

# **APPENDIX G**

## *Greenhouse Gas Screening Assessment*

## *Technical Report*



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**RE: Cypress Point 54 Unit Residential Development - Greenhouse Gas Screening Assessment - City of Oceanside**

The purpose of this Greenhouse Gas (GHG) screening assessment is to identify potential significant GHG impacts, if any, which may be created from the construction and operation of the proposed 54-unit single family development with natural gas fireplaces. As a design feature to the Project will install natural gas fireplaces in each unit as well as install 3 kilowatts (kW) of solar panels per rooftop within the development. The proposed Project site is located at the terminus of Pala Road and Los Arbolitos Boulevard in the City of Oceanside.

**City of Oceanside GHG Thresholds:**

The City of Oceanside's Climate Action Plan (CAP) seeks to align with state efforts to reduce greenhouse gas (GHG) emissions while balancing a variety of community interests: e.g., quality of life, economic development, and social equity. The CAP outlines several measures the Oceanside community will take to make progress towards meeting the State of California's 2050 GHG reduction goal. The CAP has been prepared as part of the City's General Plan and utilizes land use assumptions to estimate GHG inventories presented in the CAP. Therefore, a project would be required to conform to all General Plan policies.

California State laws governing GHG emissions within the state are generally written to conform to both the Global Warming Solutions Act of 2006 (AB 32) and Senate Bill 32 (SB 32). These laws were written to reduce GHG emissions within the state to meet goals set forth within the laws therein. The current goal for the State is to reduce GHG emissions by 40 percent below 1990 levels by 2030. To meet the requirements of the State's laws, the City of Oceanside has adopted a screening threshold of 900 metric tons of GHG's per year.

Also, a number of jurisdictions have recommended or adopted efficiency metrics or "service population" thresholds as a method for analyzing cumulative GHG emissions and significance of impacts under CEQA. A project's "service population" refers to a project's residents plus

employees that would be generated by project-related development. This efficiency metric is expressed as MT CO<sub>2</sub>e per service population (SP) per year (MT CO<sub>2</sub>e/year/SP).

Projects exceeding the 900 MT GHG screening threshold would be required to demonstrate that GHG emissions do not exceed efficiency/service population thresholds (City of Oceanside, 2019) which are identified below:

- *Projects that will be implemented prior to 2020 must show that GHG emissions related to both construction and operation will not exceed 4.0 MT CO<sub>2</sub>e/SP per year.*
- *Projects that will not be implemented prior to 2020 must show that GHG emissions related to both construction and operations will not exceed 3.5 MT CO<sub>2</sub>e/SP per year.*

Additionally, it should be noted that the San Diego Association of Governments (SANDAG) has indicated that in the City of Oceanside, the average occupancy per home is 2.92 persons/unit (SANDAG, 2013). Therefore, the SP for residential uses is 2.92 multiplied by the number of units.

## Modeling

The GHG emissions were calculated using the latest CalEEMod 2016.3.2 air quality model which was developed by Breeze Software for South Coast Air Quality Management District (SCAQMD). The City of Oceanside also recommends the use of CalEEMod 2016.3.2 which utilizes EMFAC 2014 to determine GHG estimates. The modeling results for both construction and operations are provided as **Attachment A**.

## Construction Description

The Project construction dates were estimated based on a construction kickoff starting in 2023 with construction completed in 2024. The existing site is located within a flood plain so during grading operations, the site will require import of roughly 35,000 CY. Table 1 shows the expected timeframes for the construction processes for all the Proposed Project infrastructure, facilities, improvements and structures at the site, as well as the expected number of pieces of equipment have been verified by the applicants Project Engineer.

**Table 1: Expected Construction Equipment**

Equipment Identification	Proposed Start	Proposed Completion	Quantity
<b>Site Preparation</b>	01/01/2023	01/13/2023	
Graders			3
Tractors/Loaders/Backhoes			4
<b>Grading</b>	01/14/2023	02/28/2023	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
<b>Building Construction</b>	03/01/2023	03/28/2023	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
<b>Paving</b>	03/29/2023	02/13/2024	
Cement and Mortar Mixers			2
Pavers			2
Rollers			2
<b>Architectural Coating</b>	12/01/2023	02/13/2024	
Air Compressors			1

## Operations

Once construction is completed the proposed project would generate air quality and GHG emissions from daily operations which would include sources such as Area, Energy, Mobile, Solid waste and Water uses. The proposed project is expected to be fully operational in 2022 and was modeled as such. The Project was estimated to generate 540 average daily trips ADT (LLG Engineers, 2020). Vehicle Miles Traveled (VMT) was manually updated within the model to reflect the estimated VMT per trip within the County of San Diego area which includes Oceanside as is estimated by EMFAC 2014 which is provided as **Attachment B**.

Electrical energy-intensity factors were updated within CalEEMod to reflect San Diego Gas and Electric's (SDG&E) emissions rate variations from 2009 which is the default rate data used by CalEEMod. In 2009, SDG&E achieved 10.5 percent procurement of renewable energy (California Public Utilities Commission, 2016) and in 2020 will have up to 46% in place. For purposes of analysis however the State's 33% requirement was assumed. After 2020, in 2030, an additional 27% reduction would be required or 2.7% per year such that a 60% RPS is achieved in 2030.

Given this, SDG&E energy-intensity factors for 2025 were calculated and were modeled as such within CalEEMod. As discussed earlier the model is provided as **Attachment A**.

