructionPhase	NumDays	11,000.00	1.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblTripsAndVMT	WorkerTripNumber	7,834.00	0.00
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	5.72
tblVehicleTrips	HO_TL	7.50	5.72
tblVehicleTrips	HS_TL	7.30	5.72
tblVehicleTrips	HS_TL	7.30	5.72
tblVehicleTrips	HW_TL	10.80	5.72
tblVehicleTrips	HW_TL	10.80	5.72
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	6.42	8.10
tblVehicleTrips	SU_TR	5.09	6.42
tblVehicleTrips	WD_TR	3.93	4.96

**2.0 Emissions Summary**

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Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Maximum</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Maximum</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

		Highest	
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**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,489.4407	29.5630	1,866.5373	2.6353		192.3717	192.3717		192.3717	192.3717	18,808.1439	10,210.1386	29,018.2824	28.7196	1.3082	30,126.1254
Energy	9.6405	84.0710	47.4379	0.5259		6.6607	6.6607		6.6607	6.6607	0.0000	159,454.5306	159,454.5306	12.1901	3.0051	160,654.7991
Mobile	646.1080	866.1484	5,538.0270	7.2890	624.9412	11.5226	636.4637	167.2256	10.8578	178.0834	0.0000	673,695.9953	673,695.9953	77.5598	44.3666	688,856.2245
Waste						0.0000	0.0000		0.0000	0.0000	15,778.0572	0.0000	15,778.0572	932.4565	0.0000	39,089.4689
Water						0.0000	0.0000		0.0000	0.0000	2,827.3616	6,142.9736	8,970.3353	291.3910	6.9774	18,334.3652
<b>Total</b>	<b>2,145.1892</b>	<b>979.7824</b>	<b>7,452.0022</b>	<b>10.4502</b>	<b>624.9412</b>	<b>210.5550</b>	<b>835.4962</b>	<b>167.2256</b>	<b>209.8903</b>	<b>377.1159</b>	<b>37,413.5627</b>	<b>849,503.6380</b>	<b>886,917.2008</b>	<b>1,342.3170</b>	<b>55.6572</b>	<b>937,060.9830</b>



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,489.4407	29.5630	1,866.5373	2.6353		192.3717	192.3717		192.3717	192.3717	18,808.1439	10,210.1386	29,018.2824	28.7196	1.3082	30,126.1254
Energy	9.6405	84.0710	47.4379	0.5259		6.6607	6.6607		6.6607	6.6607	0.0000	159,454.5306	159,454.5306	12.1901	3.0051	160,654.7991
Mobile	646.1080	866.1484	5,538.0270	7.2890	624.9412	11.5226	636.4637	167.2256	10.8578	178.0834	0.0000	673,695.9953	673,695.9953	77.5598	44.3666	688,856.2245
Waste						0.0000	0.0000		0.0000	0.0000	15,778.0572	0.0000	15,778.0572	932.4565	0.0000	39,089.4689
Water						0.0000	0.0000		0.0000	0.0000	2,827.3616	6,142.9736	8,970.3353	291.3910	6.9774	18,334.3652
<b>Total</b>	<b>2,145.1892</b>	<b>979.7824</b>	<b>7,452.0022</b>	<b>10.4502</b>	<b>624.9412</b>	<b>210.5550</b>	<b>835.4962</b>	<b>167.2256</b>	<b>209.8903</b>	<b>377.1159</b>	<b>37,413.5627</b>	<b>849,503.6380</b>	<b>886,917.2008</b>	<b>1,342.3170</b>	<b>55.6572</b>	<b>937,060.9830</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/29/2018	1/29/2018	5	1	

**Acres of Grading (Site Preparation Phase): 0**





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**3.2 Architectural Coating - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	646.1080	866.1484	5,538.0270	7.2890	624.9412	11.5226	636.4637	167.2256	10.8578	178.0834	0.0000	673,695.9953	673,695.9953	77.5598	44.3666	688,856.2245
Unmitigated	646.1080	866.1484	5,538.0270	7.2890	624.9412	11.5226	636.4637	167.2256	10.8578	178.0834	0.0000	673,695.9953	673,695.9953	77.5598	44.3666	688,856.2245

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	141,271.36	127,507.79	106213.21	279,616,741	279,616,741
General Heavy Industry	5,768.13	9,419.73	7466.01	13,600,863	13,600,863
General Office Building	188,136.87	42,688.14	13521.13	296,516,032	296,516,032
General Office Building	59,755.09	13,558.39	4294.51	94,177,946	94,177,946
Manufacturing	4,570.31	7,466.01	5919.31	10,778,303	10,778,303
Regional Shopping Center	244,376.14	298,559.66	136591.69	492,867,608	492,867,608
Single Family Housing	243,287.68	245,864.88	220350.60	500,488,570	500,488,570
Total	887,165.58	745,064.61	494,356.47	1,688,046,063	1,688,046,063

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.72	5.72	5.72	44.00	18.80	37.20	100	0	0
General Heavy Industry	5.72	5.72	5.72	59.00	28.00	13.00	100	0	0
General Office Building	5.72	5.72	5.72	33.00	48.00	19.00	100	0	0
General Office Building	5.72	5.72	5.72	33.00	48.00	19.00	100	0	0
Manufacturing	5.72	5.72	5.72	59.00	28.00	13.00	100	0	0

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Land Use	Miles			Trip %			Trip Purpose %	
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted
Regional Shopping Center	5.72	5.72	16.30	64.70	19.00	100	0	0
Single Family Housing	5.72	5.72	44.00	18.80	37.20	100	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
General Heavy Industry	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
General Office Building	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Manufacturing	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Regional Shopping Center	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Single Family Housing	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	64,046.5397	64,046.5397	10.3615	1.2559	64,679.8462
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	64,046.5397	64,046.5397	10.3615	1.2559	64,679.8462
NaturalGas Mitigated	9.6405	84.0710	47.4379	0.5259		6.6607	6.6607		6.6607	6.6607	0.0000	95,407.9909	95,407.9909	1.8287	1.7492	95,974.9529
NaturalGas Unmitigated	9.6405	84.0710	47.4379	0.5259		6.6607	6.6607		6.6607	6.6607	0.0000	95,407.9909	95,407.9909	1.8287	1.7492	95,974.9529

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.19257e+008	1.1823	10.1030	4.2992	0.0645		0.8168	0.8168		0.8168	0.8168	0.0000	11,700.3632	11,700.3632	0.2243	0.2145	11,769.8927
General Heavy Industry	2.85732e+007	0.1541	1.4007	1.1765	8.4000e-003		0.1065	0.1065		0.1065	0.1065	0.0000	1,524.7742	1,524.7742	0.0292	0.0280	1,533.8352
General Office Building	1.17486e+008	0.6335	5.7591	4.8376	0.0346		0.4377	0.4377		0.4377	0.4377	0.0000	6,269.4808	6,269.4808	0.1202	0.1149	6,306.7372
General Office Building	3.69899e+008	1.9946	18.1323	15.2312	0.1088		1.3781	1.3781		1.3781	1.3781	0.0000	19,739.2452	19,739.2452	0.3783	0.3619	19,856.5457
Manufacturing	2.85732e+007	0.1541	1.4007	1.1765	8.4000e-003		0.1065	0.1065		0.1065	0.1065	0.0000	1,524.7742	1,524.7742	0.0292	0.0280	1,533.8352
Regional Shopping Center	2.95193e+007	0.1592	1.4470	1.2155	8.6800e-003		0.1100	0.1100		0.1100	0.1100	0.0000	1,575.2645	1,575.2645	0.0302	0.0289	1,584.6255
Single Family Housing	9.94571e+008	5.3629	45.8283	19.5014	0.2925		3.7053	3.7053		3.7053	3.7053	0.0000	53,074.0887	53,074.0887	1.0173	0.9730	53,389.4814
<b>Total</b>		<b>9.6405</b>	<b>84.0710</b>	<b>47.4379</b>	<b>0.5258</b>		<b>6.6607</b>	<b>6.6607</b>		<b>6.6607</b>	<b>6.6607</b>	<b>0.0000</b>	<b>95,407.9909</b>	<b>95,407.9909</b>	<b>1.8287</b>	<b>1.7491</b>	<b>95,974.9529</b>



Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.19257e+008	1.1823	10.1030	4.2992	0.0645		0.8168	0.8168		0.8168	0.8168	0.0000	11,700.3632	11,700.3632	0.2243	0.2145	11,769.8927
General Heavy Industry	2.85732e+007	0.1541	1.4007	1.1765	8.4000e-003		0.1065	0.1065		0.1065	0.1065	0.0000	1,524.7742	1,524.7742	0.0292	0.0280	1,533.8352
General Office Building	1.17486e+008	0.6335	5.7591	4.8376	0.0346		0.4377	0.4377		0.4377	0.4377	0.0000	6,269.4808	6,269.4808	0.1202	0.1149	6,306.7372
General Office Building	3.69899e+008	1.9946	18.1323	15.2312	0.1088		1.3781	1.3781		1.3781	1.3781	0.0000	19,739.2452	19,739.2452	0.3783	0.3619	19,856.5457
Manufacturing	2.85732e+007	0.1541	1.4007	1.1765	8.4000e-003		0.1065	0.1065		0.1065	0.1065	0.0000	1,524.7742	1,524.7742	0.0292	0.0280	1,533.8352
Regional Shopping Center	2.95193e+007	0.1592	1.4470	1.2155	8.6800e-003		0.1100	0.1100		0.1100	0.1100	0.0000	1,575.2645	1,575.2645	0.0302	0.0289	1,584.6255
Single Family Housing	9.94571e+008	5.3629	45.8283	19.5014	0.2925		3.7053	3.7053		3.7053	3.7053	0.0000	53,074.0887	53,074.0887	1.0173	0.9730	53,389.4814
<b>Total</b>		<b>9.6405</b>	<b>84.0710</b>	<b>47.4379</b>	<b>0.5258</b>		<b>6.6607</b>	<b>6.6607</b>		<b>6.6607</b>	<b>6.6607</b>	<b>0.0000</b>	<b>95,407.9909</b>	<b>95,407.9909</b>	<b>1.8287</b>	<b>1.7491</b>	<b>95,974.9529</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.00925e+008	9,337.9748	1.5107	0.1831	9,430.3108
General Heavy Industry	8.64057e+006	799.4581	0.1293	0.0157	807.3633
General Office Building	2.32563e+008	21,517.6462	3.4811	0.4220	21,730.4176
General Office Building	7.38656e+007	6,834.3277	1.1057	0.1340	6,901.9071
Manufacturing	8.64057e+006	799.4581	0.1293	0.0157	807.3633
Regional Shopping Center	6.6289e+007	6,133.3129	0.9923	0.1203	6,193.9605
Single Family Housing	2.01293e+008	18,624.3618	3.0131	0.3652	18,808.5237
<b>Total</b>		<b>64,046.5397</b>	<b>10.3615</b>	<b>1.2560</b>	<b>64,679.8462</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.3 Energy by Land Use - Electricity**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.00925e+008	9,337.9748	1.5107	0.1831	9,430.3108
General Heavy Industry	8.64057e+006	799.4581	0.1293	0.0157	807.3633
General Office Building	2.32563e+008	21,517.6462	3.4811	0.4220	21,730.4176
General Office Building	7.38656e+007	6,834.3277	1.1057	0.1340	6,901.9071
Manufacturing	8.64057e+006	799.4581	0.1293	0.0157	807.3633
Regional Shopping Center	6.6289e+007	6,133.3129	0.9923	0.1203	6,193.9605
Single Family Housing	2.01293e+008	18,624.3618	3.0131	0.3652	18,808.5237
<b>Total</b>		<b>64,046.5397</b>	<b>10.3615</b>	<b>1.2560</b>	<b>64,679.8462</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,489,440 7	29.5630	1,866,537 3	2.6353		192.3717	192.3717		192.3717	192.3717	18,808.14 39	10,210.13 86	29,018.28 24	28.7196	1.3082	30,126.12 54
Unmitigated	1,489,440 7	29.5630	1,866,537 3	2.6353		192.3717	192.3717		192.3717	192.3717	18,808.14 39	10,210.13 86	29,018.28 24	28.7196	1.3082	30,126.12 54

