

# Appendix B

## Air Quality and GHG Emissions Detail



Averaging of Construction Emissions

Annual Emission from CalEEMod:

ROG	Nox	PM10	PM2.5
5.2331	8.545	0.2945	0.2717

tons/year

Days of Construction = (from CalEEMod input file)

	Days
Demolition =	0
Site Preparation =	40
Grading =	221
Building Construction =	521
Paving =	391 concurrent with building construction
Architectural Coating =	391 concurrent with building construction
 Total =	 782

Average daily Emissions =

ROG	Nox	PM10	PM2.5
13.38	21.85	0.75	0.69

lb/day

**Weekend Vehicle Trip Calculations - Bayview**

Per Fehr & Peers Project Trip Generation for weekday =

Residential	1371 trips	Size	144 units
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Total =	1371 trips
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Post Adjustment Total =	1371 trips	This is weekday
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Reallocate adjusted trips to land use =

Residential	1371 trips	Weekday	Rate	9.520833 trip/unit
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Total =	1371
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CalEEMod Weekday and Weekend default rates from ITE =

	Weekday	Saturday	Sunday
Residential	9.52	9.91	8.62

Calculate weekend trips based on Project specific Trip demand from Fehr & Peers

	Saturday	Rate	Sunday	Rate
Residential	1427 trips	9.910867 trip/unit	1241 trips	8.620755 trip/unit

Bayview Residential Project - Contra Costa County, Annual

**Bayview Residential Project**  
**Contra Costa County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	144.00	Dwelling Unit	23.66	259,200.00	424
User Defined Recreational	11.29	User Defined Unit	26.96	1,174,378.00	0
Other Asphalt Surfaces	421.63	1000sqft	9.68	421,626.00	0
Other Non-Asphalt Surfaces	7.03	1000sqft	0.16	7,030.00	0
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Asphalt Surfaces	71.25	1000sqft	1.64	71,250.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	290	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

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Project Characteristics - CO2 intensity based on PG&E GHG emissions factor projections for 2020

Land Use - 1,030,425 sf lots, 11.29 acre park + 15.67 acres grading, 421,626 sf roads/paths, 1,406 LF water ext (non-asphalt), 400 LF water ext (asphalt), 1,425 LF Palms Drive improvements, 2.94 persons/hh per 2010 Census Vine Hill CDP

Construction Phase - 3 yr construction

Trips and VMT - water truck trips added

Woodstoves - assume no woodstoves, assume default number of fireplaces but all natural gas per BAAQMD regulations

Energy Use -

Construction Off-road Equipment Mitigation -

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	75.00	391.00
tblConstructionPhase	NumDays	1,110.00	521.00
tblConstructionPhase	NumDays	110.00	221.00
tblConstructionPhase	NumDays	75.00	391.00
tblConstructionPhase	PhaseEndDate	4/2/2024	10/29/2021
tblConstructionPhase	PhaseEndDate	9/5/2023	10/29/2021
tblConstructionPhase	PhaseEndDate	6/4/2019	10/31/2019
tblConstructionPhase	PhaseEndDate	12/19/2023	10/29/2021
tblConstructionPhase	PhaseEndDate	1/1/2019	12/26/2018
tblConstructionPhase	PhaseStartDate	12/20/2023	5/1/2020
tblConstructionPhase	PhaseStartDate	6/5/2019	11/1/2019
tblConstructionPhase	PhaseStartDate	1/2/2019	12/27/2018
tblConstructionPhase	PhaseStartDate	9/6/2023	5/1/2020
tblConstructionPhase	PhaseStartDate	11/7/2018	11/1/2018
tblFireplaces	NumberGas	36.00	97.92
tblFireplaces	NumberWood	61.92	0.00
tblGrading	AcresOfGrading	552.50	275.00
tblLandUse	LandUseSquareFeet	0.00	1,174,378.00
tblLandUse	LotAcreage	46.75	23.66
tblLandUse	LotAcreage	0.00	26.96
tblLandUse	Population	412.00	424.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblWoodstoves	NumberCatalytic	5.76	0.00
tblWoodstoves	NumberNoncatalytic	5.76	0.00

Bayview Residential Project - Contra Costa County, Annual

**2.0 Emissions Summary**

**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	0.1005	1.0549	0.5147	8.9000e-004	0.5193	0.0555	0.5748	0.2202	0.0511	0.2712	0.0000	80.9862	80.9862	0.0244	0.0000	81.5957
2019	0.6672	7.2674	4.7392	0.0106	0.9909	0.2945	1.2854	0.4277	0.2717	0.6994	0.0000	959.4681	959.4681	0.2170	0.0000	964.8941
2020	4.5624	8.5450	7.6275	0.0249	1.1517	0.2503	1.4020	0.3121	0.2348	0.5469	0.0000	2,286.6875	2,286.6875	0.2006	0.0000	2,291.7036
2021	5.2331	6.9181	6.6775	0.0216	0.9972	0.1993	1.1965	0.2700	0.1866	0.4566	0.0000	1,977.4954	1,977.4954	0.1852	0.0000	1,982.1259
<b>Maximum</b>	<b>5.2331</b>	<b>8.5450</b>	<b>7.6275</b>	<b>0.0249</b>	<b>1.1517</b>	<b>0.2945</b>	<b>1.4020</b>	<b>0.4277</b>	<b>0.2717</b>	<b>0.6994</b>	<b>0.0000</b>	<b>2,286.6875</b>	<b>2,286.6875</b>	<b>0.2170</b>	<b>0.0000</b>	<b>2,291.7036</b>



Bayview Residential Project - Contra Costa County, Annual

**2.1 Overall Construction**

**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	0.1005	1.0549	0.5147	8.9000e-004	0.2354	0.0555	0.2909	0.0995	0.0511	0.1506	0.0000	80.9861	80.9861	0.0244	0.0000	81.5956
2019	0.6672	7.2674	4.7392	0.0106	0.5496	0.2945	0.8441	0.2206	0.2717	0.4923	0.0000	959.4673	959.4673	0.2170	0.0000	964.8933
2020	4.5624	8.5450	7.6275	0.0249	1.1517	0.2503	1.4020	0.3121	0.2348	0.5469	0.0000	2,286.6869	2,286.6869	0.2006	0.0000	2,291.7030
2021	5.2331	6.9181	6.6775	0.0216	0.9972	0.1993	1.1965	0.2700	0.1866	0.4566	0.0000	1,977.4948	1,977.4948	0.1852	0.0000	1,982.1253
<b>Maximum</b>	<b>5.2331</b>	<b>8.5450</b>	<b>7.6275</b>	<b>0.0249</b>	<b>1.1517</b>	<b>0.2945</b>	<b>1.4020</b>	<b>0.3121</b>	<b>0.2717</b>	<b>0.5469</b>	<b>0.0000</b>	<b>2,286.6869</b>	<b>2,286.6869</b>	<b>0.2170</b>	<b>0.0000</b>	<b>2,291.7030</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>19.82</b>	<b>0.00</b>	<b>16.26</b>	<b>26.65</b>	<b>0.00</b>	<b>16.60</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)
2	11-1-2018	1-31-2019	1.8348	1.8348
3	2-1-2019	4-30-2019	1.8963	1.8963
4	5-1-2019	7-31-2019	1.9599	1.9599
5	8-1-2019	10-31-2019	1.9601	1.9601
6	11-1-2019	1-31-2020	2.1334	2.1334
7	2-1-2020	4-30-2020	1.9372	1.9372
8	5-1-2020	7-31-2020	3.9270	3.9270
9	8-1-2020	10-31-2020	3.9375	3.9375

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10	11-1-2020	1-31-2021	3.8751	3.8751
11	2-1-2021	4-30-2021	3.5828	3.5828
12	5-1-2021	7-31-2021	3.6868	3.6868
13	8-1-2021	9-30-2021	2.4445	2.4445
		Highest	3.9375	3.9375

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	6.4707	0.0230	1.0808	1.2000e-004		6.7800e-003	6.7800e-003		6.7800e-003	6.7800e-003	0.0000	13.9800	13.9800	1.9500e-003	2.2000e-004	14.0955
Energy	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	476.4367	476.4367	0.0214	9.0900e-003	479.6796
Mobile	0.3642	1.6506	4.1339	0.0137	1.1734	0.0120	1.1854	0.3149	0.0112	0.3261	0.0000	1,256.5023	1,256.5023	0.0468	0.0000	1,257.6731
Waste						0.0000	0.0000		0.0000	0.0000	36.1486	0.0000	36.1486	2.1363	0.0000	89.5567
Water						0.0000	0.0000		0.0000	0.0000	2.9765	9.4012	12.3777	0.3067	7.4100e-003	22.2533
<b>Total</b>	<b>6.8678</b>	<b>1.9544</b>	<b>5.3341</b>	<b>0.0156</b>	<b>1.1734</b>	<b>0.0415</b>	<b>1.2149</b>	<b>0.3149</b>	<b>0.0407</b>	<b>0.3556</b>	<b>39.1252</b>	<b>1,756.3201</b>	<b>1,795.4453</b>	<b>2.5131</b>	<b>0.0167</b>	<b>1,863.2582</b>

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**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	6.4707	0.0230	1.0808	1.2000e-004		6.7800e-003	6.7800e-003		6.7800e-003	6.7800e-003	0.0000	13.9800	13.9800	1.9500e-003	2.2000e-004	14.0955
Energy	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	476.4367	476.4367	0.0214	9.0900e-003	479.6796
Mobile	0.3642	1.6506	4.1339	0.0137	1.1734	0.0120	1.1854	0.3149	0.0112	0.3261	0.0000	1,256.5023	1,256.5023	0.0468	0.0000	1,257.6731
Waste						0.0000	0.0000		0.0000	0.0000	36.1486	0.0000	36.1486	2.1363	0.0000	89.5567
Water						0.0000	0.0000		0.0000	0.0000	2.9765	9.4012	12.3777	0.3067	7.4100e-003	22.2533
<b>Total</b>	<b>6.8678</b>	<b>1.9544</b>	<b>5.3341</b>	<b>0.0156</b>	<b>1.1734</b>	<b>0.0415</b>	<b>1.2149</b>	<b>0.3149</b>	<b>0.0407</b>	<b>0.3556</b>	<b>39.1252</b>	<b>1,756.3201</b>	<b>1,795.4453</b>	<b>2.5131</b>	<b>0.0167</b>	<b>1,863.2582</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
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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/1/2018	12/26/2018	5	40	
2	Grading	Grading	12/27/2018	10/31/2019	5	221	
3	Building Construction	Building Construction	11/1/2019	10/29/2021	5	521	
4	Paving	Paving	5/1/2020	10/29/2021	5	391	
5	Architectural Coating	Architectural Coating	5/1/2020	10/29/2021	5	391	