The proposed project would install 3 kW of solar per home or 162 kW of solar throughout the development. The CalEEMod model for the Project has been updated to implement this design feature. For reduction calculations associated with the PV design feature, annual energy estimates were provided by the National Renewable Energy Laboratory (NREL, 2020) and shown as **Attachment C**. Based on this, the Project solar would be estimated to generate 270,479 kWh of annual electrical energy. It should be noted that the more solar produced by the Project reduces the amount of non-renewable energy added to the grid by offsite utilities. Given this, offsite generation from renewables would not be offset from onsite renewables. Instead, it is assumed that an equivalent of non-renewable generation is offset at 100%. Therefore, default GHG intensities or those assumed within CalEEMod are used to determine GHG reductions. A separate GHG model was prepared and is provided as **Attachment D**.

### Construction GHG Findings

The construction GHG emissions as calculated in CalEEMod are shown in Table 2 below. Total cumulative or combined construction emissions (from 2023 and 2024) are generated prior to operations though will ultimately contribute to yearly emission levels of the Project as a whole. Because of this, it is acceptable to average the total construction emission over a 30-year period (South Coast Air Quality Management District, 2014) which represents an average lifecycle of a project. GHGs related to construction are shown in Table 2. Based on this, it is expected that the 30 year average would be which would be 17.18 MT CO<sub>2</sub>e per year.

**Table 2: Expected Annual Construction CO<sub>2</sub>e Emissions Summary MT/Year**

Year	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
2023	0.00	466.87	466.87	0.09	0.00	469.19
2024	0.00	45.88	45.88	0.01	0.00	46.11
<b>Total</b>						515.30
<b>Yearly Average Construction Emissions (MT CO<sub>2</sub>e /year over 30 years)</b>						<b>17.18</b>

### Operational Air Quality Findings

As previously discussed, operational GHG emissions generated from Area, Energy, Mobile, Solid Waste and Water uses is also calculated within CalEEMod. Operational emissions from the

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proposed project would also include amortized construction emissions construction emissions from Table 2 above. Based on these findings, combined operational and construction GHG emissions will generate 531.48 Metric Tons of CO<sub>2</sub>e each year during a typical operational year as can be seen in Table 3 below. Given this, the project would not exceed the City's 900 MT CO<sub>2</sub>e screening threshold and would therefore generate less than significant GHG impacts.

**Table 3: Expected Operational Emissions Summary MT/Year**

Year	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Area	0.00	43.19	43.19	0.00	0.00	43.46
Energy	0.00	152.80	152.80	0.00	0.00	153.52
Mobile	0.00	345.94	345.94	0.02	0.00	346.40
Waste	12.82	0.00	12.82	0.76	0.00	31.75
Water	0.89	11.68	12.57	0.09	0.00	15.56
162 KW Rooftop Solar Reduction (See Attachment C)						-88.70
Total Construction Emissions (Amortized over 30 Years from Table 5.1 above)						17.18
<b>Total Cumulative Operations (Construction + Operations - Solar)</b>						<b>531.48</b>
<b>Service Population (Residential Component) 2.92*54=157.68</b>						<b>157.68</b>
<b>Total GHGs per SP (MT CO<sub>2</sub>e per SP)</b>						<b>3.29</b>
Data is presented in decimal format and may have rounding errors.						
Data includes reductions from natural gas fireplaces instead of wood burning fireplaces.						

Furthermore, the project would have a SP of 157.68. Given this, the project would generate roughly 3.29 MT CO<sub>2</sub>e/SP. Since the project would generate less than 3.5 MT CO<sub>2</sub>e/SP, the project would generate less than significant GHG impact and would therefore not be required to implement any mitigation measures beyond the design features (Labeled Design Feature 1 in Table 3 above) identified in this report.

Sincerely Ldn Consulting,

Jeremy Louden

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- Attachments:**
- A - CalEEMod Model Results (Proposed Project)
  - B – EMFAC 2014 VMT per Trip Calculations
  - C - NREL PV WATTS Estimated Energy Produced by 162 kW Rooftop Solar
  - D - CalEEMod Model Result (162 kW Solar)

**References:**

- California Public Utilities Commission. (2016). *Biennial RPS Program Update - In Compliance with Public Utilities Code Section 913.6*. Retrieved from [http://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Website/Content/Utilities\\_and\\_Industries/Energy/Reports\\_and\\_White\\_Papers/FINAL12302015Section913\\_6Report.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Reports_and_White_Papers/FINAL12302015Section913_6Report.pdf)
- City of Oceanside. (2019). *Planning Division Policy Directive 2018-01 (Revised), (CEQA GHG Impact Analysis: Thresholds of Significance)*.
- LLG Engineers. (2020). *LOCAL TRANSPORTATION ASSESSMENT - THE CONCORDIA COLLECTION AT CYPRESS POINT*.
- NREL. (2020). <https://pvwatts.nrel.gov/>. Retrieved from <https://pvwatts.nrel.gov/>
- SANDAG. (2013). *SERIES 13 REGIONAL GROWTH FORECAST - Subregional Area 42 - Oceanside*. Retrieved from [http://datasurfer.sandag.org/download/sandag\\_forecast\\_13\\_sra\\_oceanside.pdf](http://datasurfer.sandag.org/download/sandag_forecast_13_sra_oceanside.pdf)
- South Coast Air Quality Management District. (2014). *Greenhouse Gases CEQA Significance Thresholds*. Retrieved 2014, from <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds>

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**Cypress Point Single Family Development (54 units)  
San Diego County, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	54.00	Dwelling Unit	7.30	97,200.00	154