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	69.0891					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	416.3611					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	987.5341	23.3479	1,329,866 0	2.6071		189.4320	189.4320		189.4320	189.4320	18,808.14 39	9,337.683 0	28,145.82 69	27.8618	1.3082	29,232.22 37
Landscaping	16.4564	6.2151	536.6713	0.0282		2.9398	2.9398		2.9398	2.9398	0.0000	872.4555	872.4555	0.8579	0.0000	893.9017
<b>Total</b>	<b>1,489,440 7</b>	<b>29.5630</b>	<b>1,866,537 3</b>	<b>2.6353</b>		<b>192.3717</b>	<b>192.3717</b>		<b>192.3717</b>	<b>192.3717</b>	<b>18,808.14 39</b>	<b>10,210.13 86</b>	<b>29,018.28 24</b>	<b>28.7196</b>	<b>1.3082</b>	<b>30,126.12 54</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	69.0891					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	416.3611					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	987.5341	23.3479	1,329.8660	2.6071		189.4320	189.4320		189.4320	189.4320	18,808.1439	9,337.6830	28,145.8269	27.8618	1.3082	29,232.2237
Landscaping	16.4564	6.2151	536.6713	0.0282		2.9398	2.9398		2.9398	2.9398	0.0000	872.4555	872.4555	0.8579	0.0000	893.9017
<b>Total</b>	<b>1,489.4407</b>	<b>29.5630</b>	<b>1,866.5373</b>	<b>2.6353</b>		<b>192.3717</b>	<b>192.3717</b>		<b>192.3717</b>	<b>192.3717</b>	<b>18,808.1439</b>	<b>10,210.1386</b>	<b>29,018.2824</b>	<b>28.7196</b>	<b>1.3082</b>	<b>30,126.1254</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8,970.335 3	291.3910	6.9774	18,334.36 52
Unmitigated	8,970.335 3	291.3910	6.9774	18,334.36 52

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1691.98 / 1066.69	1,729.3028	55.3263	1.3252	3,507.3702
General Heavy Industry	268.928 / 0	219.9559	8.7848	0.2096	502.0227
General Office Building	4523.48 / 2772.46	4,597.5713	147.9094	3.5424	9,350.9408
Manufacturing	268.928 / 0	219.9559	8.7848	0.2096	502.0227
Regional Shopping Center	479.511 / 293.894	487.3651	15.6791	0.3755	991.2455
Single Family Housing	1679.15 / 1058.59	1,716.1844	54.9066	1.3152	3,480.7634
<b>Total</b>		<b>8,970.3353</b>	<b>291.3910</b>	<b>6.9774</b>	<b>18,334.3652</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1691.98 / 1066.69	1,729.3028	55.3263	1.3252	3,507.3702
General Heavy Industry	268.928 / 0	219.9559	8.7848	0.2096	502.0227
General Office Building	4523.48 / 2772.46	4,597.5713	147.9094	3.5424	9,350.9408
Manufacturing	268.928 / 0	219.9559	8.7848	0.2096	502.0227
Regional Shopping Center	479.511 / 293.894	487.3651	15.6791	0.3755	991.2455
Single Family Housing	1679.15 / 1058.59	1,716.1844	54.9066	1.3152	3,480.7634
<b>Total</b>		<b>8,970.3353</b>	<b>291.3910</b>	<b>6.9774</b>	<b>18,334.3652</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**



Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15,778.05 72	932.4565	0.0000	39,089.46 89
Unmitigated	15,778.05 72	932.4565	0.0000	39,089.46 89

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	11945.7	2,424.8773	143.3061	0.0000	6,007.5308
General Heavy Industry	1442.03	292.7191	17.2992	0.0000	725.1991
General Office Building	23669.3	4,804.6621	283.9474	0.0000	11,903.3470
Manufacturing	1442.03	292.7191	17.2992	0.0000	725.1991
Regional Shopping Center	6797.22	1,379.7742	81.5423	0.0000	3,418.3323
Single Family Housing	32431.5	6,583.3055	389.0622	0.0000	16,309.8607
<b>Total</b>		<b>15,778.0572</b>	<b>932.4565</b>	<b>0.0000</b>	<b>39,089.4689</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.2 Waste by Land Use**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	11945.7	2,424.8773	143.3061	0.0000	6,007.5308
General Heavy Industry	1442.03	292.7191	17.2992	0.0000	725.1991
General Office Building	23669.3	4,804.6621	283.9474	0.0000	11,903.3470
Manufacturing	1442.03	292.7191	17.2992	0.0000	725.1991
Regional Shopping Center	6797.22	1,379.7742	81.5423	0.0000	3,418.3323
Single Family Housing	32431.5	6,583.3055	389.0622	0.0000	16,309.8607
<b>Total</b>		<b>15,778.0572</b>	<b>932.4565</b>	<b>0.0000</b>	<b>39,089.4689</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Sustainability Update of the Santa Cruz County GP - Existing Scenario**

**Santa Cruz County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	19,315.90	1000sqft	443.43	19,315,900.00	0
General Office Building	6,135.02	1000sqft	140.84	6,135,020.00	0
General Heavy Industry	1,162.93	1000sqft	26.70	1,162,930.00	0
Manufacturing	1,162.93	1000sqft	26.70	1,162,930.00	0
Apartments Mid Rise	25,969.00	Dwelling Unit	683.39	25,969,000.00	74271
Single Family Housing	25,772.00	Dwelling Unit	8,367.53	46,389,600.00	73708
Regional Shopping Center	6,473.54	1000sqft	148.61	6,473,540.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	1.8	<b>Precipitation Freq (Days)</b>	61
<b>Climate Zone</b>	5			<b>Operational Year</b>	2019
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Existing land uses based on information from the County. "General Heavy Industry" selected in place of "General Light Industry" based on CalEEMod land use size limitation.

Construction Phase - Modeling operations only for Plan level analysis

Off-road Equipment - Modeling operations only for Plan level analysis

Trips and VMT - Modeling operations only for Plan level analysis

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Architectural Coating - Modeling operations only for Plan level analysis

Vehicle Trips - Trip lengths adjusted to match total weekday VMT for the scenario. Assumed same trip lengths for weekend days.

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Road Dust - Default

Woodstoves - Defaults

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Default

Water And Wastewater - Default

Solid Waste - Default

Fleet Mix - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,125,160.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	51,375,480.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	48,842,055.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	146,526,165.00	0.00
tblConstructionPhase	NumDays	11,000.00	1.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblTripsAndVMT	WorkerTripNumber	7,834.00	0.00
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	5.72
tblVehicleTrips	HO_TL	7.50	5.72
tblVehicleTrips	HS_TL	7.30	5.72
tblVehicleTrips	HS_TL	7.30	5.72
tblVehicleTrips	HW_TL	10.80	5.72
tblVehicleTrips	HW_TL	10.80	5.72
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	6.42	8.10
tblVehicleTrips	SU_TR	5.09	6.42
tblVehicleTrips	WD_TR	3.93	4.96

**2.0 Emissions Summary**

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Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	26,877.84 96	619.1815	36,729.12 65	63.8140		4,643.809 7	4,643.809 7		4,643.809 7	4,643.8097	505,669.0 176	258,743.3 409	764,412.3 586	756.6469	35.1726	793,809.9 566
Energy	52.8248	460.6631	259.9338	2.8814		36.4971	36.4971		36.4971	36.4971		576,270.1 780	576,270.1 780	11.0452	10.5650	579,694.6 636
Mobile	4,332.350 3	5,121.610 3	34,613.31 52	48.5513	4,175.669 0	74.2711	4,249.940 1	1,114.028 1	69.9856	1,184.0137		4,944,706. 6919	4,944,706. 6919	512.7269	295.3909	5,045,551. 3655
<b>Total</b>	<b>31,263.02 47</b>	<b>6,201.454 8</b>	<b>71,602.37 56</b>	<b>115.2466</b>	<b>4,175.669 0</b>	<b>4,754.577 9</b>	<b>8,930.246 9</b>	<b>1,114.028 1</b>	<b>4,750.292 4</b>	<b>5,864.3205</b>	<b>505,669.0 176</b>	<b>5,779,720. 2108</b>	<b>6,285,389. 2285</b>	<b>1,280.419 0</b>	<b>341.1285</b>	<b>6,419,055. 9857</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	26,877.84 96	619.1815	36,729.12 65	63.8140		4,643.809 7	4,643.809 7		4,643.809 7	4,643.8097	505,669.0 176	258,743.3 409	764,412.3 586	756.6469	35.1726	793,809.9 566
Energy	52.8248	460.6631	259.9338	2.8814		36.4971	36.4971		36.4971	36.4971		576,270.1 780	576,270.1 780	11.0452	10.5650	579,694.6 636
Mobile	4,332.350 3	5,121.610 3	34,613.31 52	48.5513	4,175.669 0	74.2711	4,249.940 1	1,114.028 1	69.9856	1,184.0137		4,944,706. 6919	4,944,706. 6919	512.7269	295.3909	5,045,551. 3655
<b>Total</b>	<b>31,263.02 47</b>	<b>6,201.454 8</b>	<b>71,602.37 56</b>	<b>115.2466</b>	<b>4,175.669 0</b>	<b>4,754.577 9</b>	<b>8,930.246 9</b>	<b>1,114.028 1</b>	<b>4,750.292 4</b>	<b>5,864.3205</b>	<b>505,669.0 176</b>	<b>5,779,720. 2108</b>	<b>6,285,389. 2285</b>	<b>1,280.419 0</b>	<b>341.1285</b>	<b>6,419,055. 9857</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/29/2018	1/29/2018	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	0.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4,332.350 3	5,121.610 3	34,613.31 52	48.5513	4,175.669 0	74.2711	4,249.940 1	1,114.028 1	69.9856	1,184.0137		4,944,706. 6919	4,944,706. 6919	512.7269	295.3909	5,045,551. 3655
Unmitigated	4,332.350 3	5,121.610 3	34,613.31 52	48.5513	4,175.669 0	74.2711	4,249.940 1	1,114.028 1	69.9856	1,184.0137		4,944,706. 6919	4,944,706. 6919	512.7269	295.3909	5,045,551. 3655