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

**Acres of Grading (Grading Phase): 275**

**Acres of Paving: 11.53**

**Residential Indoor: 524,880; Residential Outdoor: 174,960; Non-Residential Indoor: 1,761,567; Non-Residential Outdoor: 587,189; Striped Parking Area: 30,114 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

**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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	756.00	290.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	151.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Site Preparation - 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	tons/yr										MT/yr					
Fugitive Dust					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0913	0.9640	0.4495	7.6000e-004		0.0515	0.0515		0.0474	0.0474	0.0000	69.5198	69.5198	0.0216	0.0000	70.0609
<b>Total</b>	<b>0.0913</b>	<b>0.9640</b>	<b>0.4495</b>	<b>7.6000e-004</b>	<b>0.3613</b>	<b>0.0515</b>	<b>0.4129</b>	<b>0.1986</b>	<b>0.0474</b>	<b>0.2460</b>	<b>0.0000</b>	<b>69.5198</b>	<b>69.5198</b>	<b>0.0216</b>	<b>0.0000</b>	<b>70.0609</b>

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**3.2 Site Preparation - 2018**

**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	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	1.4700e-003	1.1300e-003	0.0114	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6676	2.6676	8.0000e-005	0.0000	2.6696
<b>Total</b>	<b>1.4700e-003</b>	<b>1.1300e-003</b>	<b>0.0114</b>	<b>3.0000e-005</b>	<b>2.8600e-003</b>	<b>2.0000e-005</b>	<b>2.8800e-003</b>	<b>7.6000e-004</b>	<b>2.0000e-005</b>	<b>7.8000e-004</b>	<b>0.0000</b>	<b>2.6676</b>	<b>2.6676</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>2.6696</b>

**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	tons/yr										MT/yr					
Fugitive Dust					0.1626	0.0000	0.1626	0.0894	0.0000	0.0894	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0913	0.9640	0.4495	7.6000e-004		0.0515	0.0515		0.0474	0.0474	0.0000	69.5197	69.5197	0.0216	0.0000	70.0608
<b>Total</b>	<b>0.0913</b>	<b>0.9640</b>	<b>0.4495</b>	<b>7.6000e-004</b>	<b>0.1626</b>	<b>0.0515</b>	<b>0.2141</b>	<b>0.0894</b>	<b>0.0474</b>	<b>0.1368</b>	<b>0.0000</b>	<b>69.5197</b>	<b>69.5197</b>	<b>0.0216</b>	<b>0.0000</b>	<b>70.0608</b>

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**3.2 Site Preparation - 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	1.4700e-003	1.1300e-003	0.0114	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6676	2.6676	8.0000e-005	0.0000	2.6696
<b>Total</b>	<b>1.4700e-003</b>	<b>1.1300e-003</b>	<b>0.0114</b>	<b>3.0000e-005</b>	<b>2.8600e-003</b>	<b>2.0000e-005</b>	<b>2.8800e-003</b>	<b>7.6000e-004</b>	<b>2.0000e-005</b>	<b>7.8000e-004</b>	<b>0.0000</b>	<b>2.6676</b>	<b>2.6676</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>2.6696</b>

**3.3 Grading - 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	tons/yr										MT/yr					
Fugitive Dust					0.1549	0.0000	0.1549	0.0207	0.0000	0.0207	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6400e-003	0.0893	0.0526	9.0000e-005		3.9500e-003	3.9500e-003		3.6300e-003	3.6300e-003	0.0000	8.4973	8.4973	2.6500e-003	0.0000	8.5634
<b>Total</b>	<b>7.6400e-003</b>	<b>0.0893</b>	<b>0.0526</b>	<b>9.0000e-005</b>	<b>0.1549</b>	<b>3.9500e-003</b>	<b>0.1588</b>	<b>0.0207</b>	<b>3.6300e-003</b>	<b>0.0243</b>	<b>0.0000</b>	<b>8.4973</b>	<b>8.4973</b>	<b>2.6500e-003</b>	<b>0.0000</b>	<b>8.5634</b>



Bayview Residential Project - Contra Costa County, Annual

**3.3 Grading - 2018**

**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	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	2.0000e-005	4.1000e-004	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0792	0.0792	0.0000	0.0000	0.0793
Worker	1.2000e-004	9.0000e-005	9.5000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2223	0.2223	1.0000e-005	0.0000	0.2225
<b>Total</b>	<b>1.4000e-004</b>	<b>5.0000e-004</b>	<b>1.0600e-003</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.3015</b>	<b>0.3015</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3018</b>

**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	tons/yr										MT/yr					
Fugitive Dust					0.0697	0.0000	0.0697	9.3200e-003	0.0000	9.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6400e-003	0.0893	0.0526	9.0000e-005		3.9500e-003	3.9500e-003		3.6300e-003	3.6300e-003	0.0000	8.4973	8.4973	2.6500e-003	0.0000	8.5634
<b>Total</b>	<b>7.6400e-003</b>	<b>0.0893</b>	<b>0.0526</b>	<b>9.0000e-005</b>	<b>0.0697</b>	<b>3.9500e-003</b>	<b>0.0736</b>	<b>9.3200e-003</b>	<b>3.6300e-003</b>	<b>0.0130</b>	<b>0.0000</b>	<b>8.4973</b>	<b>8.4973</b>	<b>2.6500e-003</b>	<b>0.0000</b>	<b>8.5634</b>

Bayview Residential Project - Contra Costa County, Annual

**3.3 Grading - 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	2.0000e-005	4.1000e-004	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0792	0.0792	0.0000	0.0000	0.0793
Worker	1.2000e-004	9.0000e-005	9.5000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2223	0.2223	1.0000e-005	0.0000	0.2225
<b>Total</b>	<b>1.4000e-004</b>	<b>5.0000e-004</b>	<b>1.0600e-003</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.3015</b>	<b>0.3015</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3018</b>

**3.3 Grading - 2019**

**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	tons/yr										MT/yr					
Fugitive Dust					0.8022	0.0000	0.8022	0.3766	0.0000	0.3766	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5165	5.9427	3.6381	6.7600e-003		0.2597	0.2597		0.2389	0.2389	0.0000	607.1444	607.1444	0.1921	0.0000	611.9467
<b>Total</b>	<b>0.5165</b>	<b>5.9427</b>	<b>3.6381</b>	<b>6.7600e-003</b>	<b>0.8022</b>	<b>0.2597</b>	<b>1.0619</b>	<b>0.3766</b>	<b>0.2389</b>	<b>0.6155</b>	<b>0.0000</b>	<b>607.1444</b>	<b>607.1444</b>	<b>0.1921</b>	<b>0.0000</b>	<b>611.9467</b>

Bayview Residential Project - Contra Costa County, Annual

**3.3 Grading - 2019**

**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	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	1.0800e-003	0.0277	7.2300e-003	6.0000e-005	1.4300e-003	2.0000e-004	1.6400e-003	4.1000e-004	2.0000e-004	6.1000e-004	0.0000	5.7195	5.7195	3.0000e-004	0.0000	5.7271
Worker	8.0200e-003	6.0000e-003	0.0613	1.7000e-004	0.0173	1.2000e-004	0.0174	4.6000e-003	1.1000e-004	4.7100e-003	0.0000	15.6665	15.6665	4.3000e-004	0.0000	15.6772
<b>Total</b>	<b>9.1000e-003</b>	<b>0.0337</b>	<b>0.0685</b>	<b>2.3000e-004</b>	<b>0.0187</b>	<b>3.2000e-004</b>	<b>0.0191</b>	<b>5.0100e-003</b>	<b>3.1000e-004</b>	<b>5.3200e-003</b>	<b>0.0000</b>	<b>21.3859</b>	<b>21.3859</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>21.4042</b>

**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	tons/yr										MT/yr					
Fugitive Dust					0.3610	0.0000	0.3610	0.1695	0.0000	0.1695	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5165	5.9427	3.6381	6.7600e-003		0.2597	0.2597		0.2389	0.2389	0.0000	607.1437	607.1437	0.1921	0.0000	611.9460
<b>Total</b>	<b>0.5165</b>	<b>5.9427</b>	<b>3.6381</b>	<b>6.7600e-003</b>	<b>0.3610</b>	<b>0.2597</b>	<b>0.6207</b>	<b>0.1695</b>	<b>0.2389</b>	<b>0.4084</b>	<b>0.0000</b>	<b>607.1437</b>	<b>607.1437</b>	<b>0.1921</b>	<b>0.0000</b>	<b>611.9460</b>

Bayview Residential Project - Contra Costa County, Annual

**3.3 Grading - 2019**

**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	1.0800e-003	0.0277	7.2300e-003	6.0000e-005	1.4300e-003	2.0000e-004	1.6400e-003	4.1000e-004	2.0000e-004	6.1000e-004	0.0000	5.7195	5.7195	3.0000e-004	0.0000	5.7271
Worker	8.0200e-003	6.0000e-003	0.0613	1.7000e-004	0.0173	1.2000e-004	0.0174	4.6000e-003	1.1000e-004	4.7100e-003	0.0000	15.6665	15.6665	4.3000e-004	0.0000	15.6772
<b>Total</b>	<b>9.1000e-003</b>	<b>0.0337</b>	<b>0.0685</b>	<b>2.3000e-004</b>	<b>0.0187</b>	<b>3.2000e-004</b>	<b>0.0191</b>	<b>5.0100e-003</b>	<b>3.1000e-004</b>	<b>5.3200e-003</b>	<b>0.0000</b>	<b>21.3859</b>	<b>21.3859</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>21.4042</b>