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	430.68	CH4 Intensity (lb/MWhr)	0.017	N2O Intensity (lb/MWhr)	0.004

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

Cypress Point Single Family Development (54 units) - San Diego County, Annual

## Project Characteristics - RPS 2025

Land Use - Site is roughly 7.3 acres disturbed which includes roadway access points

Construction Phase - CS

## Grading - 35,000 CY import

Architectural Coating - Rule 67 Paint

Vehicle Trips - Per Traffic Study. 5.39 VMT/Trip based on EMFAC 2014 for 2025

#### Woodstoves - all natural gas hearths

## Area Coating - Rule 67 Paints

## Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 with DPF

## Water Mitigation -

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	32.00

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

tblConstructionPhase	NumDays	20.00	53.00
tblFireplaces	NumberGas	29.70	54.00
tblFireplaces	NumberNoFireplace	5.40	0.00
tblFireplaces	NumberWood	18.90	0.00
tblGrading	MaterialImported	0.00	35,000.00
tblLandUse	LotAcreage	17.53	7.30
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.017
tblProjectCharacteristics	CO2IntensityFactor	720.49	430.68
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	HO_TL	7.50	5.39
tblVehicleTrips	HO_TTP	39.60	39.00
tblVehicleTrips	HS_TL	7.30	5.39
tblVehicleTrips	HS_TTP	18.80	19.00
tblVehicleTrips	HW_TL	10.80	5.39
tblVehicleTrips	HW_TTP	41.60	42.00
tblVehicleTrips	ST_TR	9.91	10.00
tblVehicleTrips	SU_TR	8.62	10.00
tblVehicleTrips	WD_TR	9.52	10.00
tblWoodstoves	NumberCatalytic	2.70	0.00
tblWoodstoves	NumberNoncatalytic	2.70	0.00

**2.0 Emissions Summary**

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## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**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					
2023	0.4672	2.2984	2.2696	5.1700e-003	0.2480	0.0946	0.3426	0.1179	0.0885	0.2065	0.0000	466.8682	466.8682	0.0928	0.0000	469.1879	
2024	0.3950	0.2425	0.2972	5.3000e-004	3.5900e-003	0.0108	0.0144	9.7000e-004	0.0102	0.0112	0.0000	45.8837	45.8837	9.2200e-003	0.0000	46.1142	
Maximum	0.4672	2.2984	2.2696	5.1700e-003	0.2480	0.0946	0.3426	0.1179	0.0885	0.2065	0.0000	466.8682	466.8682	0.0928	0.0000	469.1879	

**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					
2023	0.3022	0.6041	2.4785	5.1700e-003	0.2480	1.5400e-003	0.2495	0.1179	1.5100e-003	0.1194	0.0000	466.8679	466.8679	0.0928	0.0000	469.1876	
2024	0.3742	0.0457	0.3183	5.3000e-004	3.5900e-003	1.4000e-004	3.7200e-003	9.7000e-004	1.3000e-004	1.1000e-003	0.0000	45.8836	45.8836	9.2200e-003	0.0000	46.1142	
Maximum	0.3742	0.6041	2.4785	5.1700e-003	0.2480	1.5400e-003	0.2495	0.1179	1.5100e-003	0.1194	0.0000	466.8679	466.8679	0.0928	0.0000	469.1876	

	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	21.54	74.42	-8.96	0.00	0.00	98.41	29.05	0.00	98.34	44.62	0.00	0.00	0.00	0.00	0.00	0.00

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.8931	0.3619
2	4-1-2023	6-30-2023	0.5369	0.1015
3	7-1-2023	9-30-2023	0.5428	0.1027
4	10-1-2023	12-31-2023	0.8141	0.3591
5	1-1-2024	3-31-2024	0.6262	0.4126
		Highest	0.8931	0.4126

**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	0.4568	0.0413	0.4162	2.6000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	43.1880	43.1880	1.4400e-003	7.8000e-004	43.4565	
Energy	6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	152.7968	152.7968	4.6600e-003	2.0300e-003	153.5180	
Mobile	0.1063	0.4198	1.0769	3.7300e-003	0.3545	3.0300e-003	0.3575	0.0949	2.8100e-003	0.0977	0.0000	345.9411	345.9411	0.0182	0.0000	346.3961	
Waste						0.0000	0.0000		0.0000	0.0000	12.8169	0.0000	12.8169	0.7575	0.0000	31.7532	
Water						0.0000	0.0000		0.0000	0.0000	1.1162	13.7636	14.8798	0.1152	2.8300e-003	18.6042	
<b>Total</b>	<b>0.5699</b>	<b>0.5193</b>	<b>1.5178</b>	<b>4.3600e-003</b>	<b>0.3545</b>	<b>0.0129</b>	<b>0.3674</b>	<b>0.0949</b>	<b>0.0127</b>	<b>0.1076</b>	<b>13.9331</b>	<b>555.6895</b>	<b>569.6225</b>	<b>0.8969</b>	<b>5.6400e-003</b>	<b>593.7280</b>	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**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	0.4568	0.0413	0.4162	2.6000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	43.1880	43.1880	1.4400e-003	7.8000e-004	43.4565	
Energy	6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	152.7968	152.7968	4.6600e-003	2.0300e-003	153.5180	
Mobile	0.1063	0.4198	1.0769	3.7300e-003	0.3545	3.0300e-003	0.3575	0.0949	2.8100e-003	0.0977	0.0000	345.9411	345.9411	0.0182	0.0000	346.3961	
Waste						0.0000	0.0000		0.0000	0.0000	12.8169	0.0000	12.8169	0.7575	0.0000	31.7532	
Water						0.0000	0.0000		0.0000	0.0000	0.8930	11.6800	12.5730	0.0922	2.2700e-003	15.5551	
<b>Total</b>	<b>0.5699</b>	<b>0.5193</b>	<b>1.5178</b>	<b>4.3600e-003</b>	<b>0.3545</b>	<b>0.0129</b>	<b>0.3674</b>	<b>0.0949</b>	<b>0.0127</b>	<b>0.1076</b>	<b>13.7098</b>	<b>553.6059</b>	<b>567.3157</b>	<b>0.8739</b>	<b>5.0800e-003</b>	<b>590.6788</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	1.60	0.37	0.40	2.57	9.93	0.51