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	141,271.36	127,507.79	106213.21	279,616,741	279,616,741
General Heavy Industry	5,768.13	9,419.73	7466.01	13,600,863	13,600,863
General Office Building	188,136.87	42,688.14	13521.13	296,516,032	296,516,032
General Office Building	59,755.09	13,558.39	4294.51	94,177,946	94,177,946
Manufacturing	4,570.31	7,466.01	5919.31	10,778,303	10,778,303
Regional Shopping Center	244,376.14	298,559.66	136591.69	492,867,608	492,867,608
Single Family Housing	243,287.68	245,864.88	220350.60	500,488,570	500,488,570
<b>Total</b>	<b>887,165.58</b>	<b>745,064.61</b>	<b>494,356.47</b>	<b>1,688,046,063</b>	<b>1,688,046,063</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.72	5.72	5.72	44.00	18.80	37.20	100	0	0

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	5.72	5.72	5.72	59.00	28.00	13.00	100	0	0
General Office Building	5.72	5.72	5.72	33.00	48.00	19.00	100	0	0
General Office Building	5.72	5.72	5.72	33.00	48.00	19.00	100	0	0
Manufacturing	5.72	5.72	5.72	59.00	28.00	13.00	100	0	0
Regional Shopping Center	5.72	5.72	5.72	16.30	64.70	19.00	100	0	0
Single Family Housing	5.72	5.72	5.72	44.00	18.80	37.20	100	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
General Heavy Industry	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
General Office Building	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Manufacturing	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Regional Shopping Center	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Single Family Housing	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Natural Gas Mitigated	52.8248	460.6631	259.9338	2.8814		36.4971	36.4971		36.4971	36.4971			576,270.1780	576,270.1780	11.0452	10.5650	579,694.6636
Natural Gas Unmitigated	52.8248	460.6631	259.9338	2.8814		36.4971	36.4971		36.4971	36.4971			576,270.1780	576,270.1780	11.0452	10.5650	579,694.6636



Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	600703	6.4782	55.3589	23.5570	0.3534		4.4758	4.4758		4.4758	4.4758		70,670.9192	70,670.9192	1.3545	1.2956	71,090.8811
General Heavy Industry	78282.7	0.8442	7.6748	6.4468	0.0461		0.5833	0.5833		0.5833	0.5833		9,209.7309	9,209.7309	0.1765	0.1689	9,264.4597
General Office Building	1.01342e+006	10.9291	99.3552	83.4584	0.5961		7.5510	7.5510		7.5510	7.5510		119,226.2643	119,226.2643	2.2852	2.1858	119,934.7664
General Office Building	321878	3.4712	31.5567	26.5076	0.1893		2.3983	2.3983		2.3983	2.3983		37,868.0525	37,868.0525	0.7258	0.6943	38,093.0834
Manufacturing	78282.7	0.8442	7.6748	6.4468	0.0461		0.5833	0.5833		0.5833	0.5833		9,209.7309	9,209.7309	0.1765	0.1689	9,264.4597
Regional Shopping Center	80874.9	0.8722	7.9289	6.6603	0.0476		0.6026	0.6026		0.6026	0.6026		9,514.6954	9,514.6954	0.1824	0.1744	9,571.2365
Single Family Housing	2.72485e+006	29.3857	251.1138	106.8569	1.6029		20.3028	20.3028		20.3028	20.3028		320,570.7849	320,570.7849	6.1443	5.8771	322,475.7768
<b>Total</b>		<b>52.8248</b>	<b>460.6631</b>	<b>259.9338</b>	<b>2.8813</b>		<b>36.4971</b>	<b>36.4971</b>		<b>36.4971</b>	<b>36.4971</b>		<b>576,270.1780</b>	<b>576,270.1780</b>	<b>11.0452</b>	<b>10.5650</b>	<b>579,694.6636</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	600.703	6.4782	55.3589	23.5570	0.3534		4.4758	4.4758		4.4758	4.4758		70,670.9192	70,670.9192	1.3545	1.2956	71,090.8811
General Heavy Industry	78.2827	0.8442	7.6748	6.4468	0.0461		0.5833	0.5833		0.5833	0.5833		9,209.7309	9,209.7309	0.1765	0.1689	9,264.4597
General Office Building	1013.42	10.9291	99.3552	83.4584	0.5961		7.5510	7.5510		7.5510	7.5510		119,226.2643	119,226.2643	2.2852	2.1858	119,934.7664
General Office Building	321.878	3.4712	31.5567	26.5076	0.1893		2.3983	2.3983		2.3983	2.3983		37,868.0525	37,868.0525	0.7258	0.6943	38,093.0834
Manufacturing	78.2827	0.8442	7.6748	6.4468	0.0461		0.5833	0.5833		0.5833	0.5833		9,209.7309	9,209.7309	0.1765	0.1689	9,264.4597
Regional Shopping Center	80.8749	0.8722	7.9289	6.6603	0.0476		0.6026	0.6026		0.6026	0.6026		9,514.6954	9,514.6954	0.1824	0.1744	9,571.2365
Single Family Housing	2724.85	29.3857	251.1138	106.8569	1.6029		20.3028	20.3028		20.3028	20.3028		320,570.7849	320,570.7849	6.1443	5.8771	322,475.7768
<b>Total</b>		<b>52.8248</b>	<b>460.6631</b>	<b>259.9338</b>	<b>2.8813</b>		<b>36.4971</b>	<b>36.4971</b>		<b>36.4971</b>	<b>36.4971</b>		<b>576,270.1780</b>	<b>576,270.1780</b>	<b>11.0452</b>	<b>10.5650</b>	<b>579,694.6636</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	26,877.84 96	619.1815	36,729.12 65	63.8140		4,643.809 7	4,643.809 7		4,643.809 7	4,643.8097	505,669.0 176	258,743.3 409	764,412.3 586	756.6469	35.1726	793,809.9 566
Unmitigated	26,877.84 96	619.1815	36,729.12 65	63.8140		4,643.809 7	4,643.809 7		4,643.809 7	4,643.8097	505,669.0 176	258,743.3 409	764,412.3 586	756.6469	35.1726	793,809.9 566

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	378.5705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,281.430 9					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	24,086.19 73	569.4607	32,435.75 63	63.5883		4,620.291 4	4,620.291 4		4,620.291 4	4,620.2914	505,669.0 176	251,049.6 000	756,718.6 176	749.0820	35.1726	785,927.0 930
Landscaping	131.6509	49.7208	4,293.370 3	0.2257		23.5183	23.5183		23.5183	23.5183		7,693.740 9	7,693.740 9	7.5649		7,882.863 7
<b>Total</b>	<b>26,877.84 96</b>	<b>619.1815</b>	<b>36,729.12 66</b>	<b>63.8140</b>		<b>4,643.809 7</b>	<b>4,643.809 7</b>		<b>4,643.809 7</b>	<b>4,643.8097</b>	<b>505,669.0 176</b>	<b>258,743.3 409</b>	<b>764,412.3 586</b>	<b>756.6469</b>	<b>35.1726</b>	<b>793,809.9 566</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	378.5705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,281.4309					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	24,086.1973	569.4607	32,435.7563	63.5883		4,620.2914	4,620.2914		4,620.2914	4,620.2914	505,669.0176	251,049.6000	756,718.6176	749.0820	35.1726	785,927.0930
Landscaping	131.6509	49.7208	4,293.3703	0.2257		23.5183	23.5183		23.5183	23.5183		7,693.7409	7,693.7409	7.5649		7,882.8637
<b>Total</b>	<b>26,877.8496</b>	<b>619.1815</b>	<b>36,729.1266</b>	<b>63.8140</b>		<b>4,643.8097</b>	<b>4,643.8097</b>		<b>4,643.8097</b>	<b>4,643.8097</b>	<b>505,669.0176</b>	<b>258,743.3409</b>	<b>764,412.3586</b>	<b>756.6469</b>	<b>35.1726</b>	<b>793,809.9566</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Sustainability Update of the Santa Cruz County GP - Existing Scenario**

**Santa Cruz County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	19,315.90	1000sqft	443.43	19,315,900.00	0
General Office Building	6,135.02	1000sqft	140.84	6,135,020.00	0
General Heavy Industry	1,162.93	1000sqft	26.70	1,162,930.00	0
Manufacturing	1,162.93	1000sqft	26.70	1,162,930.00	0
Apartments Mid Rise	25,969.00	Dwelling Unit	683.39	25,969,000.00	74271
Single Family Housing	25,772.00	Dwelling Unit	8,367.53	46,389,600.00	73708
Regional Shopping Center	6,473.54	1000sqft	148.61	6,473,540.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	1.8	<b>Precipitation Freq (Days)</b>	61
<b>Climate Zone</b>	5			<b>Operational Year</b>	2019
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Existing land uses based on information from the County. "General Heavy Industry" selected in place of "General Light Industry" based on CalEEMod land use size limitation.

Construction Phase - Modeling operations only for Plan level analysis

Off-road Equipment - Modeling operations only for Plan level analysis

Trips and VMT - Modeling operations only for Plan level analysis

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Architectural Coating - Modeling operations only for Plan level analysis

Vehicle Trips - Trip lengths adjusted to match total weekday VMT for the scenario. Assumed same trip lengths for weekend days.

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Road Dust - Default

Woodstoves - Defaults

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Default

Water And Wastewater - Default

Solid Waste - Default

Fleet Mix - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	17,125,160.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	51,375,480.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	48,842,055.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	146,526,165.00	0.00
tblConstructionPhase	NumDays	11,000.00	1.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblTripsAndVMT	WorkerTripNumber	7,834.00	0.00
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CC_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CNW_TL	7.30	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	CW_TL	9.50	5.72
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	5.72
tblVehicleTrips	HO_TL	7.50	5.72
tblVehicleTrips	HS_TL	7.30	5.72
tblVehicleTrips	HS_TL	7.30	5.72
tblVehicleTrips	HW_TL	10.80	5.72
tblVehicleTrips	HW_TL	10.80	5.72
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00



Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	6.42	8.10
tblVehicleTrips	SU_TR	5.09	6.42
tblVehicleTrips	WD_TR	3.93	4.96