**3.4 Building Construction - 2019**

**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	tons/yr										MT/yr					
Off-Road	0.0508	0.4532	0.3690	5.8000e-004		0.0277	0.0277		0.0261	0.0261	0.0000	50.5474	50.5474	0.0123	0.0000	50.8553
<b>Total</b>	<b>0.0508</b>	<b>0.4532</b>	<b>0.3690</b>	<b>5.8000e-004</b>		<b>0.0277</b>	<b>0.0277</b>		<b>0.0261</b>	<b>0.0261</b>	<b>0.0000</b>	<b>50.5474</b>	<b>50.5474</b>	<b>0.0123</b>	<b>0.0000</b>	<b>50.8553</b>

Bayview Residential Project - Contra Costa County, Annual

**3.4 Building Construction - 2019**

**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	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	0.0309	0.7930	0.2068	1.7100e-003	0.0410	5.8400e-003	0.0469	0.0119	5.5900e-003	0.0174	0.0000	163.5817	163.5817	8.7200e-003	0.0000	163.7996
Worker	0.0598	0.0447	0.4568	1.2900e-003	0.1289	8.8000e-004	0.1298	0.0343	8.1000e-004	0.0351	0.0000	116.8086	116.8086	3.1900e-003	0.0000	116.8883
<b>Total</b>	<b>0.0908</b>	<b>0.8377</b>	<b>0.6636</b>	<b>3.0000e-003</b>	<b>0.1699</b>	<b>6.7200e-003</b>	<b>0.1766</b>	<b>0.0461</b>	<b>6.4000e-003</b>	<b>0.0525</b>	<b>0.0000</b>	<b>280.3903</b>	<b>280.3903</b>	<b>0.0119</b>	<b>0.0000</b>	<b>280.6879</b>

**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	tons/yr										MT/yr					
Off-Road	0.0508	0.4532	0.3690	5.8000e-004		0.0277	0.0277		0.0261	0.0261	0.0000	50.5473	50.5473	0.0123	0.0000	50.8552
<b>Total</b>	<b>0.0508</b>	<b>0.4532</b>	<b>0.3690</b>	<b>5.8000e-004</b>		<b>0.0277</b>	<b>0.0277</b>		<b>0.0261</b>	<b>0.0261</b>	<b>0.0000</b>	<b>50.5473</b>	<b>50.5473</b>	<b>0.0123</b>	<b>0.0000</b>	<b>50.8552</b>

Bayview Residential Project - Contra Costa County, Annual

**3.4 Building Construction - 2019**

**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	0.0309	0.7930	0.2068	1.7100e-003	0.0410	5.8400e-003	0.0469	0.0119	5.5900e-003	0.0174	0.0000	163.5817	163.5817	8.7200e-003	0.0000	163.7996
Worker	0.0598	0.0447	0.4568	1.2900e-003	0.1289	8.8000e-004	0.1298	0.0343	8.1000e-004	0.0351	0.0000	116.8086	116.8086	3.1900e-003	0.0000	116.8883
<b>Total</b>	<b>0.0908</b>	<b>0.8377</b>	<b>0.6636</b>	<b>3.0000e-003</b>	<b>0.1699</b>	<b>6.7200e-003</b>	<b>0.1766</b>	<b>0.0461</b>	<b>6.4000e-003</b>	<b>0.0525</b>	<b>0.0000</b>	<b>280.3903</b>	<b>280.3903</b>	<b>0.0119</b>	<b>0.0000</b>	<b>280.6879</b>

**3.4 Building Construction - 2020**

**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	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
<b>Total</b>	<b>0.2777</b>	<b>2.5134</b>	<b>2.2072</b>	<b>3.5300e-003</b>		<b>0.1463</b>	<b>0.1463</b>		<b>0.1376</b>	<b>0.1376</b>	<b>0.0000</b>	<b>303.4091</b>	<b>303.4091</b>	<b>0.0740</b>	<b>0.0000</b>	<b>305.2596</b>

Bayview Residential Project - Contra Costa County, Annual

**3.4 Building Construction - 2020**

**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	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	0.1523	4.3579	1.1201	0.0104	0.2498	0.0223	0.2721	0.0722	0.0213	0.0935	0.0000	990.9781	990.9781	0.0486	0.0000	992.1929
Worker	0.3322	0.2403	2.4879	7.6200e-003	0.7855	5.2500e-003	0.7907	0.2089	4.8300e-003	0.2137	0.0000	689.0838	689.0838	0.0169	0.0000	689.5068
<b>Total</b>	<b>0.4845</b>	<b>4.5982</b>	<b>3.6080</b>	<b>0.0180</b>	<b>1.0353</b>	<b>0.0275</b>	<b>1.0628</b>	<b>0.2811</b>	<b>0.0261</b>	<b>0.3073</b>	<b>0.0000</b>	<b>1,680.0619</b>	<b>1,680.0619</b>	<b>0.0655</b>	<b>0.0000</b>	<b>1,681.6996</b>

**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	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
<b>Total</b>	<b>0.2777</b>	<b>2.5134</b>	<b>2.2072</b>	<b>3.5300e-003</b>		<b>0.1463</b>	<b>0.1463</b>		<b>0.1376</b>	<b>0.1376</b>	<b>0.0000</b>	<b>303.4087</b>	<b>303.4087</b>	<b>0.0740</b>	<b>0.0000</b>	<b>305.2592</b>

Bayview Residential Project - Contra Costa County, Annual

**3.4 Building Construction - 2020**

**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	0.1523	4.3579	1.1201	0.0104	0.2498	0.0223	0.2721	0.0722	0.0213	0.0935	0.0000	990.9781	990.9781	0.0486	0.0000	992.1929
Worker	0.3322	0.2403	2.4879	7.6200e-003	0.7855	5.2500e-003	0.7907	0.2089	4.8300e-003	0.2137	0.0000	689.0838	689.0838	0.0169	0.0000	689.5068
<b>Total</b>	<b>0.4845</b>	<b>4.5982</b>	<b>3.6080</b>	<b>0.0180</b>	<b>1.0353</b>	<b>0.0275</b>	<b>1.0628</b>	<b>0.2811</b>	<b>0.0261</b>	<b>0.3073</b>	<b>0.0000</b>	<b>1,680.0619</b>	<b>1,680.0619</b>	<b>0.0655</b>	<b>0.0000</b>	<b>1,681.6996</b>

**3.4 Building Construction - 2021**

**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	tons/yr										MT/yr					
Off-Road	0.2053	1.8827	1.7901	2.9100e-003		0.1035	0.1035		0.0973	0.0973	0.0000	250.1683	250.1683	0.0604	0.0000	251.6771
<b>Total</b>	<b>0.2053</b>	<b>1.8827</b>	<b>1.7901</b>	<b>2.9100e-003</b>		<b>0.1035</b>	<b>0.1035</b>		<b>0.0973</b>	<b>0.0973</b>	<b>0.0000</b>	<b>250.1683</b>	<b>250.1683</b>	<b>0.0604</b>	<b>0.0000</b>	<b>251.6771</b>



Bayview Residential Project - Contra Costa County, Annual

**3.4 Building Construction - 2021**

**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	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	0.1025	3.2374	0.8224	8.4600e-003	0.2060	7.2600e-003	0.2132	0.0596	6.9400e-003	0.0665	0.0000	809.6363	809.6363	0.0376	0.0000	810.5760
Worker	0.2529	0.1768	1.8698	6.0600e-003	0.6476	4.2100e-003	0.6518	0.1722	3.8800e-003	0.1761	0.0000	547.9593	547.9593	0.0125	0.0000	548.2706
<b>Total</b>	<b>0.3554</b>	<b>3.4141</b>	<b>2.6923</b>	<b>0.0145</b>	<b>0.8535</b>	<b>0.0115</b>	<b>0.8650</b>	<b>0.2318</b>	<b>0.0108</b>	<b>0.2426</b>	<b>0.0000</b>	<b>1,357.5956</b>	<b>1,357.5956</b>	<b>0.0500</b>	<b>0.0000</b>	<b>1,358.8466</b>

**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	tons/yr										MT/yr					
Off-Road	0.2053	1.8827	1.7901	2.9100e-003		0.1035	0.1035		0.0973	0.0973	0.0000	250.1680	250.1680	0.0604	0.0000	251.6768
<b>Total</b>	<b>0.2053</b>	<b>1.8827</b>	<b>1.7901</b>	<b>2.9100e-003</b>		<b>0.1035</b>	<b>0.1035</b>		<b>0.0973</b>	<b>0.0973</b>	<b>0.0000</b>	<b>250.1680</b>	<b>250.1680</b>	<b>0.0604</b>	<b>0.0000</b>	<b>251.6768</b>

Bayview Residential Project - Contra Costa County, Annual

**3.4 Building Construction - 2021**

**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	0.1025	3.2374	0.8224	8.4600e-003	0.2060	7.2600e-003	0.2132	0.0596	6.9400e-003	0.0665	0.0000	809.6363	809.6363	0.0376	0.0000	810.5760
Worker	0.2529	0.1768	1.8698	6.0600e-003	0.6476	4.2100e-003	0.6518	0.1722	3.8800e-003	0.1761	0.0000	547.9593	547.9593	0.0125	0.0000	548.2706
<b>Total</b>	<b>0.3554</b>	<b>3.4141</b>	<b>2.6923</b>	<b>0.0145</b>	<b>0.8535</b>	<b>0.0115</b>	<b>0.8650</b>	<b>0.2318</b>	<b>0.0108</b>	<b>0.2426</b>	<b>0.0000</b>	<b>1,357.5956</b>	<b>1,357.5956</b>	<b>0.0500</b>	<b>0.0000</b>	<b>1,358.8466</b>

**3.5 Paving - 2020**

**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	tons/yr										MT/yr					
Off-Road	0.1187	1.2307	1.2821	1.9900e-003		0.0659	0.0659		0.0606	0.0606	0.0000	175.2469	175.2469	0.0567	0.0000	176.6639
Paving	6.6700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1254</b>	<b>1.2307</b>	<b>1.2821</b>	<b>1.9900e-003</b>		<b>0.0659</b>	<b>0.0659</b>		<b>0.0606</b>	<b>0.0606</b>	<b>0.0000</b>	<b>175.2469</b>	<b>175.2469</b>	<b>0.0567</b>	<b>0.0000</b>	<b>176.6639</b>