**3.0 Construction Detail****Construction Phase**

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	2/28/2023	5	32	
3	Paving	Paving	3/1/2023	3/28/2023	5	20	
4	Building Construction	Building Construction	3/29/2023	2/13/2024	5	230	
5	Architectural Coating	Architectural Coating	12/1/2023	2/13/2024	5	53	

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

**Acres of Grading (Grading Phase): 16**

**Acres of Paving: 0**

**Residential Indoor: 196,830; Residential Outdoor: 65,610; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

#### OffRoad Equipment

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

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

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	3,461.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	19.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

**3.2 Site Preparation - 2023****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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606	
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0903	6.3300e-003	0.0967	0.0497	5.8200e-003	0.0555	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.2 Site Preparation - 2023****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	2.8000e-004	1.9000e-004	1.9400e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5842	0.5842	2.0000e-005	0.0000	0.5845	
Total	2.8000e-004	1.9000e-004	1.9400e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5842	0.5842	2.0000e-005	0.0000	0.5845	

**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	0.0000	0.0000	0.0000	0.0000	0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004	0.0903	5.0000e-005	5.0000e-005	0.0497	5.0000e-005	0.0497	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	2.3300e-003	0.0101	0.1043	1.9000e-004	0.0903	5.0000e-005	0.0904	0.0497	5.0000e-005	0.0497	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.2 Site Preparation - 2023****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	2.8000e-004	1.9000e-004	1.9400e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5842	0.5842	2.0000e-005	0.0000	0.5845	
Total	2.8000e-004	1.9000e-004	1.9400e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5842	0.5842	2.0000e-005	0.0000	0.5845	

**3.3 Grading - 2023****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					0.1048	0.0000	0.1048	0.0539	0.0000	0.0539	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0274	0.2870	0.2360	4.7000e-004		0.0124	0.0124		0.0114	0.0114	0.0000	41.6970	41.6970	0.0135	0.0000	42.0341
Total	0.0274	0.2870	0.2360	4.7000e-004	0.1048	0.0124	0.1172	0.0539	0.0114	0.0653	0.0000	41.6970	41.6970	0.0135	0.0000	42.0341

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.3 Grading - 2023****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	8.7300e-003	0.2839	0.1037	1.2600e-003	0.0296	5.3000e-004	0.0301	8.1300e-003	5.0000e-004	8.6400e-003	0.0000	125.6592	125.6592	0.0112	0.0000	125.9402	
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	7.5000e-004	5.0000e-004	5.1600e-003	2.0000e-005	1.9200e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.5578	1.5578	4.0000e-005	0.0000	1.5588	
Total	9.4800e-003	0.2844	0.1088	1.2800e-003	0.0315	5.4000e-004	0.0321	8.6400e-003	5.1000e-004	9.1600e-003	0.0000	127.2169	127.2169	0.0113	0.0000	127.4989	

**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					0.1048	0.0000	0.1048	0.0539	0.0000	0.0539	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	5.8100e-003	0.0252	0.2840	4.7000e-004		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	41.6969	41.6969	0.0135	0.0000	42.0341	
Total	5.8100e-003	0.0252	0.2840	4.7000e-004	0.1048	1.2000e-004	0.1050	0.0539	1.2000e-004	0.0540	0.0000	41.6969	41.6969	0.0135	0.0000	42.0341	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.3 Grading - 2023****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	8.7300e-003	0.2839	0.1037	1.2600e-003	0.0296	5.3000e-004	0.0301	8.1300e-003	5.0000e-004	8.6400e-003	0.0000	125.6592	125.6592	0.0112	0.0000	125.9402	
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	7.5000e-004	5.0000e-004	5.1600e-003	2.0000e-005	1.9200e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.5578	1.5578	4.0000e-005	0.0000	1.5588	
Total	9.4800e-003	0.2844	0.1088	1.2800e-003	0.0315	5.4000e-004	0.0321	8.6400e-003	5.1000e-004	9.1600e-003	0.0000	127.2169	127.2169	0.0113	0.0000	127.4989	

**3.4 Paving - 2023****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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888	
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.4 Paving - 2023****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	4.7000e-004	3.1000e-004	3.2300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9736	0.9736	3.0000e-005	0.0000	0.9742	
Total	4.7000e-004	3.1000e-004	3.2300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9736	0.9736	3.0000e-005	0.0000	0.9742	

**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	2.8000e-003	0.0122	0.1730	2.3000e-004		6.0000e-005	6.0000e-005	6.0000e-005	6.0000e-005	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888		
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total	2.8000e-003	0.0122	0.1730	2.3000e-004		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.4 Paving - 2023****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	4.7000e-004	3.1000e-004	3.2300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9736	0.9736	3.0000e-005	0.0000	0.9742	
Total	4.7000e-004	3.1000e-004	3.2300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9736	0.9736	3.0000e-005	0.0000	0.9742	