**2.0 Emissions Summary**

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Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	26,877.84 96	619.1815	36,729.12 65	63.8140		4,643.809 7	4,643.809 7		4,643.809 7	4,643.8097	505,669.0 176	258,743.3 409	764,412.3 586	756.6469	35.1726	793,809.9 566
Energy	52.8248	460.6631	259.9338	2.8814		36.4971	36.4971		36.4971	36.4971		576,270.1 780	576,270.1 780	11.0452	10.5650	579,694.6 636
Mobile	4,254.962 3	5,876.845 0	38,247.70 85	47.0291	4,175.669 0	74.3642	4,250.033 2	1,114.028 1	70.0746	1,184.1027		4,791,167. 9151	4,791,167. 9151	587.3196	328.9090	4,903,865. 7713
<b>Total</b>	<b>31,185.63 67</b>	<b>6,956.689 5</b>	<b>75,236.76 89</b>	<b>113.7245</b>	<b>4,175.669 0</b>	<b>4,754.670 9</b>	<b>8,930.340 0</b>	<b>1,114.028 1</b>	<b>4,750.381 4</b>	<b>5,864.4095</b>	<b>505,669.0 176</b>	<b>5,626,181. 4341</b>	<b>6,131,850. 4517</b>	<b>1,355.011 7</b>	<b>374.6465</b>	<b>6,277,370. 3915</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	26,877.84 96	619.1815	36,729.12 65	63.8140		4,643.809 7	4,643.809 7		4,643.809 7	4,643.8097	505,669.0 176	258,743.3 409	764,412.3 586	756.6469	35.1726	793,809.9 566
Energy	52.8248	460.6631	259.9338	2.8814		36.4971	36.4971		36.4971	36.4971		576,270.1 780	576,270.1 780	11.0452	10.5650	579,694.6 636
Mobile	4,254.962 3	5,876.845 0	38,247.70 85	47.0291	4,175.669 0	74.3642	4,250.033 2	1,114.028 1	70.0746	1,184.1027		4,791,167. 9151	4,791,167. 9151	587.3196	328.9090	4,903,865. 7713
<b>Total</b>	<b>31,185.63 67</b>	<b>6,956.689 5</b>	<b>75,236.76 89</b>	<b>113.7245</b>	<b>4,175.669 0</b>	<b>4,754.670 9</b>	<b>8,930.340 0</b>	<b>1,114.028 1</b>	<b>4,750.381 4</b>	<b>5,864.4095</b>	<b>505,669.0 176</b>	<b>5,626,181. 4341</b>	<b>6,131,850. 4517</b>	<b>1,355.011 7</b>	<b>374.6465</b>	<b>6,277,370. 3915</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/29/2018	1/29/2018	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	0.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4,254.962 3	5,876.845 0	38,247.70 85	47.0291	4,175.669 0	74.3642	4,250.033 2	1,114.028 1	70.0746	1,184.1027		4,791,167. 9151	4,791,167. 9151	587.3196	328.9090	4,903,865. 7713
Unmitigated	4,254.962 3	5,876.845 0	38,247.70 85	47.0291	4,175.669 0	74.3642	4,250.033 2	1,114.028 1	70.0746	1,184.1027		4,791,167. 9151	4,791,167. 9151	587.3196	328.9090	4,903,865. 7713

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	141,271.36	127,507.79	106213.21	279,616,741	279,616,741
General Heavy Industry	5,768.13	9,419.73	7466.01	13,600,863	13,600,863
General Office Building	188,136.87	42,688.14	13521.13	296,516,032	296,516,032
General Office Building	59,755.09	13,558.39	4294.51	94,177,946	94,177,946
Manufacturing	4,570.31	7,466.01	5919.31	10,778,303	10,778,303
Regional Shopping Center	244,376.14	298,559.66	136591.69	492,867,608	492,867,608
Single Family Housing	243,287.68	245,864.88	220350.60	500,488,570	500,488,570
<b>Total</b>	<b>887,165.58</b>	<b>745,064.61</b>	<b>494,356.47</b>	<b>1,688,046,063</b>	<b>1,688,046,063</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.72	5.72	5.72	44.00	18.80	37.20	100	0	0

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	5.72	5.72	5.72	59.00	28.00	13.00	100	0	0
General Office Building	5.72	5.72	5.72	33.00	48.00	19.00	100	0	0
General Office Building	5.72	5.72	5.72	33.00	48.00	19.00	100	0	0
Manufacturing	5.72	5.72	5.72	59.00	28.00	13.00	100	0	0
Regional Shopping Center	5.72	5.72	5.72	16.30	64.70	19.00	100	0	0
Single Family Housing	5.72	5.72	5.72	44.00	18.80	37.20	100	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
General Heavy Industry	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
General Office Building	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Manufacturing	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Regional Shopping Center	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267
Single Family Housing	0.478708	0.054656	0.216621	0.143906	0.034949	0.007147	0.012517	0.003953	0.000904	0.000851	0.038296	0.001224	0.006267

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**



Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Natural Gas Mitigated	52.8248	460.6631	259.9338	2.8814		36.4971	36.4971		36.4971	36.4971			576,270.1780	576,270.1780	11.0452	10.5650	579,694.6636
Natural Gas Unmitigated	52.8248	460.6631	259.9338	2.8814		36.4971	36.4971		36.4971	36.4971			576,270.1780	576,270.1780	11.0452	10.5650	579,694.6636

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	600703	6.4782	55.3589	23.5570	0.3534		4.4758	4.4758		4.4758	4.4758		70,670.9192	70,670.9192	1.3545	1.2956	71,090.8811
General Heavy Industry	78282.7	0.8442	7.6748	6.4468	0.0461		0.5833	0.5833		0.5833	0.5833		9,209.7309	9,209.7309	0.1765	0.1689	9,264.4597
General Office Building	1.01342e+006	10.9291	99.3552	83.4584	0.5961		7.5510	7.5510		7.5510	7.5510		119,226.2643	119,226.2643	2.2852	2.1858	119,934.7664
General Office Building	321878	3.4712	31.5567	26.5076	0.1893		2.3983	2.3983		2.3983	2.3983		37,868.0525	37,868.0525	0.7258	0.6943	38,093.0834
Manufacturing	78282.7	0.8442	7.6748	6.4468	0.0461		0.5833	0.5833		0.5833	0.5833		9,209.7309	9,209.7309	0.1765	0.1689	9,264.4597
Regional Shopping Center	80874.9	0.8722	7.9289	6.6603	0.0476		0.6026	0.6026		0.6026	0.6026		9,514.6954	9,514.6954	0.1824	0.1744	9,571.2365
Single Family Housing	2.72485e+006	29.3857	251.1138	106.8569	1.6029		20.3028	20.3028		20.3028	20.3028		320,570.7849	320,570.7849	6.1443	5.8771	322,475.7768
<b>Total</b>		<b>52.8248</b>	<b>460.6631</b>	<b>259.9338</b>	<b>2.8813</b>		<b>36.4971</b>	<b>36.4971</b>		<b>36.4971</b>	<b>36.4971</b>		<b>576,270.1780</b>	<b>576,270.1780</b>	<b>11.0452</b>	<b>10.5650</b>	<b>579,694.6636</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	600.703	6.4782	55.3589	23.5570	0.3534		4.4758	4.4758		4.4758	4.4758		70,670.9192	70,670.9192	1.3545	1.2956	71,090.8811
General Heavy Industry	78.2827	0.8442	7.6748	6.4468	0.0461		0.5833	0.5833		0.5833	0.5833		9,209.7309	9,209.7309	0.1765	0.1689	9,264.4597
General Office Building	1013.42	10.9291	99.3552	83.4584	0.5961		7.5510	7.5510		7.5510	7.5510		119,226.2643	119,226.2643	2.2852	2.1858	119,934.7664
General Office Building	321.878	3.4712	31.5567	26.5076	0.1893		2.3983	2.3983		2.3983	2.3983		37,868.0525	37,868.0525	0.7258	0.6943	38,093.0834
Manufacturing	78.2827	0.8442	7.6748	6.4468	0.0461		0.5833	0.5833		0.5833	0.5833		9,209.7309	9,209.7309	0.1765	0.1689	9,264.4597
Regional Shopping Center	80.8749	0.8722	7.9289	6.6603	0.0476		0.6026	0.6026		0.6026	0.6026		9,514.6954	9,514.6954	0.1824	0.1744	9,571.2365
Single Family Housing	2724.85	29.3857	251.1138	106.8569	1.6029		20.3028	20.3028		20.3028	20.3028		320,570.7849	320,570.7849	6.1443	5.8771	322,475.7768
<b>Total</b>		<b>52.8248</b>	<b>460.6631</b>	<b>259.9338</b>	<b>2.8813</b>		<b>36.4971</b>	<b>36.4971</b>		<b>36.4971</b>	<b>36.4971</b>		<b>576,270.1780</b>	<b>576,270.1780</b>	<b>11.0452</b>	<b>10.5650</b>	<b>579,694.6636</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	26,877.84 96	619.1815	36,729.12 65	63.8140		4,643.809 7	4,643.809 7		4,643.809 7	4,643.8097	505,669.0 176	258,743.3 409	764,412.3 586	756.6469	35.1726	793,809.9 566
Unmitigated	26,877.84 96	619.1815	36,729.12 65	63.8140		4,643.809 7	4,643.809 7		4,643.809 7	4,643.8097	505,669.0 176	258,743.3 409	764,412.3 586	756.6469	35.1726	793,809.9 566

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	378.5705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,281.430 9					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	24,086.19 73	569.4607	32,435.75 63	63.5883		4,620.291 4	4,620.291 4		4,620.291 4	4,620.2914	505,669.0 176	251,049.6 000	756,718.6 176	749.0820	35.1726	785,927.0 930
Landscaping	131.6509	49.7208	4,293.370 3	0.2257		23.5183	23.5183		23.5183	23.5183		7,693.740 9	7,693.740 9	7.5649		7,882.863 7
<b>Total</b>	<b>26,877.84 96</b>	<b>619.1815</b>	<b>36,729.12 66</b>	<b>63.8140</b>		<b>4,643.809 7</b>	<b>4,643.809 7</b>		<b>4,643.809 7</b>	<b>4,643.8097</b>	<b>505,669.0 176</b>	<b>258,743.3 409</b>	<b>764,412.3 586</b>	<b>756.6469</b>	<b>35.1726</b>	<b>793,809.9 566</b>

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	378.5705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,281.4309					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	24,086.1973	569.4607	32,435.7563	63.5883		4,620.2914	4,620.2914		4,620.2914	4,620.2914	505,669.0176	251,049.6000	756,718.6176	749.0820	35.1726	785,927.0930
Landscaping	131.6509	49.7208	4,293.3703	0.2257		23.5183	23.5183		23.5183	23.5183		7,693.7409	7,693.7409	7.5649		7,882.8637
<b>Total</b>	<b>26,877.8496</b>	<b>619.1815</b>	<b>36,729.1266</b>	<b>63.8140</b>		<b>4,643.8097</b>	<b>4,643.8097</b>		<b>4,643.8097</b>	<b>4,643.8097</b>	<b>505,669.0176</b>	<b>258,743.3409</b>	<b>764,412.3586</b>	<b>756.6469</b>	<b>35.1726</b>	<b>793,809.9566</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Sustainability Update of the Santa Cruz County GP - Existing Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Sustainability Update of the Santa Cruz County GP - Project Scenario**

**Santa Cruz County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	22,558.51	1000sqft	517.87	22,558,500.00	0
General Office Building	7,576.99	1000sqft	173.94	7,576,990.00	0
General Heavy Industry	1,891.84	1000sqft	43.43	1,891,840.00	0
Manufacturing	1,891.84	1000sqft	43.43	1,891,840.00	0
Apartments Mid Rise	26,931.00	Dwelling Unit	708.71	26,931,000.00	77023
Single Family Housing	29,308.00	Dwelling Unit	8,000.00	52,754,400.00	83821
Regional Shopping Center	6,540.67	1000sqft	150.15	6,540,670.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	1.8	<b>Precipitation Freq (Days)</b>	61
<b>Climate Zone</b>	5			<b>Operational Year</b>	2040
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - Change based on RPS?

Land Use - Project land uses based on information from the County. "General Heavy Industry" selected in place of "General Light Industry" and reduced SF housing acres based on CalEEMod land use size limitations.