Bayview Residential Project - Contra Costa County, Annual

**3.5 Paving - 2020**

**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	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	7.0000e-004	0.0201	5.1600e-003	5.0000e-005	1.1500e-003	1.0000e-004	1.2500e-003	3.3000e-004	1.0000e-004	4.3000e-004	0.0000	4.5649	4.5649	2.2000e-004	0.0000	4.5705
Worker	4.4000e-003	3.1900e-003	0.0330	1.0000e-004	0.0104	7.0000e-005	0.0105	2.7700e-003	6.0000e-005	2.8300e-003	0.0000	9.1323	9.1323	2.2000e-004	0.0000	9.1379
<b>Total</b>	<b>5.1000e-003</b>	<b>0.0233</b>	<b>0.0381</b>	<b>1.5000e-004</b>	<b>0.0116</b>	<b>1.7000e-004</b>	<b>0.0117</b>	<b>3.1000e-003</b>	<b>1.6000e-004</b>	<b>3.2600e-003</b>	<b>0.0000</b>	<b>13.6972</b>	<b>13.6972</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>13.7084</b>

**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	tons/yr										MT/yr					
Off-Road	0.1187	1.2307	1.2821	1.9900e-003		0.0659	0.0659		0.0606	0.0606	0.0000	175.2467	175.2467	0.0567	0.0000	176.6637
Paving	6.6700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1254</b>	<b>1.2307</b>	<b>1.2821</b>	<b>1.9900e-003</b>		<b>0.0659</b>	<b>0.0659</b>		<b>0.0606</b>	<b>0.0606</b>	<b>0.0000</b>	<b>175.2467</b>	<b>175.2467</b>	<b>0.0567</b>	<b>0.0000</b>	<b>176.6637</b>

Bayview Residential Project - Contra Costa County, Annual

**3.5 Paving - 2020**

**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	7.0000e-004	0.0201	5.1600e-003	5.0000e-005	1.1500e-003	1.0000e-004	1.2500e-003	3.3000e-004	1.0000e-004	4.3000e-004	0.0000	4.5649	4.5649	2.2000e-004	0.0000	4.5705
Worker	4.4000e-003	3.1900e-003	0.0330	1.0000e-004	0.0104	7.0000e-005	0.0105	2.7700e-003	6.0000e-005	2.8300e-003	0.0000	9.1323	9.1323	2.2000e-004	0.0000	9.1379
<b>Total</b>	<b>5.1000e-003</b>	<b>0.0233</b>	<b>0.0381</b>	<b>1.5000e-004</b>	<b>0.0116</b>	<b>1.7000e-004</b>	<b>0.0117</b>	<b>3.1000e-003</b>	<b>1.6000e-004</b>	<b>3.2600e-003</b>	<b>0.0000</b>	<b>13.6972</b>	<b>13.6972</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>13.7084</b>

**3.5 Paving - 2021**

**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	tons/yr										MT/yr					
Off-Road	0.1356	1.3953	1.5826	2.4600e-003		0.0732	0.0732		0.0673	0.0673	0.0000	216.2536	216.2536	0.0699	0.0000	218.0021
Paving	8.2300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1438</b>	<b>1.3953</b>	<b>1.5826</b>	<b>2.4600e-003</b>		<b>0.0732</b>	<b>0.0732</b>		<b>0.0673</b>	<b>0.0673</b>	<b>0.0000</b>	<b>216.2536</b>	<b>216.2536</b>	<b>0.0699</b>	<b>0.0000</b>	<b>218.0021</b>

Bayview Residential Project - Contra Costa County, Annual

**3.5 Paving - 2021**

**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	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	7.1000e-004	0.0223	5.6700e-003	6.0000e-005	1.4200e-003	5.0000e-005	1.4700e-003	4.1000e-004	5.0000e-005	4.6000e-004	0.0000	5.5837	5.5837	2.6000e-004	0.0000	5.5902
Worker	5.0200e-003	3.5100e-003	0.0371	1.2000e-004	0.0129	8.0000e-005	0.0129	3.4200e-003	8.0000e-005	3.4900e-003	0.0000	10.8722	10.8722	2.5000e-004	0.0000	10.8784
<b>Total</b>	<b>5.7300e-003</b>	<b>0.0258</b>	<b>0.0428</b>	<b>1.8000e-004</b>	<b>0.0143</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>3.8300e-003</b>	<b>1.3000e-004</b>	<b>3.9500e-003</b>	<b>0.0000</b>	<b>16.4559</b>	<b>16.4559</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>16.4686</b>

**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	tons/yr										MT/yr					
Off-Road	0.1356	1.3953	1.5826	2.4600e-003		0.0732	0.0732		0.0673	0.0673	0.0000	216.2533	216.2533	0.0699	0.0000	218.0019
Paving	8.2300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1438</b>	<b>1.3953</b>	<b>1.5826</b>	<b>2.4600e-003</b>		<b>0.0732</b>	<b>0.0732</b>		<b>0.0673</b>	<b>0.0673</b>	<b>0.0000</b>	<b>216.2533</b>	<b>216.2533</b>	<b>0.0699</b>	<b>0.0000</b>	<b>218.0019</b>

Bayview Residential Project - Contra Costa County, Annual

**3.5 Paving - 2021**

**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	7.1000e-004	0.0223	5.6700e-003	6.0000e-005	1.4200e-003	5.0000e-005	1.4700e-003	4.1000e-004	5.0000e-005	4.6000e-004	0.0000	5.5837	5.5837	2.6000e-004	0.0000	5.5902
Worker	5.0200e-003	3.5100e-003	0.0371	1.2000e-004	0.0129	8.0000e-005	0.0129	3.4200e-003	8.0000e-005	3.4900e-003	0.0000	10.8722	10.8722	2.5000e-004	0.0000	10.8784
<b>Total</b>	<b>5.7300e-003</b>	<b>0.0258</b>	<b>0.0428</b>	<b>1.8000e-004</b>	<b>0.0143</b>	<b>1.3000e-004</b>	<b>0.0144</b>	<b>3.8300e-003</b>	<b>1.3000e-004</b>	<b>3.9500e-003</b>	<b>0.0000</b>	<b>16.4559</b>	<b>16.4559</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>16.4686</b>

**3.6 Architectural Coating - 2020**

**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	tons/yr										MT/yr					
Archit. Coating	3.6043					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.1473	0.1603	2.6000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	22.3410	22.3410	1.7300e-003	0.0000	22.3842
<b>Total</b>	<b>3.6255</b>	<b>0.1473</b>	<b>0.1603</b>	<b>2.6000e-004</b>		<b>9.7100e-003</b>	<b>9.7100e-003</b>		<b>9.7100e-003</b>	<b>9.7100e-003</b>	<b>0.0000</b>	<b>22.3410</b>	<b>22.3410</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>22.3842</b>

Bayview Residential Project - Contra Costa County, Annual

**3.6 Architectural Coating - 2020**

**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	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	0.0443	0.0321	0.3319	1.0200e-003	0.1048	7.0000e-004	0.1055	0.0279	6.4000e-004	0.0285	0.0000	91.9314	91.9314	2.2600e-003	0.0000	91.9878
<b>Total</b>	<b>0.0443</b>	<b>0.0321</b>	<b>0.3319</b>	<b>1.0200e-003</b>	<b>0.1048</b>	<b>7.0000e-004</b>	<b>0.1055</b>	<b>0.0279</b>	<b>6.4000e-004</b>	<b>0.0285</b>	<b>0.0000</b>	<b>91.9314</b>	<b>91.9314</b>	<b>2.2600e-003</b>	<b>0.0000</b>	<b>91.9878</b>

**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	tons/yr										MT/yr					
Archit. Coating	3.6043					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.1473	0.1603	2.6000e-004		9.7100e-003	9.7100e-003		9.7100e-003	9.7100e-003	0.0000	22.3409	22.3409	1.7300e-003	0.0000	22.3842
<b>Total</b>	<b>3.6255</b>	<b>0.1473</b>	<b>0.1603</b>	<b>2.6000e-004</b>		<b>9.7100e-003</b>	<b>9.7100e-003</b>		<b>9.7100e-003</b>	<b>9.7100e-003</b>	<b>0.0000</b>	<b>22.3409</b>	<b>22.3409</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>22.3842</b>

Bayview Residential Project - Contra Costa County, Annual

**3.6 Architectural Coating - 2020**

**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	0.0443	0.0321	0.3319	1.0200e-003	0.1048	7.0000e-004	0.1055	0.0279	6.4000e-004	0.0285	0.0000	91.9314	91.9314	2.2600e-003	0.0000	91.9878
<b>Total</b>	<b>0.0443</b>	<b>0.0321</b>	<b>0.3319</b>	<b>1.0200e-003</b>	<b>0.1048</b>	<b>7.0000e-004</b>	<b>0.1055</b>	<b>0.0279</b>	<b>6.4000e-004</b>	<b>0.0285</b>	<b>0.0000</b>	<b>91.9314</b>	<b>91.9314</b>	<b>2.2600e-003</b>	<b>0.0000</b>	<b>91.9878</b>

**3.6 Architectural Coating - 2021**

**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	tons/yr										MT/yr					
Archit. Coating	4.4487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0236	0.1649	0.1963	3.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	27.5751	27.5751	1.8900e-003	0.0000	27.6225
<b>Total</b>	<b>4.4723</b>	<b>0.1649</b>	<b>0.1963</b>	<b>3.2000e-004</b>		<b>0.0102</b>	<b>0.0102</b>		<b>0.0102</b>	<b>0.0102</b>	<b>0.0000</b>	<b>27.5751</b>	<b>27.5751</b>	<b>1.8900e-003</b>	<b>0.0000</b>	<b>27.6225</b>



Bayview Residential Project - Contra Costa County, Annual

**3.6 Architectural Coating - 2021**

**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	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	0.0505	0.0353	0.3735	1.2100e-003	0.1293	8.4000e-004	0.1302	0.0344	7.7000e-004	0.0352	0.0000	109.4469	109.4469	2.4900e-003	0.0000	109.5091
<b>Total</b>	<b>0.0505</b>	<b>0.0353</b>	<b>0.3735</b>	<b>1.2100e-003</b>	<b>0.1293</b>	<b>8.4000e-004</b>	<b>0.1302</b>	<b>0.0344</b>	<b>7.7000e-004</b>	<b>0.0352</b>	<b>0.0000</b>	<b>109.4469</b>	<b>109.4469</b>	<b>2.4900e-003</b>	<b>0.0000</b>	<b>109.5091</b>