**3.5 Building Construction - 2023****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	0.1557	1.4241	1.6082	2.6700e-003			0.0693	0.0693		0.0652	0.0652	0.0000	229.4867	229.4867	0.0546	0.0000	230.8515
Total	0.1557	1.4241	1.6082	2.6700e-003			0.0693	0.0693		0.0652	0.0652	0.0000	229.4867	229.4867	0.0546	0.0000	230.8515

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.5 Building Construction - 2023****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	1.3200e-003	0.0453	0.0140	1.5000e-004	3.9400e-003	5.0000e-005	4.0000e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	14.9952	14.9952	1.0200e-003	0.0000	15.0207	
Worker	5.8700e-003	3.8800e-003	0.0405	1.3000e-004	0.0151	1.0000e-004	0.0152	4.0100e-003	9.0000e-005	4.1000e-003	0.0000	12.2089	12.2089	3.2000e-004	0.0000	12.2168	
Total	7.1900e-003	0.0492	0.0545	2.8000e-004	0.0190	1.5000e-004	0.0192	5.1500e-003	1.4000e-004	5.2900e-003	0.0000	27.2042	27.2042	1.3400e-003	0.0000	27.2376	

**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	0.0325	0.2212	1.7286	2.6700e-003		6.1000e-004	6.1000e-004	6.1000e-004	6.1000e-004	0.0000	229.4864	229.4864	0.0546	0.0000	230.8512		
Total	0.0325	0.2212	1.7286	2.6700e-003		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	229.4864	229.4864	0.0546	0.0000	230.8512	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.5 Building Construction - 2023****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	1.3200e-003	0.0453	0.0140	1.5000e-004	3.9400e-003	5.0000e-005	4.0000e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	14.9952	14.9952	1.0200e-003	0.0000	15.0207	
Worker	5.8700e-003	3.8800e-003	0.0405	1.3000e-004	0.0151	1.0000e-004	0.0152	4.0100e-003	9.0000e-005	4.1000e-003	0.0000	12.2089	12.2089	3.2000e-004	0.0000	12.2168	
Total	7.1900e-003	0.0492	0.0545	2.8000e-004	0.0190	1.5000e-004	0.0192	5.1500e-003	1.4000e-004	5.2900e-003	0.0000	27.2042	27.2042	1.3400e-003	0.0000	27.2376	

**3.5 Building Construction - 2024****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	0.0236	0.2151	0.2587	4.3000e-004		9.8100e-003	9.8100e-003		9.2300e-003	9.2300e-003	0.0000	37.0959	37.0959	8.7700e-003	0.0000	37.3152	
Total	0.0236	0.2151	0.2587	4.3000e-004		9.8100e-003	9.8100e-003		9.2300e-003	9.2300e-003	0.0000	37.0959	37.0959	8.7700e-003	0.0000	37.3152	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.5 Building Construction - 2024****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	2.1000e-004	7.2200e-003	2.2000e-003	2.0000e-005	6.4000e-004	1.0000e-005	6.5000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	2.4081	2.4081	1.6000e-004	0.0000	2.4121	
Worker	9.0000e-004	5.8000e-004	6.1100e-003	2.0000e-005	2.4400e-003	2.0000e-005	2.4500e-003	6.5000e-004	1.0000e-005	6.6000e-004	0.0000	1.8955	1.8955	5.0000e-005	0.0000	1.8967	
Total	1.1100e-003	7.8000e-003	8.3100e-003	4.0000e-005	3.0800e-003	3.0000e-005	3.1000e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	4.3036	4.3036	2.1000e-004	0.0000	4.3088	

**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	5.2500e-003	0.0358	0.2794	4.3000e-004		1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	37.0958	37.0958	8.7700e-003	0.0000	37.3151		
Total	5.2500e-003	0.0358	0.2794	4.3000e-004		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	37.0958	37.0958	8.7700e-003	0.0000	37.3151	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.5 Building Construction - 2024****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	2.1000e-004	7.2200e-003	2.2000e-003	2.0000e-005	6.4000e-004	1.0000e-005	6.5000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	2.4081	2.4081	1.6000e-004	0.0000	2.4121	
Worker	9.0000e-004	5.8000e-004	6.1100e-003	2.0000e-005	2.4400e-003	2.0000e-005	2.4500e-003	6.5000e-004	1.0000e-005	6.6000e-004	0.0000	1.8955	1.8955	5.0000e-005	0.0000	1.8967	
Total	1.1100e-003	7.8000e-003	8.3100e-003	4.0000e-005	3.0800e-003	3.0000e-005	3.1000e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	4.3036	4.3036	2.1000e-004	0.0000	4.3088	

**3.6 Architectural Coating - 2023****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	0.2410						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0100e-003	0.0137	0.0190	3.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	2.6809	2.6809	1.6000e-004	0.0000	2.6849
Total	0.2430	0.0137	0.0190	3.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	2.6809	2.6809	1.6000e-004	0.0000	2.6849

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.6 Architectural Coating - 2023****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	1.3000e-004	9.0000e-005	9.0000e-004	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2726	0.2726	1.0000e-005	0.0000	0.2728	
Total	1.3000e-004	9.0000e-005	9.0000e-004	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2726	0.2726	1.0000e-005	0.0000	0.2728	