Construction Phase - Modeling operations only for Plan level analysis

Off-road Equipment - Modeling operations only for Plan level analysis

Trips and VMT - Modeling operations only for Plan level analysis

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Architectural Coating - Modeling operations only for Plan level analysis

Vehicle Trips - Trip lengths adjusted to match total weekday VMT for the scenario. Assumed same trip lengths for weekend days.

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Road Dust - Default

Woodstoves - Defaults

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Default

Water And Wastewater - Default

Solid Waste - Default

Fleet Mix - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	20,229,920.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	60,689,760.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	53,787,645.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	161,362,935.00	0.00
tblConstructionPhase	NumDays	11,000.00	1.00
tblConstructionPhase	PhaseEndDate	3/26/2060	1/29/2018
tblLandUse	LotAcreage	9,515.58	8,000.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblTripsAndVMT	WorkerTripNumber	8,653.00	0.00
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77



Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	5.77
tblVehicleTrips	HO_TL	7.50	5.77
tblVehicleTrips	HS_TL	7.30	5.77
tblVehicleTrips	HS_TL	7.30	5.77
tblVehicleTrips	HW_TL	10.80	5.77
tblVehicleTrips	HW_TL	10.80	5.77
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	6.42	8.10
tblVehicleTrips	SU_TR	5.09	6.42
tblVehicleTrips	WD_TR	3.93	4.96

**2.0 Emissions Summary**

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Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Maximum</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Maximum</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

		Highest	
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**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,687.5623	33.2209	2,090.2667	2.9955		218.6407	218.6407		218.6407	218.6407	21,388.6808	11,567.2235	32,955.9043	32.5889	1.4877	34,213.9666
Energy	11.0986	96.9014	55.4543	0.6054		7.6682	7.6682		7.6682	7.6682	0.0000	183,070.4573	183,070.4573	13.9528	3.4498	184,447.3072
Mobile	266.7574	237.6418	2,563.3146	4.8683	691.2055	2.5958	693.8012	184.4611	2.4172	186.8783	0.0000	449,899.9070	449,899.9070	34.7200	21.9303	457,303.1308
Waste						0.0000	0.0000		0.0000	0.0000	18,036.7579	0.0000	18,036.7579	1,065.9419	0.0000	44,685.3044
Water						0.0000	0.0000		0.0000	0.0000	3,293.0166	7,103.8786	10,396.8952	339.3737	8.1255	21,302.6404
<b>Total</b>	<b>1,965.4183</b>	<b>367.7641</b>	<b>4,709.0355</b>	<b>8.4692</b>	<b>691.2055</b>	<b>228.9046</b>	<b>920.1101</b>	<b>184.4611</b>	<b>228.7261</b>	<b>413.1871</b>	<b>42,718.4553</b>	<b>651,641.4664</b>	<b>694,359.9218</b>	<b>1,486.5771</b>	<b>34.9933</b>	<b>741,952.3492</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1,687.5623	33.2209	2,090.2667	2.9955		218.6407	218.6407		218.6407	218.6407	21,388.6808	11,567.2235	32,955.9043	32.5889	1.4877	34,213.9666
Energy	11.0986	96.9014	55.4543	0.6054		7.6682	7.6682		7.6682	7.6682	0.0000	183,070.4573	183,070.4573	13.9528	3.4498	184,447.3072
Mobile	266.7574	237.6418	2,563.3146	4.8683	691.2055	2.5958	693.8012	184.4611	2.4172	186.8783	0.0000	449,899.9070	449,899.9070	34.7200	21.9303	457,303.1308
Waste						0.0000	0.0000		0.0000	0.0000	18,036.7579	0.0000	18,036.7579	1,065.9419	0.0000	44,685.3044
Water						0.0000	0.0000		0.0000	0.0000	3,293.0166	7,103.8786	10,396.8952	339.3737	8.1255	21,302.6404
<b>Total</b>	<b>1,965.4183</b>	<b>367.7641</b>	<b>4,709.0355</b>	<b>8.4692</b>	<b>691.2055</b>	<b>228.9046</b>	<b>920.1101</b>	<b>184.4611</b>	<b>228.7261</b>	<b>413.1871</b>	<b>42,718.4553</b>	<b>651,641.4664</b>	<b>694,359.9218</b>	<b>1,486.5771</b>	<b>34.9933</b>	<b>741,952.3492</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/29/2018	1/29/2018	5	1	

**Acres of Grading (Site Preparation Phase): 0**





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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	266.7574	237.6418	2,563.3146	4.8683	691.2055	2.5958	693.8012	184.4611	2.4172	186.8783	0.0000	449,899.9070	449,899.9070	34.7200	21.9303	457,303.1308
Unmitigated	266.7574	237.6418	2,563.3146	4.8683	691.2055	2.5958	693.8012	184.4611	2.4172	186.8783	0.0000	449,899.9070	449,899.9070	34.7200	21.9303	457,303.1308

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	146,504.64	132,231.21	110,147.79	292,509,656	292,509,656
General Heavy Industry	9,383.53	15,323.90	12,145.61	22,319,120	22,319,120
General Office Building	219,719.89	49,854.31	15,790.96	349,319,980	349,319,980
General Office Building	73,799.88	16,745.15	5,303.89	117,330,178	117,330,178
Manufacturing	7,434.93	12,145.61	9,629.47	17,687,278	17,687,278
Regional Shopping Center	246,910.29	301,655.70	138,008.14	502,331,559	502,331,559
Single Family Housing	276,667.52	279,598.32	250,583.40	574,132,337	574,132,337
<b>Total</b>	<b>980,420.68</b>	<b>807,554.20</b>	<b>541,609.26</b>	<b>1,875,630,108</b>	<b>1,875,630,108</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.77	5.77	5.77	44.00	18.80	37.20	100	0	0
General Heavy Industry	5.77	5.77	5.77	59.00	28.00	13.00	100	0	0
General Office Building	5.77	5.77	5.77	33.00	48.00	19.00	100	0	0
General Office Building	5.77	5.77	5.77	33.00	48.00	19.00	100	0	0
Manufacturing	5.77	5.77	5.77	59.00	28.00	13.00	100	0	0

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Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Regional Shopping Center	5.77	5.77	5.77	16.30	64.70	19.00	100	0	0
Single Family Housing	5.77	5.77	5.77	44.00	18.80	37.20	100	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
General Heavy Industry	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
General Office Building	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Manufacturing	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Regional Shopping Center	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Single Family Housing	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	73,232.1076	73,232.1076	11.8475	1.4361	73,956.2431
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	73,232.1076	73,232.1076	11.8475	1.4361	73,956.2431
Natural Gas Mitigated	11.0986	96.9014	55.4543	0.6054		7.6682	7.6682		7.6682	7.6682	0.0000	109,838.3497	109,838.3497	2.1052	2.0137	110,491.0641
Natural Gas Unmitigated	11.0986	96.9014	55.4543	0.6054		7.6682	7.6682		7.6682	7.6682	0.0000	109,838.3497	109,838.3497	2.1052	2.0137	110,491.0641

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.27379e+008	1.2261	10.4773	4.4584	0.0669		0.8471	0.8471		0.8471	0.8471	0.0000	12,133.7935	12,133.7935	0.2326	0.2225	12,205.8985
General Heavy Industry	4.64825e+007	0.2506	2.2786	1.9140	0.0137		0.1732	0.1732		0.1732	0.1732	0.0000	2,480.4837	2,480.4837	0.0475	0.0455	2,495.2240
General Office Building	1.45099e+008	0.7824	7.1127	5.9747	0.0427		0.5406	0.5406		0.5406	0.5406	0.0000	7,743.0543	7,743.0543	0.1484	0.1420	7,789.0674
General Office Building	4.31995e+008	2.3294	21.1762	17.7880	0.1271		1.6094	1.6094		1.6094	1.6094	0.0000	23,052.9130	23,052.9130	0.4419	0.4226	23,189.9050
Manufacturing	4.64825e+007	0.2506	2.2786	1.9140	0.0137		0.1732	0.1732		0.1732	0.1732	0.0000	2,480.4837	2,480.4837	0.0475	0.0455	2,495.2240
Regional Shopping Center	2.98255e+007	0.1608	1.4620	1.2281	8.7700e-003		0.1111	0.1111		0.1111	0.1111	0.0000	1,591.5999	1,591.5999	0.0305	0.0292	1,601.0580
Single Family Housing	1.13103e+009	6.0987	52.1161	22.1770	0.3327		4.2136	4.2136		4.2136	4.2136	0.0000	60,356.0217	60,356.0217	1.1568	1.1065	60,714.6873
<b>Total</b>		<b>11.0986</b>	<b>96.9014</b>	<b>55.4543</b>	<b>0.6054</b>		<b>7.6682</b>	<b>7.6682</b>		<b>7.6682</b>	<b>7.6682</b>	<b>0.0000</b>	<b>109,838.3497</b>	<b>109,838.3497</b>	<b>2.1052</b>	<b>2.0137</b>	<b>110,491.0641</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.27379e+008	1.2261	10.4773	4.4584	0.0669		0.8471	0.8471		0.8471	0.8471	0.0000	12,133.7935	12,133.7935	0.2326	0.2225	12,205.8985
General Heavy Industry	4.64825e+007	0.2506	2.2786	1.9140	0.0137		0.1732	0.1732		0.1732	0.1732	0.0000	2,480.4837	2,480.4837	0.0475	0.0455	2,495.2240
General Office Building	1.45099e+008	0.7824	7.1127	5.9747	0.0427		0.5406	0.5406		0.5406	0.5406	0.0000	7,743.0543	7,743.0543	0.1484	0.1420	7,789.0674
General Office Building	4.31995e+008	2.3294	21.1762	17.7880	0.1271		1.6094	1.6094		1.6094	1.6094	0.0000	23,052.9130	23,052.9130	0.4419	0.4226	23,189.9050
Manufacturing	4.64825e+007	0.2506	2.2786	1.9140	0.0137		0.1732	0.1732		0.1732	0.1732	0.0000	2,480.4837	2,480.4837	0.0475	0.0455	2,495.2240
Regional Shopping Center	2.98255e+007	0.1608	1.4620	1.2281	8.7700e-003		0.1111	0.1111		0.1111	0.1111	0.0000	1,591.5999	1,591.5999	0.0305	0.0292	1,601.0580
Single Family Housing	1.13103e+009	6.0987	52.1161	22.1770	0.3327		4.2136	4.2136		4.2136	4.2136	0.0000	60,356.0217	60,356.0217	1.1568	1.1065	60,714.6873
<b>Total</b>		<b>11.0986</b>	<b>96.9014</b>	<b>55.4543</b>	<b>0.6054</b>		<b>7.6682</b>	<b>7.6682</b>		<b>7.6682</b>	<b>7.6682</b>	<b>0.0000</b>	<b>109,838.3497</b>	<b>109,838.3497</b>	<b>2.1052</b>	<b>2.0137</b>	<b>110,491.0641</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.04664e+008	9,683.8924	1.5667	0.1899	9,779.6489
General Heavy Industry	1.40564e+007	1,300.5485	0.2104	0.0255	1,313.4086
General Office Building	2.71604e+008	25,129.8579	4.0655	0.4928	25,378.3476
General Office Building	9.1227e+007	8,440.6624	1.3655	0.1655	8,524.1255
Manufacturing	1.40564e+007	1,300.5485	0.2104	0.0255	1,313.4086
Regional Shopping Center	6.69765e+007	6,196.9148	1.0025	0.1215	6,258.1913
Single Family Housing	2.28911e+008	21,179.6832	3.4265	0.4153	21,389.1127
<b>Total</b>		<b>73,232.1076</b>	<b>11.8475</b>	<b>1.4361</b>	<b>73,956.2431</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.3 Energy by Land Use - Electricity**

**Mitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.04664e+008	9,683.8924	1.5667	0.1899	9,779.6489
General Heavy Industry	1.40564e+007	1,300.5485	0.2104	0.0255	1,313.4086
General Office Building	2.71604e+008	25,129.8579	4.0655	0.4928	25,378.3476
General Office Building	9.1227e+007	8,440.6624	1.3655	0.1655	8,524.1255
Manufacturing	1.40564e+007	1,300.5485	0.2104	0.0255	1,313.4086
Regional Shopping Center	6.69765e+007	6,196.9148	1.0025	0.1215	6,258.1913
Single Family Housing	2.28911e+008	21,179.6832	3.4265	0.4153	21,389.1127
<b>Total</b>		<b>73,232.1076</b>	<b>11.8475</b>	<b>1.4361</b>	<b>73,956.2431</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,687.5623	33.2209	2,090.2667	2.9955		218.6407	218.6407		218.6407	218.6407	21,388.6808	11,567.2235	32,955.9043	32.5889	1.4877	34,213.9666
Unmitigated	1,687.5623	33.2209	2,090.2667	2.9955		218.6407	218.6407		218.6407	218.6407	21,388.6808	11,567.2235	32,955.9043	32.5889	1.4877	34,213.9666

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	77.9909					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	469.2272					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,123.0269	26.5513	1,512.3278	2.9648		215.4226	215.4226		215.4226	215.4226	21,388.6808	10,618.8427	32,007.5234	31.6845	1.4877	33,242.9773
Landscaping	17.3173	6.6696	577.9389	0.0307		3.2181	3.2181		3.2181	3.2181	0.0000	948.3809	948.3809	0.9043	0.0000	970.9892
<b>Total</b>	<b>1,687.5623</b>	<b>33.2209</b>	<b>2,090.2667</b>	<b>2.9955</b>		<b>218.6407</b>	<b>218.6407</b>		<b>218.6407</b>	<b>218.6407</b>	<b>21,388.6808</b>	<b>11,567.2235</b>	<b>32,955.9043</b>	<b>32.5889</b>	<b>1.4877</b>	<b>34,213.9666</b>



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	77.9909					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	469.2272					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1,123.0269	26.5513	1,512.3278	2.9648		215.4226	215.4226		215.4226	215.4226	21,388.6808	10,618.8427	32,007.5234	31.6845	1.4877	33,242.9773
Landscaping	17.3173	6.6696	577.9389	0.0307		3.2181	3.2181		3.2181	3.2181	0.0000	948.3809	948.3809	0.9043	0.0000	970.9892
<b>Total</b>	<b>1,687.5623</b>	<b>33.2209</b>	<b>2,090.2667</b>	<b>2.9955</b>		<b>218.6407</b>	<b>218.6407</b>		<b>218.6407</b>	<b>218.6407</b>	<b>21,388.6808</b>	<b>11,567.2235</b>	<b>32,955.9043</b>	<b>32.5889</b>	<b>1.4877</b>	<b>34,213.9666</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10,396.89 52	339.3737	8.1255	21,302.64 04
Unmitigated	10,396.89 52	339.3737	8.1255	21,302.64 04

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1754.66 / 1106.2	1,793.3634	57.3758	1.3743	3,637.2978
General Heavy Industry	437.488 / 0	357.8214	14.2910	0.3409	816.6842
General Office Building	5356.1 / 3282.77	5,443.8197	175.1342	4.1944	11,072.1144
Manufacturing	437.488 / 0	357.8214	14.2910	0.3409	816.6842
Regional Shopping Center	484.484 / 296.942	492.4190	15.8417	0.3794	1,001.5246
Single Family Housing	1909.53 / 1203.84	1,951.6503	62.4399	1.4956	3,958.3352
<b>Total</b>		<b>10,396.8952</b>	<b>339.3737</b>	<b>8.1255</b>	<b>21,302.6403</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	1754.66 / 1106.2	1,793.3634	57.3758	1.3743	3,637.2978
General Heavy Industry	437.488 / 0	357.8214	14.2910	0.3409	816.6842
General Office Building	5356.1 / 3282.77	5,443.8197	175.1342	4.1944	11,072.1144
Manufacturing	437.488 / 0	357.8214	14.2910	0.3409	816.6842
Regional Shopping Center	484.484 / 296.942	492.4190	15.8417	0.3794	1,001.5246
Single Family Housing	1909.53 / 1203.84	1,951.6503	62.4399	1.4956	3,958.3352
<b>Total</b>		<b>10,396.8952</b>	<b>339.3737</b>	<b>8.1255</b>	<b>21,302.6403</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18,036.75 79	1,065.941 9	0.0000	44,685.30 44
Unmitigated	18,036.75 79	1,065.941 9	0.0000	44,685.30 44

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	12388.3	2,514.7048	148.6148	0.0000	6,230.0748
General Heavy Industry	2345.88	476.1924	28.1422	0.0000	1,179.7466
General Office Building	28026	5,689.0288	336.2120	0.0000	14,094.3280
Manufacturing	2345.88	476.1924	28.1422	0.0000	1,179.7466
Regional Shopping Center	6867.7	1,394.0810	82.3878	0.0000	3,453.7768
Single Family Housing	36881.2	7,486.5584	442.4429	0.0000	18,547.6316
<b>Total</b>		<b>18,036.7580</b>	<b>1,065.9419</b>	<b>0.0000</b>	<b>44,685.3044</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.2 Waste by Land Use**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	12388.3	2,514.7048	148.6148	0.0000	6,230.0748
General Heavy Industry	2345.88	476.1924	28.1422	0.0000	1,179.7466
General Office Building	28026	5,689.0288	336.2120	0.0000	14,094.3280
Manufacturing	2345.88	476.1924	28.1422	0.0000	1,179.7466
Regional Shopping Center	6867.7	1,394.0810	82.3878	0.0000	3,453.7768
Single Family Housing	36881.2	7,486.5584	442.4429	0.0000	18,547.6316
<b>Total</b>		<b>18,036.7580</b>	<b>1,065.9419</b>	<b>0.0000</b>	<b>44,685.3044</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Sustainability Update of the Santa Cruz County GP - Project Scenario**

**Santa Cruz County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	22,558.51	1000sqft	517.87	22,558,500.00	0
General Office Building	7,576.99	1000sqft	173.94	7,576,990.00	0
General Heavy Industry	1,891.84	1000sqft	43.43	1,891,840.00	0
Manufacturing	1,891.84	1000sqft	43.43	1,891,840.00	0
Apartments Mid Rise	26,931.00	Dwelling Unit	708.71	26,931,000.00	77023
Single Family Housing	29,308.00	Dwelling Unit	8,000.00	52,754,400.00	83821
Regional Shopping Center	6,540.67	1000sqft	150.15	6,540,670.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	1.8	<b>Precipitation Freq (Days)</b>	61
<b>Climate Zone</b>	5			<b>Operational Year</b>	2040
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - Change based on RPS?

Land Use - Project land uses based on information from the County. "General Heavy Industry" selected in place of "General Light Industry" and reduced SF housing acres based on CalEEMod land use size limitations.

Construction Phase - Modeling operations only for Plan level analysis

Off-road Equipment - Modeling operations only for Plan level analysis

Trips and VMT - Modeling operations only for Plan level analysis

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Architectural Coating - Modeling operations only for Plan level analysis

Vehicle Trips - Trip lengths adjusted to match total weekday VMT for the scenario. Assumed same trip lengths for weekend days.

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Road Dust - Default

Woodstoves - Defaults

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Default

Water And Wastewater - Default

Solid Waste - Default

Fleet Mix - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	20,229,920.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	60,689,760.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	53,787,645.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	161,362,935.00	0.00
tblConstructionPhase	NumDays	11,000.00	1.00
tblConstructionPhase	PhaseEndDate	3/26/2060	1/29/2018
tblLandUse	LotAcreage	9,515.58	8,000.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblTripsAndVMT	WorkerTripNumber	8,653.00	0.00
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	5.77
tblVehicleTrips	HO_TL	7.50	5.77
tblVehicleTrips	HS_TL	7.30	5.77
tblVehicleTrips	HS_TL	7.30	5.77
tblVehicleTrips	HW_TL	10.80	5.77
tblVehicleTrips	HW_TL	10.80	5.77
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	6.42	8.10
tblVehicleTrips	SU_TR	5.09	6.42
tblVehicleTrips	WD_TR	3.93	4.96

**2.0 Emissions Summary**

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Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30,527.89 33	700.9494	41,509.55 57	72.5581		5,279.954 6	5,279.954 6		5,279.954 6	5,279.9546	575,048.4 079	293,857.6 875	868,906.0 955	859.8333	39.9984	902,321.4 378
Energy	60.8145	530.9666	303.8589	3.3172		42.0173	42.0173		42.0173	42.0173		663,430.4 399	663,430.4 399	12.7158	12.1629	667,372.8 753
Mobile	1,828.879 9	1,402.030 1	15,706.96 65	32.5285	4,627.153 8	16.7670	4,643.920 8	1,231.263 4	15.6136	1,246.8769		3,313,175. 0769	3,313,175. 0769	233.9016	147.0482	3,362,842. 9871
<b>Total</b>	<b>32,417.58 76</b>	<b>2,633.946 0</b>	<b>57,520.38 11</b>	<b>108.4037</b>	<b>4,627.153 8</b>	<b>5,338.738 9</b>	<b>9,965.892 7</b>	<b>1,231.263 4</b>	<b>5,337.585 5</b>	<b>6,568.8488</b>	<b>575,048.4 079</b>	<b>4,270,463. 2043</b>	<b>4,845,511. 6122</b>	<b>1,106.450 6</b>	<b>199.2095</b>	<b>4,932,537. 3001</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30,527.89 33	700.9494	41,509.55 57	72.5581		5,279.954 6	5,279.954 6		5,279.954 6	5,279.9546	575,048.4 079	293,857.6 875	868,906.0 955	859.8333	39.9984	902,321.4 378
Energy	60.8145	530.9666	303.8589	3.3172		42.0173	42.0173		42.0173	42.0173		663,430.4 399	663,430.4 399	12.7158	12.1629	667,372.8 753
Mobile	1,828.879 9	1,402.030 1	15,706.96 65	32.5285	4,627.153 8	16.7670	4,643.920 8	1,231.263 4	15.6136	1,246.8769		3,313,175. 0769	3,313,175. 0769	233.9016	147.0482	3,362,842. 9871
<b>Total</b>	<b>32,417.58 76</b>	<b>2,633.946 0</b>	<b>57,520.38 11</b>	<b>108.4037</b>	<b>4,627.153 8</b>	<b>5,338.738 9</b>	<b>9,965.892 7</b>	<b>1,231.263 4</b>	<b>5,337.585 5</b>	<b>6,568.8488</b>	<b>575,048.4 079</b>	<b>4,270,463. 2043</b>	<b>4,845,511. 6122</b>	<b>1,106.450 6</b>	<b>199.2095</b>	<b>4,932,537. 3001</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/29/2018	1/29/2018	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	0.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>



Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,828.879 9	1,402.030 1	15,706.96 65	32.5285	4,627.153 8	16.7670	4,643.920 8	1,231.263 4	15.6136	1,246.8769		3,313,175. 0769	3,313,175. 0769	233.9016	147.0482	3,362,842. 9871
Unmitigated	1,828.879 9	1,402.030 1	15,706.96 65	32.5285	4,627.153 8	16.7670	4,643.920 8	1,231.263 4	15.6136	1,246.8769		3,313,175. 0769	3,313,175. 0769	233.9016	147.0482	3,362,842. 9871

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	146,504.64	132,231.21	110147.79	292,509,656	292,509,656
General Heavy Industry	9,383.53	15,323.90	12145.61	22,319,120	22,319,120
General Office Building	219,719.89	49,854.31	15790.96	349,319,980	349,319,980
General Office Building	73,799.88	16,745.15	5303.89	117,330,178	117,330,178
Manufacturing	7,434.93	12,145.61	9629.47	17,687,278	17,687,278
Regional Shopping Center	246,910.29	301,655.70	138008.14	502,331,559	502,331,559
Single Family Housing	276,667.52	279,598.32	250583.40	574,132,337	574,132,337
<b>Total</b>	<b>980,420.68</b>	<b>807,554.20</b>	<b>541,609.26</b>	<b>1,875,630,108</b>	<b>1,875,630,108</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.77	5.77	5.77	44.00	18.80	37.20	100	0	0

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	5.77	5.77	5.77	59.00	28.00	13.00	100	0	0
General Office Building	5.77	5.77	5.77	33.00	48.00	19.00	100	0	0
General Office Building	5.77	5.77	5.77	33.00	48.00	19.00	100	0	0
Manufacturing	5.77	5.77	5.77	59.00	28.00	13.00	100	0	0
Regional Shopping Center	5.77	5.77	5.77	16.30	64.70	19.00	100	0	0
Single Family Housing	5.77	5.77	5.77	44.00	18.80	37.20	100	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
General Heavy Industry	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
General Office Building	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Manufacturing	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Regional Shopping Center	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Single Family Housing	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Natural Gas Mitigated	60.8145	530.9666	303.8589	3.3172		42.0173	42.0173		42.0173	42.0173		663,430.4399	663,430.4399	12.7158	12.1629	667,372.8753
Natural Gas Unmitigated	60.8145	530.9666	303.8589	3.3172		42.0173	42.0173		42.0173	42.0173		663,430.4399	663,430.4399	12.7158	12.1629	667,372.8753

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	622955	6.7182	57.4096	24.4296	0.3664		4.6416	4.6416		4.6416	4.6416		73,288.8646	73,288.8646	1.4047	1.3436	73,724.3836
General Heavy Industry	127349	1.3734	12.4852	10.4876	0.0749		0.9489	0.9489		0.9489	0.9489		14,982.2752	14,982.2752	0.2872	0.2747	15,071.3074
General Office Building	1.18355e+006	12.7638	116.0342	97.4687	0.6962		8.8186	8.8186		8.8186	8.8186		139,241.0234	139,241.0234	2.6688	2.5528	140,068.4632
General Office Building	397532	4.2871	38.9738	32.7380	0.2338		2.9620	2.9620		2.9620	2.9620		46,768.5281	46,768.5281	0.8964	0.8574	47,046.4501
Manufacturing	127349	1.3734	12.4852	10.4876	0.0749		0.9489	0.9489		0.9489	0.9489		14,982.2752	14,982.2752	0.2872	0.2747	15,071.3074
Regional Shopping Center	81713.6	0.8812	8.0111	6.7294	0.0481		0.6089	0.6089		0.6089	0.6089		9,613.3619	9,613.3619	0.1843	0.1762	9,670.4893
Single Family Housing	3.09871e+006	33.4175	285.5674	121.5180	1.8228		23.0884	23.0884		23.0884	23.0884		364,554.116	364,554.116	6.9873	6.6835	366,720.4744
<b>Total</b>		<b>60.8145</b>	<b>530.9666</b>	<b>303.8589</b>	<b>3.3172</b>		<b>42.0173</b>	<b>42.0173</b>		<b>42.0173</b>	<b>42.0173</b>		<b>663,430.4399</b>	<b>663,430.4399</b>	<b>12.7158</b>	<b>12.1629</b>	<b>667,372.8753</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	622.955	6.7182	57.4096	24.4296	0.3664		4.6416	4.6416		4.6416	4.6416		73,288.8646	73,288.8646	1.4047	1.3436	73,724.3836
General Heavy Industry	127.349	1.3734	12.4852	10.4876	0.0749		0.9489	0.9489		0.9489	0.9489		14,982.2752	14,982.2752	0.2872	0.2747	15,071.3074
General Office Building	1183.55	12.7638	116.0342	97.4687	0.6962		8.8186	8.8186		8.8186	8.8186		139,241.0234	139,241.0234	2.6688	2.5528	140,068.4632
General Office Building	397.532	4.2871	38.9738	32.7380	0.2338		2.9620	2.9620		2.9620	2.9620		46,768.5281	46,768.5281	0.8964	0.8574	47,046.4501
Manufacturing	127.349	1.3734	12.4852	10.4876	0.0749		0.9489	0.9489		0.9489	0.9489		14,982.2752	14,982.2752	0.2872	0.2747	15,071.3074
Regional Shopping Center	81.7136	0.8812	8.0111	6.7294	0.0481		0.6089	0.6089		0.6089	0.6089		9,613.3619	9,613.3619	0.1843	0.1762	9,670.4893
Single Family Housing	3098.71	33.4175	285.5674	121.5180	1.8228		23.0884	23.0884		23.0884	23.0884		364,554.116	364,554.116	6.9873	6.6835	366,720.4744
<b>Total</b>		<b>60.8145</b>	<b>530.9666</b>	<b>303.8589</b>	<b>3.3172</b>		<b>42.0173</b>	<b>42.0173</b>		<b>42.0173</b>	<b>42.0173</b>		<b>663,430.4399</b>	<b>663,430.4399</b>	<b>12.7158</b>	<b>12.1629</b>	<b>667,372.8753</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30,527.89 33	700.9494	41,509.55 57	72.5581		5,279.954 6	5,279.954 6		5,279.954 6	5,279.9546	575,048.4 079	293,857.6 875	868,906.0 955	859.8333	39.9984	902,321.4 378
Unmitigated	30,527.89 33	700.9494	41,509.55 57	72.5581		5,279.954 6	5,279.954 6		5,279.954 6	5,279.9546	575,048.4 079	293,857.6 875	868,906.0 955	859.8333	39.9984	902,321.4 378

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	427.3471					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,571.108 1					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	27,390.89 98	647.5925	36,886.04 48	72.3128		5,254.210 0	5,254.210 0		5,254.210 0	5,254.2100	575,048.4 079	285,494.4 000	860,542.8 079	851.8584	39.9984	893,758.7 785
Landscaping	138.5382	53.3569	4,623.511 0	0.2453		25.7446	25.7446		25.7446	25.7446		8,363.287 5	8,363.287 5	7.9749		8,562.659 3
<b>Total</b>	<b>30,527.89 33</b>	<b>700.9494</b>	<b>41,509.55 57</b>	<b>72.5581</b>		<b>5,279.954 6</b>	<b>5,279.954 6</b>		<b>5,279.954 6</b>	<b>5,279.9546</b>	<b>575,048.4 079</b>	<b>293,857.6 875</b>	<b>868,906.0 955</b>	<b>859.8333</b>	<b>39.9984</b>	<b>902,321.4 378</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	427.3471					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,571.1081					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	27,390.8998	647.5925	36,886.0448	72.3128		5,254.2100	5,254.2100		5,254.2100	5,254.2100	575,048.4079	285,494.4000	860,542.8079	851.8584	39.9984	893,758.7785
Landscaping	138.5382	53.3569	4,623.5110	0.2453		25.7446	25.7446		25.7446	25.7446		8,363.2875	8,363.2875	7.9749		8,562.6593
<b>Total</b>	<b>30,527.8933</b>	<b>700.9494</b>	<b>41,509.5557</b>	<b>72.5581</b>		<b>5,279.9546</b>	<b>5,279.9546</b>		<b>5,279.9546</b>	<b>5,279.9546</b>	<b>575,048.4079</b>	<b>293,857.6875</b>	<b>868,906.0955</b>	<b>859.8333</b>	<b>39.9984</b>	<b>902,321.4378</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**



Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Sustainability Update of the Santa Cruz County GP - Project Scenario  
Santa Cruz County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	22,558.51	1000sqft	517.87	22,558,500.00	0
General Office Building	7,576.99	1000sqft	173.94	7,576,990.00	0
General Heavy Industry	1,891.84	1000sqft	43.43	1,891,840.00	0
Manufacturing	1,891.84	1000sqft	43.43	1,891,840.00	0
Apartments Mid Rise	26,931.00	Dwelling Unit	708.71	26,931,000.00	77023
Single Family Housing	29,308.00	Dwelling Unit	8,000.00	52,754,400.00	83821
Regional Shopping Center	6,540.67	1000sqft	150.15	6,540,670.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	1.8	<b>Precipitation Freq (Days)</b>	61
<b>Climate Zone</b>	5			<b>Operational Year</b>	2040
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - Change based on RPS?

Land Use - Project land uses based on information from the County. "General Heavy Industry" selected in place of "General Light Industry" and reduced SF housing acres based on CalEEMod land use size limitations.

Construction Phase - Modeling operations only for Plan level analysis

Off-road Equipment - Modeling operations only for Plan level analysis

Trips and VMT - Modeling operations only for Plan level analysis

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Architectural Coating - Modeling operations only for Plan level analysis

Vehicle Trips - Trip lengths adjusted to match total weekday VMT for the scenario. Assumed same trip lengths for weekend days.