**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	tons/yr										MT/yr					
Archit. Coating	4.4487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0236	0.1649	0.1963	3.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	27.5751	27.5751	1.8900e-003	0.0000	27.6224
<b>Total</b>	<b>4.4723</b>	<b>0.1649</b>	<b>0.1963</b>	<b>3.2000e-004</b>		<b>0.0102</b>	<b>0.0102</b>		<b>0.0102</b>	<b>0.0102</b>	<b>0.0000</b>	<b>27.5751</b>	<b>27.5751</b>	<b>1.8900e-003</b>	<b>0.0000</b>	<b>27.6224</b>

Bayview Residential Project - Contra Costa County, Annual

**3.6 Architectural Coating - 2021**

**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	0.0505	0.0353	0.3735	1.2100e-003	0.1293	8.4000e-004	0.1302	0.0344	7.7000e-004	0.0352	0.0000	109.4469	109.4469	2.4900e-003	0.0000	109.5091
<b>Total</b>	<b>0.0505</b>	<b>0.0353</b>	<b>0.3735</b>	<b>1.2100e-003</b>	<b>0.1293</b>	<b>8.4000e-004</b>	<b>0.1302</b>	<b>0.0344</b>	<b>7.7000e-004</b>	<b>0.0352</b>	<b>0.0000</b>	<b>109.4469</b>	<b>109.4469</b>	<b>2.4900e-003</b>	<b>0.0000</b>	<b>109.5091</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Bayview Residential Project - Contra Costa County, Annual

	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	0.3642	1.6506	4.1339	0.0137	1.1734	0.0120	1.1854	0.3149	0.0112	0.3261	0.0000	1,256.502 3	1,256.502 3	0.0468	0.0000	1,257.673 1
Unmitigated	0.3642	1.6506	4.1339	0.0137	1.1734	0.0120	1.1854	0.3149	0.0112	0.3261	0.0000	1,256.502 3	1,256.502 3	0.0468	0.0000	1,257.673 1

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	1,370.88	1,427.04	1,241.28	3,141,963	3,141,963
User Defined Recreational	0.00	0.00	0.00		
<b>Total</b>	<b>1,370.88</b>	<b>1,427.04</b>	<b>1,241.28</b>	<b>3,141,963</b>	<b>3,141,963</b>

4.3 Trip Type Information

Bayview Residential Project - Contra Costa County, Annual

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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871
Other Non-Asphalt Surfaces	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871
Single Family Housing	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871
User Defined Recreational	0.582298	0.039109	0.186022	0.123408	0.017184	0.005083	0.010615	0.023794	0.001605	0.001810	0.005454	0.002746	0.000871

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Bayview Residential Project - Contra Costa County, Annual

	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	151.2045	151.2045	0.0151	3.1300e-003	152.5147
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	151.2045	151.2045	0.0151	3.1300e-003	152.5147
NaturalGas Mitigated	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	325.2322	325.2322	6.2300e-003	5.9600e-003	327.1649
NaturalGas Unmitigated	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	325.2322	325.2322	6.2300e-003	5.9600e-003	327.1649

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					
Other Asphalt Surfaces	0	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
Other Non-Asphalt Surfaces	0	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
Single Family Housing	6.09462e+006	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	325.2322	325.2322	6.2300e-003	5.9600e-003	327.1649
User Defined Recreational	0	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>0.0329</b>	<b>0.2808</b>	<b>0.1195</b>	<b>1.7900e-003</b>		<b>0.0227</b>	<b>0.0227</b>		<b>0.0227</b>	<b>0.0227</b>	<b>0.0000</b>	<b>325.2322</b>	<b>325.2322</b>	<b>6.2300e-003</b>	<b>5.9600e-003</b>	<b>327.1649</b>

Bayview Residential Project - Contra Costa County, Annual

**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					
Other Asphalt Surfaces	0	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
Other Non-Asphalt Surfaces	0	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
Single Family Housing	6.09462e+006	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	325.2322	325.2322	6.2300e-003	5.9600e-003	327.1649
User Defined Recreational	0	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>0.0329</b>	<b>0.2808</b>	<b>0.1195</b>	<b>1.7900e-003</b>		<b>0.0227</b>	<b>0.0227</b>		<b>0.0227</b>	<b>0.0227</b>	<b>0.0000</b>	<b>325.2322</b>	<b>325.2322</b>	<b>6.2300e-003</b>	<b>5.9600e-003</b>	<b>327.1649</b>

Bayview Residential Project - Contra Costa County, Annual

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.14948e+006	151.2045	0.0151	3.1300e-003	152.5147
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>151.2045</b>	<b>0.0151</b>	<b>3.1300e-003</b>	<b>152.5147</b>

Bayview Residential Project - Contra Costa County, Annual

**5.3 Energy by Land Use - Electricity**

**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2 MT/yr	CH4 MT/yr	N2O MT/yr	CO2e MT/yr
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.14948e+006	151.2045	0.0151	3.1300e-003	152.5147
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>151.2045</b>	<b>0.0151</b>	<b>3.1300e-003</b>	<b>152.5147</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**



Bayview Residential Project - Contra Costa County, Annual

	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	6.4707	0.0230	1.0808	1.2000e-004		6.7800e-003	6.7800e-003		6.7800e-003	6.7800e-003	0.0000	13.9800	13.9800	1.9500e-003	2.2000e-004	14.0955
Unmitigated	6.4707	0.0230	1.0808	1.2000e-004		6.7800e-003	6.7800e-003		6.7800e-003	6.7800e-003	0.0000	13.9800	13.9800	1.9500e-003	2.2000e-004	14.0955

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	0.8053					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6313					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.2400e-003	0.0106	4.4900e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2243	12.2243	2.3000e-004	2.2000e-004	12.2969
Landscaping	0.0329	0.0124	1.0763	6.0000e-005		5.9200e-003	5.9200e-003		5.9200e-003	5.9200e-003	0.0000	1.7557	1.7557	1.7200e-003	0.0000	1.7986
<b>Total</b>	<b>6.4707</b>	<b>0.0230</b>	<b>1.0808</b>	<b>1.3000e-004</b>		<b>6.7700e-003</b>	<b>6.7700e-003</b>		<b>6.7700e-003</b>	<b>6.7700e-003</b>	<b>0.0000</b>	<b>13.9800</b>	<b>13.9800</b>	<b>1.9500e-003</b>	<b>2.2000e-004</b>	<b>14.0956</b>

Bayview Residential Project - Contra Costa County, Annual

**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	0.8053					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6313					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.2400e-003	0.0106	4.4900e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2243	12.2243	2.3000e-004	2.2000e-004	12.2969
Landscaping	0.0329	0.0124	1.0763	6.0000e-005		5.9200e-003	5.9200e-003		5.9200e-003	5.9200e-003	0.0000	1.7557	1.7557	1.7200e-003	0.0000	1.7986
<b>Total</b>	<b>6.4707</b>	<b>0.0230</b>	<b>1.0808</b>	<b>1.3000e-004</b>		<b>6.7700e-003</b>	<b>6.7700e-003</b>		<b>6.7700e-003</b>	<b>6.7700e-003</b>	<b>0.0000</b>	<b>13.9800</b>	<b>13.9800</b>	<b>1.9500e-003</b>	<b>2.2000e-004</b>	<b>14.0956</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Bayview Residential Project - Contra Costa County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	12.3777	0.3067	7.4100e-003	22.2533
Unmitigated	12.3777	0.3067	7.4100e-003	22.2533

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	9.38218 / 5.91485	12.3777	0.3067	7.4100e-003	22.2533
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>12.3777</b>	<b>0.3067</b>	<b>7.4100e-003</b>	<b>22.2533</b>

Bayview Residential Project - Contra Costa County, Annual

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	9.38218 / 5.91485	12.3777	0.3067	7.4100e-003	22.2533
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>12.3777</b>	<b>0.3067</b>	<b>7.4100e-003</b>	<b>22.2533</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Bayview Residential Project - Contra Costa County, Annual

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	36.1486	2.1363	0.0000	89.5567
Unmitigated	36.1486	2.1363	0.0000	89.5567

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	178.08	36.1486	2.1363	0.0000	89.5567
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>36.1486</b>	<b>2.1363</b>	<b>0.0000</b>	<b>89.5567</b>

Bayview Residential Project - Contra Costa County, Annual

**8.2 Waste by Land Use**

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	178.08	36.1486	2.1363	0.0000	89.5567
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>36.1486</b>	<b>2.1363</b>	<b>0.0000</b>	<b>89.5567</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**

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

Bayview Residential Project - Contra Costa County, Annual

Equipment Type	Number
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## 11.0 Vegetation

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Bayview Residential BAU - Contra Costa County, Annual

**Bayview Residential BAU  
Contra Costa County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	144.00	Dwelling Unit	23.66	259,200.00	424
User Defined Recreational	11.29	User Defined Unit	26.96	1,174,378.00	0
Other Asphalt Surfaces	421.63	1000sqft	9.68	421,626.00	0
Other Non-Asphalt Surfaces	7.03	1000sqft	0.16	7,030.00	0
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Asphalt Surfaces	71.25	1000sqft	1.64	71,250.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	5	<b>Operational Year</b>		2005	
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -

Land Use - 1,030,425 sf lots, 11.29 acre park + 15.67 acres grading, 421,626 sf roads/paths, 1,406 LF water ext (non-asphalt), 400 LF water ext (asphalt), 1,425 LF Palms Drive improvements, 2.04 persons/lot  
 Construction Phase - no construction model

Off-road Equipment - no construction model



Trips and VMT - no construction model

Woodstoves - assume no woodstoves, all gas fireplaces

Energy Use - Using historical data for 2005 BAU

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	75.00	1.00
tblConstructionPhase	PhaseEndDate	7/2/2010	11/1/2005
tblConstructionPhase	PhaseStartDate	3/20/2010	11/1/2005
tblEnergyUse	T24E	321.72	321.72
tblEnergyUse	T24NG	49,807.87	49,807.87
tblFireplaces	NumberGas	36.00	97.92
tblFireplaces	NumberWood	61.92	0.00
tblLandUse	LandUseSquareFeet	0.00	1,174,378.00
tblLandUse	LotAcreage	46.75	23.66
tblLandUse	LotAcreage	0.00	26.96
tblLandUse	Population	412.00	424.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	151.00	0.00
tblWoodstoves	NumberCatalytic	5.76	0.00
tblWoodstoves	NumberNoncatalytic	5.76	0.00