**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	0.2410						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	3.1000e-004	1.3500e-003	0.0192	3.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6809	2.6809	1.6000e-004	0.0000	2.6849	
Total	0.2413	1.3500e-003	0.0192	3.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6809	2.6809	1.6000e-004	0.0000	2.6849	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.6 Architectural Coating - 2023****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	1.3000e-004	9.0000e-005	9.0000e-004	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2726	0.2726	1.0000e-005	0.0000	0.2728	
Total	1.3000e-004	9.0000e-005	9.0000e-004	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2726	0.2726	1.0000e-005	0.0000	0.2728	

**3.6 Architectural Coating - 2024****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	0.3672						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8900e-003	0.0195	0.0290	5.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	4.0852	4.0852	2.3000e-004	0.0000	4.0910
Total	0.3701	0.0195	0.0290	5.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	4.0852	4.0852	2.3000e-004	0.0000	4.0910

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.6 Architectural Coating - 2024****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	1.9000e-004	1.2000e-004	1.2900e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3991	0.3991	1.0000e-005	0.0000	0.3993	
Total	1.9000e-004	1.2000e-004	1.2900e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3991	0.3991	1.0000e-005	0.0000	0.3993	

**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	0.3672						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	4.8000e-004	2.0600e-003	0.0293	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0852	4.0852	2.3000e-004	0.0000	4.0910	
Total	0.3677	2.0600e-003	0.0293	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0852	4.0852	2.3000e-004	0.0000	4.0910	

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**3.6 Architectural Coating - 2024****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	1.9000e-004	1.2000e-004	1.2900e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3991	0.3991	1.0000e-005	0.0000	0.3993	
Total	1.9000e-004	1.2000e-004	1.2900e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3991	0.3991	1.0000e-005	0.0000	0.3993	

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## Cypress Point Single Family Development (54 units) - San Diego 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	0.1063	0.4198	1.0769	3.7300e-003	0.3545	3.0300e-003	0.3575	0.0949	2.8100e-003	0.0977	0.0000	345.9411	345.9411	0.0182	0.0000	346.3961	
Unmitigated	0.1063	0.4198	1.0769	3.7300e-003	0.3545	3.0300e-003	0.3575	0.0949	2.8100e-003	0.0977	0.0000	345.9411	345.9411	0.0182	0.0000	346.3961	

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Single Family Housing	540.00	540.00	540.00	940,859	940,859	940,859	940,859
Total	540.00	540.00	540.00	940,859	940,859	940,859	940,859

**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
Single Family Housing	5.39	5.39	5.39	42.00	19.00	39.00	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.609162	0.038894	0.178600	0.101308	0.013823	0.005356	0.016956	0.024628	0.001928	0.001823	0.005807	0.000764	0.000950

**5.0 Energy Detail**

Historical Energy Use: N

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

## 5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	85.4040	85.4040	3.3700e-003	7.9000e-004	85.7247
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	85.4040	85.4040	3.3700e-003	7.9000e-004	85.7247
NaturalGas Mitigated	6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3928	67.3928	1.2900e-003	1.2400e-003	67.7933
NaturalGas Unmitigated	6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3928	67.3928	1.2900e-003	1.2400e-003	67.7933

## 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					
Single Family Housing	1.26289e+006	6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3928	67.3928	1.2900e-003	1.2400e-003	67.7933
Total		6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3928	67.3928	1.2900e-003	1.2400e-003	67.7933

## Cypress Point Single Family Development (54 units) - San Diego 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					
Single Family Housing	1.26289e+006	6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3928	67.3928	1.2900e-003	1.2400e-003	67.7933
<b>Total</b>		<b>6.8100e-003</b>	<b>0.0582</b>	<b>0.0248</b>	<b>3.7000e-004</b>		<b>4.7000e-003</b>	<b>4.7000e-003</b>		<b>4.7000e-003</b>	<b>4.7000e-003</b>	<b>0.0000</b>	<b>67.3928</b>	<b>67.3928</b>	<b>1.2900e-003</b>	<b>1.2400e-003</b>	<b>67.7933</b>

**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	437178	85.4040	3.3700e-003	7.9000e-004	85.7247
<b>Total</b>		<b>85.4040</b>	<b>3.3700e-003</b>	<b>7.9000e-004</b>	<b>85.7247</b>

## Cypress Point Single Family Development (54 units) - San Diego County, Annual

**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	437178	85.4040	3.3700e-003	7.9000e-004	85.7247
<b>Total</b>		<b>85.4040</b>	<b>3.3700e-003</b>	<b>7.9000e-004</b>	<b>85.7247</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	0.4568	0.0413	0.4162	2.6000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	43.1880	43.1880	1.4400e-003	7.8000e-004	43.4565
Unmitigated	0.4568	0.0413	0.4162	2.6000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	43.1880	43.1880	1.4400e-003	7.8000e-004	43.4565

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**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	0.0608					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3796					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.3000e-003	0.0367	0.0156	2.3000e-004		2.9700e-003	2.9700e-003		2.9700e-003	2.9700e-003	0.0000	42.5331	42.5331	8.2000e-004	7.8000e-004	42.7858
Landscaping	0.0120	4.6100e-003	0.4006	2.0000e-005		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	0.6550	0.6550	6.3000e-004	0.0000	0.6706
<b>Total</b>	<b>0.4568</b>	<b>0.0413</b>	<b>0.4162</b>	<b>2.5000e-004</b>		<b>5.1900e-003</b>	<b>5.1900e-003</b>		<b>5.1900e-003</b>	<b>5.1900e-003</b>	<b>0.0000</b>	<b>43.1880</b>	<b>43.1880</b>	<b>1.4500e-003</b>	<b>7.8000e-004</b>	<b>43.4565</b>