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Vehicle Emission Factors - Default

Road Dust - Default

Woodstoves - Defaults

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Default

Water And Wastewater - Default

Solid Waste - Default

Fleet Mix - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	20,229,920.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	60,689,760.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	53,787,645.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	161,362,935.00	0.00
tblConstructionPhase	NumDays	11,000.00	1.00
tblConstructionPhase	PhaseEndDate	3/26/2060	1/29/2018
tblLandUse	LotAcreage	9,515.58	8,000.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblTripsAndVMT	WorkerTripNumber	8,653.00	0.00
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77
tblVehicleTrips	CC_TL	7.30	5.77

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CNW_TL	7.30	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	CW_TL	9.50	5.77
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	5.77
tblVehicleTrips	HO_TL	7.50	5.77
tblVehicleTrips	HS_TL	7.30	5.77
tblVehicleTrips	HS_TL	7.30	5.77
tblVehicleTrips	HW_TL	10.80	5.77
tblVehicleTrips	HW_TL	10.80	5.77
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	6.42	8.10
tblVehicleTrips	SU_TR	5.09	6.42
tblVehicleTrips	WD_TR	3.93	4.96

**2.0 Emissions Summary**

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Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30,527.89 33	700.9494	41,509.55 57	72.5581		5,279.954 6	5,279.954 6		5,279.954 6	5,279.9546	575,048.4 079	293,857.6 875	868,906.0 955	859.8333	39.9984	902,321.4 378
Energy	60.8145	530.9666	303.8589	3.3172		42.0173	42.0173		42.0173	42.0173		663,430.4 399	663,430.4 399	12.7158	12.1629	667,372.8 753
Mobile	1,721.637 1	1,618.709 9	17,854.13 63	31.4513	4,627.153 8	16.7725	4,643.926 3	1,231.263 4	15.6188	1,246.8821		3,204,338. 9488	3,204,338. 9488	259.2613	162.2616	3,259,174. 4405
<b>Total</b>	<b>32,310.34 48</b>	<b>2,850.625 8</b>	<b>59,667.55 09</b>	<b>107.3266</b>	<b>4,627.153 8</b>	<b>5,338.744 4</b>	<b>9,965.898 2</b>	<b>1,231.263 4</b>	<b>5,337.590 7</b>	<b>6,568.8540</b>	<b>575,048.4 079</b>	<b>4,161,627. 0762</b>	<b>4,736,675. 4841</b>	<b>1,131.810 3</b>	<b>214.4229</b>	<b>4,828,868. 7536</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30,527.89 33	700.9494	41,509.55 57	72.5581		5,279.954 6	5,279.954 6		5,279.954 6	5,279.9546	575,048.4 079	293,857.6 875	868,906.0 955	859.8333	39.9984	902,321.4 378
Energy	60.8145	530.9666	303.8589	3.3172		42.0173	42.0173		42.0173	42.0173		663,430.4 399	663,430.4 399	12.7158	12.1629	667,372.8 753
Mobile	1,721.637 1	1,618.709 9	17,854.13 63	31.4513	4,627.153 8	16.7725	4,643.926 3	1,231.263 4	15.6188	1,246.8821		3,204,338. 9488	3,204,338. 9488	259.2613	162.2616	3,259,174. 4405
<b>Total</b>	<b>32,310.34 48</b>	<b>2,850.625 8</b>	<b>59,667.55 09</b>	<b>107.3266</b>	<b>4,627.153 8</b>	<b>5,338.744 4</b>	<b>9,965.898 2</b>	<b>1,231.263 4</b>	<b>5,337.590 7</b>	<b>6,568.8540</b>	<b>575,048.4 079</b>	<b>4,161,627. 0762</b>	<b>4,736,675. 4841</b>	<b>1,131.810 3</b>	<b>214.4229</b>	<b>4,828,868. 7536</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/29/2018	1/29/2018	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	0.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**



Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Architectural Coating - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,721.637 1	1,618.709 9	17,854.13 63	31.4513	4,627.153 8	16.7725	4,643.926 3	1,231.263 4	15.6188	1,246.8821		3,204,338. 9488	3,204,338. 9488	259.2613	162.2616	3,259,174. 4405
Unmitigated	1,721.637 1	1,618.709 9	17,854.13 63	31.4513	4,627.153 8	16.7725	4,643.926 3	1,231.263 4	15.6188	1,246.8821		3,204,338. 9488	3,204,338. 9488	259.2613	162.2616	3,259,174. 4405

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	146,504.64	132,231.21	110147.79	292,509,656	292,509,656
General Heavy Industry	9,383.53	15,323.90	12145.61	22,319,120	22,319,120
General Office Building	219,719.89	49,854.31	15790.96	349,319,980	349,319,980
General Office Building	73,799.88	16,745.15	5303.89	117,330,178	117,330,178
Manufacturing	7,434.93	12,145.61	9629.47	17,687,278	17,687,278
Regional Shopping Center	246,910.29	301,655.70	138008.14	502,331,559	502,331,559
Single Family Housing	276,667.52	279,598.32	250583.40	574,132,337	574,132,337
<b>Total</b>	<b>980,420.68</b>	<b>807,554.20</b>	<b>541,609.26</b>	<b>1,875,630,108</b>	<b>1,875,630,108</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	5.77	5.77	5.77	44.00	18.80	37.20	100	0	0

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	5.77	5.77	5.77	59.00	28.00	13.00	100	0	0
General Office Building	5.77	5.77	5.77	33.00	48.00	19.00	100	0	0
General Office Building	5.77	5.77	5.77	33.00	48.00	19.00	100	0	0
Manufacturing	5.77	5.77	5.77	59.00	28.00	13.00	100	0	0
Regional Shopping Center	5.77	5.77	5.77	16.30	64.70	19.00	100	0	0
Single Family Housing	5.77	5.77	5.77	44.00	18.80	37.20	100	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
General Heavy Industry	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
General Office Building	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Manufacturing	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Regional Shopping Center	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245
Single Family Housing	0.566528	0.057285	0.189228	0.120794	0.018602	0.004804	0.009218	0.003221	0.000447	0.000734	0.026067	0.000828	0.002245

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Natural Gas Mitigated	60.8145	530.9666	303.8589	3.3172		42.0173	42.0173		42.0173	42.0173		663,430.4399	663,430.4399	12.7158	12.1629	667,372.8753
Natural Gas Unmitigated	60.8145	530.9666	303.8589	3.3172		42.0173	42.0173		42.0173	42.0173		663,430.4399	663,430.4399	12.7158	12.1629	667,372.8753

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	622955	6.7182	57.4096	24.4296	0.3664		4.6416	4.6416		4.6416	4.6416		73,288.8646	73,288.8646	1.4047	1.3436	73,724.3836
General Heavy Industry	127349	1.3734	12.4852	10.4876	0.0749		0.9489	0.9489		0.9489	0.9489		14,982.2752	14,982.2752	0.2872	0.2747	15,071.3074
General Office Building	1.18355e+006	12.7638	116.0342	97.4687	0.6962		8.8186	8.8186		8.8186	8.8186		139,241.0234	139,241.0234	2.6688	2.5528	140,068.4632
General Office Building	397532	4.2871	38.9738	32.7380	0.2338		2.9620	2.9620		2.9620	2.9620		46,768.5281	46,768.5281	0.8964	0.8574	47,046.4501
Manufacturing	127349	1.3734	12.4852	10.4876	0.0749		0.9489	0.9489		0.9489	0.9489		14,982.2752	14,982.2752	0.2872	0.2747	15,071.3074
Regional Shopping Center	81713.6	0.8812	8.0111	6.7294	0.0481		0.6089	0.6089		0.6089	0.6089		9,613.3619	9,613.3619	0.1843	0.1762	9,670.4893
Single Family Housing	3.09871e+006	33.4175	285.5674	121.5180	1.8228		23.0884	23.0884		23.0884	23.0884		364,554.116	364,554.116	6.9873	6.6835	366,720.4744
<b>Total</b>		<b>60.8145</b>	<b>530.9666</b>	<b>303.8589</b>	<b>3.3172</b>		<b>42.0173</b>	<b>42.0173</b>		<b>42.0173</b>	<b>42.0173</b>		<b>663,430.4399</b>	<b>663,430.4399</b>	<b>12.7158</b>	<b>12.1629</b>	<b>667,372.8753</b>

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	622.955	6.7182	57.4096	24.4296	0.3664		4.6416	4.6416		4.6416	4.6416		73,288.8646	73,288.8646	1.4047	1.3436	73,724.3836
General Heavy Industry	127.349	1.3734	12.4852	10.4876	0.0749		0.9489	0.9489		0.9489	0.9489		14,982.2752	14,982.2752	0.2872	0.2747	15,071.3074
General Office Building	1183.55	12.7638	116.0342	97.4687	0.6962		8.8186	8.8186		8.8186	8.8186		139,241.0234	139,241.0234	2.6688	2.5528	140,068.4632
General Office Building	397.532	4.2871	38.9738	32.7380	0.2338		2.9620	2.9620		2.9620	2.9620		46,768.5281	46,768.5281	0.8964	0.8574	47,046.4501
Manufacturing	127.349	1.3734	12.4852	10.4876	0.0749		0.9489	0.9489		0.9489	0.9489		14,982.2752	14,982.2752	0.2872	0.2747	15,071.3074
Regional Shopping Center	81.7136	0.8812	8.0111	6.7294	0.0481		0.6089	0.6089		0.6089	0.6089		9,613.3619	9,613.3619	0.1843	0.1762	9,670.4893
Single Family Housing	3098.71	33.4175	285.5674	121.5180	1.8228		23.0884	23.0884		23.0884	23.0884		364,554.116	364,554.116	6.9873	6.6835	366,720.4744
<b>Total</b>		<b>60.8145</b>	<b>530.9666</b>	<b>303.8589</b>	<b>3.3172</b>		<b>42.0173</b>	<b>42.0173</b>		<b>42.0173</b>	<b>42.0173</b>		<b>663,430.4399</b>	<b>663,430.4399</b>	<b>12.7158</b>	<b>12.1629</b>	<b>667,372.8753</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30,527.89 33	700.9494	41,509.55 57	72.5581		5,279.954 6	5,279.954 6		5,279.954 6	5,279.9546	575,048.4 079	293,857.6 875	868,906.0 955	859.8333	39.9984	902,321.4 378
Unmitigated	30,527.89 33	700.9494	41,509.55 57	72.5581		5,279.954 6	5,279.954 6		5,279.954 6	5,279.9546	575,048.4 079	293,857.6 875	868,906.0 955	859.8333	39.9984	902,321.4 378

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	427.3471					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,571.108 1					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	27,390.89 98	647.5925	36,886.04 48	72.3128		5,254.210 0	5,254.210 0		5,254.210 0	5,254.2100	575,048.4 079	285,494.4 000	860,542.8 079	851.8584	39.9984	893,758.7 785
Landscaping	138.5382	53.3569	4,623.511 0	0.2453		25.7446	25.7446		25.7446	25.7446		8,363.287 5	8,363.287 5	7.9749		8,562.659 3
<b>Total</b>	<b>30,527.89 33</b>	<b>700.9494</b>	<b>41,509.55 57</b>	<b>72.5581</b>		<b>5,279.954 6</b>	<b>5,279.954 6</b>		<b>5,279.954 6</b>	<b>5,279.9546</b>	<b>575,048.4 079</b>	<b>293,857.6 875</b>	<b>868,906.0 955</b>	<b>859.8333</b>	<b>39.9984</b>	<b>902,321.4 378</b>



Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	427.3471					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,571.1081					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	27,390.8998	647.5925	36,886.0448	72.3128		5,254.2100	5,254.2100		5,254.2100	5,254.2100	575,048.4079	285,494.4000	860,542.8079	851.8584	39.9984	893,758.7785
Landscaping	138.5382	53.3569	4,623.5110	0.2453		25.7446	25.7446		25.7446	25.7446		8,363.2875	8,363.2875	7.9749		8,562.6593
<b>Total</b>	<b>30,527.8933</b>	<b>700.9494</b>	<b>41,509.5557</b>	<b>72.5581</b>		<b>5,279.9546</b>	<b>5,279.9546</b>		<b>5,279.9546</b>	<b>5,279.9546</b>	<b>575,048.4079</b>	<b>293,857.6875</b>	<b>868,906.0955</b>	<b>859.8333</b>	<b>39.9984</b>	<b>902,321.4378</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Sustainability Update of the Santa Cruz County GP - Project Scenario - Santa Cruz County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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