## 2.0 Emissions Summary

### 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					



## 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	tons/yr										MT/yr					
Mitigated	1.5294	5.0729	18.8207	0.0379	1.1769	0.1068	1.2838	0.3164	0.1015	0.4180	0.0000	1,522.8380	1,522.8380	0.1742	0.0000	1,527.1940
Unmitigated	1.5294	5.0729	18.8207	0.0379	1.1769	0.1068	1.2838	0.3164	0.1015	0.4180	0.0000	1,522.8380	1,522.8380	0.1742	0.0000	1,527.1940

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	1,370.88	1,427.04	1241.28	3,141,963	3,141,963
User Defined Recreational	0.00	0.00	0.00		
<b>Total</b>	<b>1,370.88</b>	<b>1,427.04</b>	<b>1,241.28</b>	<b>3,141,963</b>	<b>3,141,963</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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.510898	0.066605	0.178193	0.160292	0.034075	0.004844	0.011374	0.020220	0.001133	0.001995	0.005872	0.002764	0.001735
Other Non-Asphalt Surfaces	0.510898	0.066605	0.178193	0.160292	0.034075	0.004844	0.011374	0.020220	0.001133	0.001995	0.005872	0.002764	0.001735
Single Family Housing	0.510898	0.066605	0.178193	0.160292	0.034075	0.004844	0.011374	0.020220	0.001133	0.001995	0.005872	0.002764	0.001735
User Defined Recreational	0.510898	0.066605	0.178193	0.160292	0.034075	0.004844	0.011374	0.020220	0.001133	0.001995	0.005872	0.002764	0.001735

#### 5.0 Energy Detail

Historical Energy Use: Y

#### 5.1 Mitigation Measures Energy

	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	294.3699	294.3699	0.0133	2.7500e-003	295.5234
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	294.3699	294.3699	0.0133	2.7500e-003	295.5234
NaturalGas Mitigated	0.0435	0.3716	0.1581	2.3700e-003		0.0300	0.0300		0.0300	0.0300	0.0000	430.3318	430.3318	8.2500e-003	7.8900e-003	432.8891
NaturalGas Unmitigated	0.0435	0.3716	0.1581	2.3700e-003		0.0300	0.0300		0.0300	0.0300	0.0000	430.3318	430.3318	8.2500e-003	7.8900e-003	432.8891

#### 5.2 Energy by Land Use - NaturalGas

##### Unmitigated

	Natural Gas 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					
Other Asphalt Surfaces	0	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
Other Non-Asphalt Surfaces	0	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
Single Family Housing	8.06411e+006	0.0435	0.3716	0.1581	2.3700e-003		0.0300	0.0300		0.0300	0.0300	0.0000	430.3318	430.3318	8.2500e-003	7.8900e-003	432.8891
User Defined Recreational	0	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>0.0435</b>	<b>0.3716</b>	<b>0.1581</b>	<b>2.3700e-003</b>		<b>0.0300</b>	<b>0.0300</b>		<b>0.0300</b>	<b>0.0300</b>	<b>0.0000</b>	<b>430.3318</b>	<b>430.3318</b>	<b>8.2500e-003</b>	<b>7.8900e-003</b>	<b>432.8891</b>

**Mitigated**

	Natural Gas 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					
Other Asphalt Surfaces	0	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
Other Non-Asphalt Surfaces	0	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
Single Family Housing	8.06411e+006	0.0435	0.3716	0.1581	2.3700e-003		0.0300	0.0300		0.0300	0.0300	0.0000	430.3318	430.3318	8.2500e-003	7.8900e-003	432.8891
User Defined Recreational	0	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>0.0435</b>	<b>0.3716</b>	<b>0.1581</b>	<b>2.3700e-003</b>		<b>0.0300</b>	<b>0.0300</b>		<b>0.0300</b>	<b>0.0300</b>	<b>0.0000</b>	<b>430.3318</b>	<b>430.3318</b>	<b>8.2500e-003</b>	<b>7.8900e-003</b>	<b>432.8891</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.01189e+006	294.3699	0.0133	2.7500e-003	295.5234
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>294.3699</b>	<b>0.0133</b>	<b>2.7500e-003</b>	<b>295.5234</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.01189e+006	294.3699	0.0133	2.7500e-003	295.5234
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>294.3699</b>	<b>0.0133</b>	<b>2.7500e-003</b>	<b>295.5234</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	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	7.4637	0.0275	1.2505	1.2000e-004		6.1100e-003	6.1100e-003		6.1100e-003	6.1100e-003	0.0000	13.9800	13.9800	3.0700e-003	2.2000e-004	14.1236
Unmitigated	7.4637	0.0275	1.2505	1.2000e-004		6.1100e-003	6.1100e-003		6.1100e-003	6.1100e-003	0.0000	13.9800	13.9800	3.0700e-003	2.2000e-004	14.1236

## 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	1.7768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6313					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.2400e-003	0.0106	4.4900e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2243	12.2243	2.3000e-004	2.2000e-004	12.2969
Landscaping	0.0544	0.0169	1.2460	6.0000e-005		5.2600e-003	5.2600e-003		5.2600e-003	5.2600e-003	0.0000	1.7557	1.7557	2.8400e-003	0.0000	1.8267
<b>Total</b>	<b>7.4637</b>	<b>0.0275</b>	<b>1.2505</b>	<b>1.3000e-004</b>		<b>6.1100e-003</b>	<b>6.1100e-003</b>		<b>6.1100e-003</b>	<b>6.1100e-003</b>	<b>0.0000</b>	<b>13.9800</b>	<b>13.9800</b>	<b>3.0700e-003</b>	<b>2.2000e-004</b>	<b>14.1236</b>

### 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	1.7768					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6313					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.2400e-003	0.0106	4.4900e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2243	12.2243	2.3000e-004	2.2000e-004	12.2969
Landscaping	0.0544	0.0169	1.2460	6.0000e-005		5.2600e-003	5.2600e-003		5.2600e-003	5.2600e-003	0.0000	1.7557	1.7557	2.8400e-003	0.0000	1.8267
<b>Total</b>	<b>7.4637</b>	<b>0.0275</b>	<b>1.2505</b>	<b>1.3000e-004</b>		<b>6.1100e-003</b>	<b>6.1100e-003</b>		<b>6.1100e-003</b>	<b>6.1100e-003</b>	<b>0.0000</b>	<b>13.9800</b>	<b>13.9800</b>	<b>3.0700e-003</b>	<b>2.2000e-004</b>	<b>14.1236</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	23.7677	0.3067	7.4100e-003	33.6433
Unmitigated	23.7677	0.3067	7.4100e-003	33.6433

### 7.2 Water by Land Use

#### Unmitigated



	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	9.38218 / 5.91485	23.7677	0.3067	7.4100e-003	33.6433
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>23.7677</b>	<b>0.3067</b>	<b>7.4100e-003</b>	<b>33.6433</b>

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	9.38218 / 5.91485	23.7677	0.3067	7.4100e-003	33.6433
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>23.7677</b>	<b>0.3067</b>	<b>7.4100e-003</b>	<b>33.6433</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	36.1486	2.1363	0.0000	89.5567
Unmitigated	36.1486	2.1363	0.0000	89.5567

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	178.08	36.1486	2.1363	0.0000	89.5567
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>36.1486</b>	<b>2.1363</b>	<b>0.0000</b>	<b>89.5567</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	178.08	36.1486	2.1363	0.0000	89.5567
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>36.1486</b>	<b>2.1363</b>	<b>0.0000</b>	<b>89.5567</b>

## 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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Bayview 2030 - Contra Costa County, Annual

**Bayview 2035**  
**Contra Costa County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	144.00	Dwelling Unit	23.66	259,200.00	424
User Defined Recreational	11.29	User Defined Unit	26.96	1,174,378.00	0
Other Asphalt Surfaces	421.63	1000sqft	9.68	421,626.00	0
Other Non-Asphalt Surfaces	7.03	1000sqft	0.16	7,030.00	0
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Asphalt Surfaces	71.25	1000sqft	1.64	71,250.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	5			<b>Operational Year</b>	2035
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	290	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics - PG&E emissions factor projections for 2020

Land Use - 1,030,425 sf lots, 11.29 acre park + 15.67 acres grading, 421,626 sf roads/paths, 1,406 LF water ext (non-asphalt), 400 LF water ext (asphalt), 1,425 LF Palms Drive improvements, 2.04 persons/lot

Construction Phase - no construction model

Off-road Equipment - no construction model

Trips and VMT - no construction model

Woodstoves - assume no woodstoves, all gas fireplaces

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	75.00	1.00
tblConstructionPhase	PhaseEndDate	7/3/2024	3/21/2024
tblFireplaces	NumberGas	36.00	97.92
tblFireplaces	NumberWood	61.92	0.00
tblLandUse	LandUseSquareFeet	0.00	1,174,378.00
tblLandUse	LotAcreage	46.75	23.66
tblLandUse	LotAcreage	0.00	26.96
tblLandUse	Population	412.00	424.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	WorkerTripNumber	151.00	0.00
tblWoodstoves	NumberCatalytic	5.76	0.00
tblWoodstoves	NumberNoncatalytic	5.76	0.00

## 2.0 Emissions Summary

### 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	6.4701	0.0229	1.0746	1.2000e-004		6.8000e-003	6.8000e-003		6.8000e-003	6.8000e-003	0.0000	13.9800	13.9800	1.9200e-003	2.2000e-004	14.0948

Energy	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	476.4367	476.4367	0.0214	9.0900e-003	479.6796
Mobile	0.1712	0.9065	1.9661	9.8200e-003	1.1722	5.0100e-003	1.1772	0.3143	4.6600e-003	0.3190	0.0000	905.1416	905.1416	0.0258	0.0000	905.7877
Waste						0.0000	0.0000		0.0000	0.0000	36.1486	0.0000	36.1486	2.1363	0.0000	89.5567
Water						0.0000	0.0000		0.0000	0.0000	2.9765	9.4012	12.3777	0.3067	7.4100e-003	22.2533
<b>Total</b>	<b>6.6741</b>	<b>1.2102</b>	<b>3.1602</b>	<b>0.0117</b>	<b>1.1722</b>	<b>0.0345</b>	<b>1.2067</b>	<b>0.3143</b>	<b>0.0342</b>	<b>0.3485</b>	<b>39.1252</b>	<b>1,404.9594</b>	<b>1,444.0846</b>	<b>2.4921</b>	<b>0.0167</b>	<b>1,511.3721</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	tons/yr										MT/yr					
Area	6.4701	0.0229	1.0746	1.2000e-004		6.8000e-003	6.8000e-003		6.8000e-003	6.8000e-003	0.0000	13.9800	13.9800	1.9200e-003	2.2000e-004	14.0948
Energy	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	476.4367	476.4367	0.0214	9.0900e-003	479.6796
Mobile	0.1712	0.9065	1.9661	9.8200e-003	1.1722	5.0100e-003	1.1772	0.3143	4.6600e-003	0.3190	0.0000	905.1416	905.1416	0.0258	0.0000	905.7877
Waste						0.0000	0.0000		0.0000	0.0000	36.1486	0.0000	36.1486	2.1363	0.0000	89.5567
Water						0.0000	0.0000		0.0000	0.0000	2.9765	9.4012	12.3777	0.3067	7.4100e-003	22.2533
<b>Total</b>	<b>6.6741</b>	<b>1.2102</b>	<b>3.1602</b>	<b>0.0117</b>	<b>1.1722</b>	<b>0.0345</b>	<b>1.2067</b>	<b>0.3143</b>	<b>0.0342</b>	<b>0.3485</b>	<b>39.1252</b>	<b>1,404.9594</b>	<b>1,444.0846</b>	<b>2.4921</b>	<b>0.0167</b>	<b>1,511.3721</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
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

**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	tons/yr										MT/yr					
Mitigated	0.1712	0.9065	1.9661	9.8200e-003	1.1722	5.0100e-003	1.1772	0.3143	4.6600e-003	0.3190	0.0000	905.1416	905.1416	0.0258	0.0000	905.7877
Unmitigated	0.1712	0.9065	1.9661	9.8200e-003	1.1722	5.0100e-003	1.1772	0.3143	4.6600e-003	0.3190	0.0000	905.1416	905.1416	0.0258	0.0000	905.7877

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	1,370.88	1,427.04	1,241.28	3,141,963	3,141,963
User Defined Recreational	0.00	0.00	0.00		
<b>Total</b>	<b>1,370.88</b>	<b>1,427.04</b>	<b>1,241.28</b>	<b>3,141,963</b>	<b>3,141,963</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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.609624	0.034331	0.184174	0.106725	0.011089	0.004823	0.010941	0.026901	0.001676	0.001461	0.005046	0.002585	0.000623
Other Non-Asphalt Surfaces	0.609624	0.034331	0.184174	0.106725	0.011089	0.004823	0.010941	0.026901	0.001676	0.001461	0.005046	0.002585	0.000623
Single Family Housing	0.609624	0.034331	0.184174	0.106725	0.011089	0.004823	0.010941	0.026901	0.001676	0.001461	0.005046	0.002585	0.000623
User Defined Recreational	0.609624	0.034331	0.184174	0.106725	0.011089	0.004823	0.010941	0.026901	0.001676	0.001461	0.005046	0.002585	0.000623

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	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	151.2045	151.2045	0.0151	3.1300e-003	152.5147
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	151.2045	151.2045	0.0151	3.1300e-003	152.5147
NaturalGas Mitigated	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	325.2322	325.2322	6.2300e-003	5.9600e-003	327.1649
NaturalGas Unmitigated	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	325.2322	325.2322	6.2300e-003	5.9600e-003	327.1649

## 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					



Other Asphalt Surfaces	0	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
Other Non-Asphalt Surfaces	0	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
Single Family Housing	6.09462e+006	0.0329	0.2808	0.1195	1.7900e-003	0.0227	0.0227	0.0227	0.0227	0.0227	0.0000	325.2322	325.2322	6.2300e-003	5.9600e-003	327.1649	
User Defined Recreational	0	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>0.0329</b>	<b>0.2808</b>	<b>0.1195</b>	<b>1.7900e-003</b>	<b>0.0227</b>	<b>0.0227</b>	<b>0.0227</b>	<b>0.0227</b>	<b>0.0227</b>	<b>0.0000</b>	<b>325.2322</b>	<b>325.2322</b>	<b>6.2300e-003</b>	<b>5.9600e-003</b>	<b>327.1649</b>	

**Mitigated**

	Natural Gas 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					
Other Asphalt Surfaces	0	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
Other Non-Asphalt Surfaces	0	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
Single Family Housing	6.09462e+006	0.0329	0.2808	0.1195	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	325.2322	325.2322	6.2300e-003	5.9600e-003	327.1649
User Defined Recreational	0	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>0.0329</b>	<b>0.2808</b>	<b>0.1195</b>	<b>1.7900e-003</b>		<b>0.0227</b>	<b>0.0227</b>		<b>0.0227</b>	<b>0.0227</b>	<b>0.0000</b>	<b>325.2322</b>	<b>325.2322</b>	<b>6.2300e-003</b>	<b>5.9600e-003</b>	<b>327.1649</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.14948e+006	151.2045	0.0151	3.1300e-003	152.5147
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>151.2045</b>	<b>0.0151</b>	<b>3.1300e-003</b>	<b>152.5147</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.14948e+006	151.2045	0.0151	3.1300e-003	152.5147
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>151.2045</b>	<b>0.0151</b>	<b>3.1300e-003</b>	<b>152.5147</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	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
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Hearth	1.2400e-003	0.0106	4.4900e-003	7.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	12.2243	12.2243	2.3000e-004	2.2000e-004	12.2969
Landscaping	0.0323	0.0123	1.0702	6.0000e-005		5.9500e-003	5.9500e-003		5.9500e-003	5.9500e-003	0.0000	1.7557	1.7557	1.6900e-003	0.0000	1.7979
<b>Total</b>	<b>6.4701</b>	<b>0.0229</b>	<b>1.0746</b>	<b>1.3000e-004</b>		<b>6.8000e-003</b>	<b>6.8000e-003</b>		<b>6.8000e-003</b>	<b>6.8000e-003</b>	<b>0.0000</b>	<b>13.9800</b>	<b>13.9800</b>	<b>1.9200e-003</b>	<b>2.2000e-004</b>	<b>14.0948</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	12.3777	0.3067	7.4100e-003	22.2533
Unmitigated	12.3777	0.3067	7.4100e-003	22.2533

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	9.38218 / 5.91485	12.3777	0.3067	7.4100e-003	22.2533

User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>12.3777</b>	<b>0.3067</b>	<b>7.4100e-003</b>	<b>22.2533</b>

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	9.38218 / 5.91485	12.3777	0.3067	7.4100e-003	22.2533
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>12.3777</b>	<b>0.3067</b>	<b>7.4100e-003</b>	<b>22.2533</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	36.1486	2.1363	0.0000	89.5567

Unmitigated	36.1486	2.1363	0.0000	89.5567
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## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	178.08	36.1486	2.1363	0.0000	89.5567
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>36.1486</b>	<b>2.1363</b>	<b>0.0000</b>	<b>89.5567</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	178.08	36.1486	2.1363	0.0000	89.5567
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000

Total		36.1486	2.1363	0.0000	89.5567
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## 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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**Unadjusted Project**

Emission Source	Total Emissions (MT/Year)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total CO <sub>2</sub> e
Area Sources	13.98	<1	<1	14.1
Electricity	151.20	0.02	0.00	152.51
Nat gas	325.23	0.01	0.01	327.16
Mobile Sources	1,256.50	0.05	0	1,257.67
Solid Waste	36.15	2.14	0	89.56
Water and Wastewater	12.38	0.31	0.01	22.25
Amortized Construction Emissions				177
<b>Total</b>	<b>1,795.45</b>	<b>2.51</b>	<b>0.02</b>	<b>2,040.26</b>
Service Population (residents)				356
<b>Total Project GHG Emissions by Service Population</b>				<b>5.73</b>
Project-level Screening Threshold				3.86

Emissions above threshold 664.30

**Unadjusted Project (check methods)**

Emission Source	Total Emissions (MT/Year)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total CO <sub>2</sub> e
Area Sources	13.98	<1	<1	14.1
Electricity	151.25	0.02	0.00	152.58
Nat gas	325.23	0.01	0.01	327.16
Mobile Sources	1,256.50	0.05	0	1,257.67
Solid Waste	36.15	2.14	0	89.56
Water and Wastewater	22.34	0.06	0.14	22.54
Amortized Construction Emissions				177
<b>Total</b>	<b>1,805.45</b>	<b>2.27</b>	<b>0.15</b>	<b>2,040.62</b>
Service Population (residents)				356
<b>Total Project GHG Emissions by Service Population</b>				<b>5.73</b>
Project-level Screening Threshold				3.86

Emissions above threshold 665.72

**Adjusted Project (for 2024 first year of operation)**

Emission Source	Total Emissions (MT/Year)				ESA	Ramboll	ESA Reduction	
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total CO <sub>2</sub> e			Total CO <sub>2</sub> e	
Area Sources	13.98	<1	<1	14.1			14.1	0
Electricity	128.98	0.02	0.00	130.32	-22.19	-76.10	130.32	-22.19
Nat gas	325.23	0.01	0.01	327.16	-28.90	-28.90	298.26	-28.90
Mobile Sources	895.14	0.05	0	895.19			895.19	-362.48
Solid Waste	36.15	2.14	0	89.56	-67.2	-67.2	22.36	-67.2
Water and Wastewater	19.05	0.06	0.14	19.25	-3.00	-4.8	19.25	-3.00
Amortized Construction Emissions				177			177	0
<b>Total</b>	<b>1,418.54</b>	<b>2.27</b>	<b>0.15</b>	<b>1,652.58</b>	<b>-121.29</b>	<b>-177.00</b>	<b>1,556.48</b>	<b>-483.77</b>
Service Population (residents)				356			356	356
<b>Total Project GHG Emissions by Service Population</b>				<b>4.64</b>			<b>4.37</b>	<b>3.93</b>
Project-level Screening Threshold				3.86			<b>3.86</b>	<b>3.86</b>

Emissions above threshold 278.42 182.32 24.416

**Notes:** Electricity emissions adjusted for RPS  
Mobile emissions adjusted for EMFAC 2017

with zero carbon 1400 electricity

. In most cases, alternative or new energy use reductions are applied rather than default assumptions in the CalEEMod version 2016.3.2 land use emissions model used

**BAAQMD screening threshold adjusted for SB 32**

2020 threshold 4.60 MT/SP  
2030 2.76 MT/SP

Interpolated for 2024 3.86

**Table 4.6-11**  
annual operational energy consumption

Fuel Type	Energy Consumption	Units
<b>Electricity</b>		
Building <sup>a</sup>	1,149,480	Kwh/year
Water <sup>a</sup>	169,797	Kwh/year
Total Electricity	1,319,277	Kwh/year
<b>Natural Gas</b>		
Building <sup>a</sup>	6,094,620	kBTU/year
<b>Gasoline<sup>b</sup></b>		
Mobile <sup>c,d</sup>	121,623	Gallons/year

Composite gallons/mile = 0.0387092  
CalEEMod VMT = 3,141,963  
total gallons per year (gasoline) = 121,623  
MT CO2 per year = 895

VMT from CalEEMod run  
3141.96 Annual VMT



**Energy Usage Emission Factors**  
**PG&E**

(Adapted & updated from Ramboll, June 13, 2019 Memo on GHG Emissions Reductions for Bayview Estates Residential Project: Appendix A, Table 1)

**PG&E Historical Electricity Emissions Intensity**

Annual Electricity Data	2014	2015	2016	2017	Average <sup>1</sup>	Units
CO <sub>2</sub> Intensity Factor per Total Energy Delivered <sup>2</sup>	435	405	294	210	303	lbs CO <sub>2</sub> /MWh delivered
% of Total Energy From RPS-Eligible Renewables <sup>3</sup>	0.27	0.30	0.33	0.33	0.32	-
CO <sub>2</sub> Intensity Factor per Total Non-RPS-Eligible Energy <sup>4</sup>	596	574	437	314	442	lbs CO <sub>2</sub> /MWh delivered

**Estimated Intensity Factor for Total Energy Delivered<sup>5,6</sup>**

Model Year	2015	2016	2017	Average <sup>1</sup>	Units
2020 RPS (33%)	384	293	210	296	lbs CO <sub>2</sub> /MWh delivered
	387	295	213	298	lbs CO <sub>2e</sub> /MWh delivered
2024 RPS (44%) <sup>7</sup>	321	245	176	247	lbs CO <sub>2</sub> /MWh delivered
	324	247	178	250	lbs CO <sub>2e</sub> /MWh delivered
2030 RPS (60%) <sup>7</sup>	230	175	126	177	lbs CO <sub>2</sub> /MWh delivered
	232	177	128	179	lbs CO <sub>2e</sub> /MWh delivered
2045 RPS (100%) <sup>7</sup>	0	0	0	0	lbs CO <sub>2</sub> /MWh delivered
	2.6	2.6	2.6	2.6	lbs CO <sub>2e</sub> /MWh delivered

**Greenhouse Gas Energy Emission Factors**

Greenhouse Gas	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2e</sub>	Units
Global Warming Potential <sup>6</sup>	1.0	25	298	-	-
2020 Electricity Use Emission Factor <sup>8</sup>	300	0.029	0.0062	302	lb/MWh
	0.14	1.3E-05	2.8E-06	0.14	MT/MWh
2024 (Buildout) Electricity Use Emission Factor <sup>8</sup>	297	0.029	0.0062	300	lb/MWh
	0.13	1.3E-05	2.8E-06	0.14	MT/MWh
2030 Electricity Use Emission Factor <sup>8</sup>	213	0.029	0.0062	216	lb/MWh
	0.10	1.3E-05	2.8E-06	0.10	MT/MWh
Natural Gas Use Emission Factor <sup>9</sup>	118	0.0023	0.0022	118	lb/MMBTU
	0.0053	1.0E-07	9.8E-08	0.0054	MT/therm
Greenhouse Gas	CH <sub>4</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub>	Units
Gasoline Emission Factor <sup>10</sup>				7.36	kg/gal

**Notes:**

- <sup>1</sup> This average uses the most recent three years of data.
- <sup>2</sup> Total CO<sub>2</sub> emission factor from The Climate Registry.
- <sup>3</sup> Percent of total energy from eligible renewables is from the PG&E 2015, 2016, and 2017 Corporate Responsibility Reports.
- <sup>4</sup> The emissions metric presented here is calculated based on the total CO<sub>2</sub> intensity factor divided by the percent of energy delivered from non-RPS-eligible renewable sources. This CO<sub>2</sub> intensity factor includes both fossil and nuclear.
- <sup>5</sup> The intensity factor for total energy delivered is estimated by multiplying the percentage of energy delivered from non-RPS-eligible renewable energy by the intensity factor for total energy delivered from non-RPS-eligible renewable energy.
- <sup>6</sup> Global Warming Potentials (GWP) are based on the IPCC Fourth Assessment Report. CH<sub>4</sub> and N<sub>2</sub>O emission factors are from the CalEEMod<sup>®</sup> version 2016.3.2.
- <sup>7</sup> Emission factor presented here is 44% projected RPS for 2024, 60% projected RPS for 2030 and 100% carbon-free electricity for 2045 consistent with Senate Bill (SB) 100. Available at: <https://leginfo.ca.gov/faces/billNavClient.xhtml>
- <sup>8</sup> The intensity factor for total energy delivered is
- <sup>9</sup> Natural Gas Use emission factors from Table 8.2 of CalEEMod<sup>®</sup> User's Guide Appendix D.
- <sup>10</sup> Gasoline emission factors from Table 12.1 of The Climate Registry's General Reporting Protocol, 2018.

**Abbreviations:**

CalEEMod<sup>®</sup> - California Emissions Estimator Model  
 CH<sub>4</sub> - methane  
 CO<sub>2</sub> - carbon dioxide  
 CO<sub>2e</sub> - carbon dioxide equivalents  
 CPUC - California Public Utilities Commission  
 GWP - global warming potential  
 IPCC AR4 - Intergovernmental Panel on Climate Change Fourth Assessment Report  
 lb - pound(s)  
 MMBtu - million British Thermal Units

MT - metric ton(s)  
 MWh - megawatt-hour  
 N<sub>2</sub>O - nitrous oxide  
 NOx - nitrogen oxides  
 PG&E - Pacific Gas & Electric  
 PM - particulate matter  
 ROG - reactive organic gases  
 RPS - Renewable Portfolio Standard  
 SB - Senate Bill

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**CO<sub>2</sub> Intensity (lb/MWhr)**  
**CH<sub>4</sub> Intensity (lb/MWhr)**  
**N<sub>2</sub>O Intensity (lb/MWhr)**

	GWP	PGE
	1	
	25	0.029
	298	0.00617

**Title 24 Energy Savings Adjustment**

Non-Residential

% savings over Title 24 (2019)

	% savings over Title 24 (2016)		
	Electricity	Lighting	NG
Non-Residential:	10.7%	0%	1%
0%	10.7%	0%	1%
5%	15.2%	0%	6.0%
10%	19.6%	0%	10.9%
15%	24.1%	0%	15.9%

Residential

% savings over Title 24 (2019)

	% savings over Title 24 (2016)		
	Electricity	Lighting	NG
Multi-Family without PV:	2%	0%	5%
0%	2.0%	0%	5.0%
5%	6.9%	0%	9.8%
10%	11.8%	0%	14.5%
15%	16.7%	0%	19.3%

**Project Energy Use Factors Adjustment**

Non-Residential % savings over Title 24 (2016) =

Residential % savings over Title 24 (2016) =

	Electricity	Lighting	NG
Non-Residential % savings over Title 24 (2016) =	10.7%	0.0%	1.0%
Residential % savings over Title 24 (2016) =	2.0%	0.0%	5.0%

Link these cells to the appropriate val

	T24 Electricity	NT24 Electricity	Lighting Electricity	T24 NG	NT24 NG
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**Title 24 (2016 - CalEEMod Default)**

**Project Non-Residential Land Uses**

Enclosed Parking with Elevator	3.92	0.19	1.75	-	-
General Office Building	4.60	4.62	3.77	10.02	0.39
High Turnover (Sit Down Rest.)	8.11	28.16	7.87	42.98	187.78
User Defined (Outdoor Deck)	-	-	0.35	-	-

Enter CalEEMod default Title 24 (2016) (nonresidential land uses; insert/delete r

**Project Residential Land Uses**

N/A	-	-	-	-	-
N/A	-	-	-	-	-

Enter CalEEMod default Title 24 (2016) (residential land uses; insert/delete r

**Title 24 (2019)**

**Project Non-Residential Land Uses**

Enclosed Parking with Elevator	3.50	0.19	1.75	-	-
General Office Building	4.11	4.62	3.77	9.92	0.39
High Turnover (Sit Down Rest.)	7.24	28.16	7.87	42.55	187.78
User Defined (Outdoor Deck)	-	-	0.35	-	-

Copy same land uses from above into Copy/paste formulas to new rows as (these rates should replace the defau

**Project Residential Land Uses**

N/A	-	-	-	-	-
N/A	-	-	-	-	-

Copy same land uses from above into Copy/paste formulas to new rows as (these rates should replace the defau

Sources:

California Emissions Estimator Model (CalEEMod), version 2016.3.2.

California Energy Commission, Impact Analysis, 2019 Update to the California Energy Efficiency Standards for Residential and Non-Residential Buildings, Section 1.2 (Non-Residential), Table 19 (Multi-Family without PV), June 10, 2015. Available:

[https://ww2.energy.ca.gov/title24/2019standards/post\\_adoption/documents/2019\\_Impact\\_Analysis\\_Final\\_Report\\_2018-06-29.pdf](https://ww2.energy.ca.gov/title24/2019standards/post_adoption/documents/2019_Impact_Analysis_Final_Report_2018-06-29.pdf). Accessed January 2020.