## Cypress Point Single Family Development (54 units) - San Diego 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	0.0608					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3796					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.3000e-003	0.0367	0.0156	2.3000e-004		2.9700e-003	2.9700e-003		2.9700e-003	2.9700e-003	0.0000	42.5331	42.5331	8.2000e-004	7.8000e-004	42.7858
Landscaping	0.0120	4.6100e-003	0.4006	2.0000e-005		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	0.6550	0.6550	6.3000e-004	0.0000	0.6706
<b>Total</b>	<b>0.4568</b>	<b>0.0413</b>	<b>0.4162</b>	<b>2.5000e-004</b>		<b>5.1900e-003</b>	<b>5.1900e-003</b>		<b>5.1900e-003</b>	<b>5.1900e-003</b>	<b>0.0000</b>	<b>43.1880</b>	<b>43.1880</b>	<b>1.4500e-003</b>	<b>7.8000e-004</b>	<b>43.4565</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	12.5730	0.0922	2.2700e-003	15.5551
Unmitigated	14.8798	0.1152	2.8300e-003	18.6042

**7.2 Water by Land Use****Unmitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.51832 / 2.21807	14.8798	0.1152	2.8300e-003	18.6042
<b>Total</b>		<b>14.8798</b>	<b>0.1152</b>	<b>2.8300e-003</b>	<b>18.6042</b>

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**7.2 Water by Land Use****Mitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	2.81465 / 2.08277	12.5730	0.0922	2.2700e- 003	15.5551
<b>Total</b>		<b>12.5730</b>	<b>0.0922</b>	<b>2.2700e- 003</b>	<b>15.5551</b>

**8.0 Waste Detail****8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.8169	0.7575	0.0000	31.7532
Unmitigated	12.8169	0.7575	0.0000	31.7532

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**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	63.14	12.8169	0.7575	0.0000	31.7532
<b>Total</b>		<b>12.8169</b>	<b>0.7575</b>	<b>0.0000</b>	<b>31.7532</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	63.14	12.8169	0.7575	0.0000	31.7532
<b>Total</b>		<b>12.8169</b>	<b>0.7575</b>	<b>0.0000</b>	<b>31.7532</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Cypress Point Single Family Development (54 units) - San Diego County, Annual

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

### User Defined Equipment

Equipment Type	Number
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## 11.0 Vegetation

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## EMFAC2014 (v1.0.7) Emission Rates

Region Type: County

Region: San Diego

Calendar Year: 2025

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips
San Diego	2025	HHD <sup>T</sup>		Aggregate	Aggregate GAS	161.1216	21202.38	3223.722
San Diego	2025	HHD <sup>T</sup>		Aggregate	Aggregate DSL	15341.85	2103842	0
San Diego	2025	LDA		Aggregate	Aggregate GAS	1430879	47587917	9062515
San Diego	2025	LDA		Aggregate	Aggregate DSL	18230.06	610522.6	114299.8
San Diego	2025	LDA		Aggregate	Aggregate ELEC	102949.9	4362999	668758.3
San Diego	2025	LDT <sup>1</sup>		Aggregate	Aggregate GAS	110056.6	3351788	665740.4
San Diego	2025	LDT <sup>1</sup>		Aggregate	Aggregate DSL	135.5653	2803.107	658.3286
San Diego	2025	LDT <sup>1</sup>		Aggregate	Aggregate ELEC	41.86047	1338.282	253.6785
San Diego	2025	LDT <sup>2</sup>		Aggregate	Aggregate GAS	445728.9	15377109	2820576
San Diego	2025	LDT <sup>2</sup>		Aggregate	Aggregate DSL	944.5915	33384.94	6012.223
San Diego	2025	LHD <sup>T</sup> <sub>1</sub>		Aggregate	Aggregate GAS	17137.47	468069.8	255322.8
San Diego	2025	LHD <sup>T</sup> <sub>1</sub>		Aggregate	Aggregate DSL	23103.06	724642.4	290607.5
San Diego	2025	LHD <sup>T</sup> <sub>2</sub>		Aggregate	Aggregate GAS	4048.832	139572.1	60321.57
San Diego	2025	LHD <sup>T</sup> <sub>2</sub>		Aggregate	Aggregate DSL	8965.437	322602.6	112773.9
San Diego	2025	MCY		Aggregate	Aggregate GAS	70674.4	501031.3	141334.7
San Diego	2025	MDV		Aggregate	Aggregate GAS	267677.5	8534403	1665094
San Diego	2025	MDV		Aggregate	Aggregate DSL	5742.887	206955.9	36633.48
San Diego	2025	MH		Aggregate	Aggregate GAS	8633.504	64191.89	863.6957
San Diego	2025	MH		Aggregate	Aggregate DSL	2309.531	17748.26	230.9531
San Diego	2025	MHD <sup>T</sup>		Aggregate	Aggregate GAS	3092.563	161145.6	61876
San Diego	2025	MHD <sup>T</sup>		Aggregate	Aggregate DSL	25605.17	1301919	0
San Diego	2025	OBUS		Aggregate	Aggregate GAS	1716.977	92464.34	34353.27
San Diego	2025	OBUS		Aggregate	Aggregate DSL	935.031	73876.47	0
San Diego	2025	SBUS		Aggregate	Aggregate GAS	438.5087	19991.26	1754.035
San Diego	2025	SBUS		Aggregate	Aggregate DSL	1213.17	45957.63	0
San Diego	2025	UBUS		Aggregate	Aggregate GAS	472.4052	63912.55	1889.621
San Diego	2025	UBUS		Aggregate	Aggregate DSL	690.1969	93377.98	2760.788
					Total VMT	Total Trips		
					86284768	16007854		

VMT/Trip 5.390152



# RESULTS

# 270,479 kWh/Year\*

System output may range from 259,984 to 272,183 kWh per year near this location.

Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at <https://sam.nrel.gov>) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

Disclaimer: The PVWatts® Model ("Model") is provided by the National Renewable Energy Laboratory ("NREL"), which is operated by the Alliance for Sustainable Energy, LLC ("Alliance") for the U.S. Department Of Energy ("DOE") and may be used for any purpose whatsoever.

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The energy output range is based on analysis of 30 years of historical weather data for nearby, and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

Month	Solar Radiation ( kWh / m <sup>2</sup> / day )	AC Energy ( kWh )	Value ( \$ )
January	4.58	17,775	2,906
February	5.18	18,332	2,997
March	6.15	24,164	3,951
April	6.87	25,412	4,155
May	6.61	25,322	4,140
June	6.91	25,288	4,135
July	7.02	26,381	4,313
August	7.08	26,555	4,342
September	6.52	23,645	3,866
October	5.65	21,506	3,516
November	5.02	18,901	3,090
December	4.37	17,197	2,812
<b>Annual</b>	<b>6.00</b>	<b>270,478</b>	<b>\$ 44,223</b>

## Location and Station Identification

Requested Location	oceanside	
Weather Data Source	Lat, Lon: 33.21, -117.38    1.0 mi	
Latitude	33.21° N	
Longitude	117.38° W	

## PV System Specifications (Residential)

DC System Size	162 kW
Module Type	Premium
Array Type	Fixed (roof mount)
Array Tilt	20°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2

## Economics

Average Retail Electricity Rate	0.164 \$/kWh
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## Performance Metrics

Capacity Factor	19.1%
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## Cypress Residential Development - 162KW Solar - San Diego County, Annual

**Cypress Residential Development - 162KW Solar**  
San Diego County, Annual**1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

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

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

Project Characteristics - Project would install 162 kw solar

Land Use - Rooftop Solar

Construction Phase -

Off-road Equipment -

Off-road Equipment - zero hours

Trips and VMT - zero

Grading -

Architectural Coating -

Vehicle Trips -

Woodstoves - 0

Area Coating -

Landscape Equipment - zero

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation -

Energy Mitigation - Based on PVWatts, 162 kw of solar would generate 270,479 kWh per year.

Fleet Mix -

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.61	0.60
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.3560e-003	5.4790e-003
tblFleetMix	MCY	5.8070e-003	6.0160e-003
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MH	9.5000e-004	1.1220e-003
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	1.9280e-003	1.9260e-003
tblFleetMix	SBUS	7.6400e-004	7.5300e-004
tblFleetMix	UBUS	1.8230e-003	1.9320e-003
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	6.60
tblTripsAndVMT	WorkerTripLength	10.80	16.80
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblVehicleTrips	CC_TL	7.30	6.60
tblVehicleTrips	CNW_TL	7.30	6.60
tblVehicleTrips	CW_TL	9.50	14.70

**2.0 Emissions Summary**

Cypress Residential Development - 162KW Solar - San Diego County, Annual

## 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					
2021	5.5000e-004	5.7500e-003	2.9000e-003	1.0000e-005	2.6300e-003	2.9000e-004	2.9200e-003	1.4500e-003	2.7000e-004	1.7100e-003	0.0000	0.4649	0.4649	1.5000e-004	0.0000	0.4686
Maximum	5.5000e-004	5.7500e-003	2.9000e-003	1.0000e-005	2.6300e-003	2.9000e-004	2.9200e-003	1.4500e-003	2.7000e-004	1.7100e-003	0.0000	0.4649	0.4649	1.5000e-004	0.0000	0.4686

## **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					
2021	5.5000e-004	5.7500e-003	2.9000e-003	1.0000e-005	2.6300e-003	2.9000e-004	2.9200e-003	1.4500e-003	2.7000e-004	1.7100e-003	0.0000	0.4649	0.4649	1.5000e-004	0.0000	0.4686	
Maximum	5.5000e-004	5.7500e-003	2.9000e-003	1.0000e-005	2.6300e-003	2.9000e-004	2.9200e-003	1.4500e-003	2.7000e-004	1.7100e-003	0.0000	0.4649	0.4649	1.5000e-004	0.0000	0.4686	

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

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

**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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005	
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

**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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005	
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	-88.3949	-88.3949	-0.0036	-0.0007	-88.7032	
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>-88.3949</b>	<b>-88.3949</b>	<b>-0.0036</b>	<b>-0.0007</b>	<b>-88.7032</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	441,974.5 50.00	441,974.5 50.00	0.00	0.00	443,516,1 00.00

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/12/2021	12/13/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	0.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

**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	3	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Cypress Residential Development - 162KW Solar - San Diego County, Annual

### **3.2 Site Preparation - 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						
Fugitive Dust					2.6300e-003	0.0000	2.6300e-003	1.4500e-003	0.0000	1.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	5.5000e-004	5.7500e-003	2.9000e-003	1.0000e-005		2.9000e-004	2.9000e-004		2.7000e-004	2.7000e-004	0.0000	0.4649	0.4649	1.5000e-004	0.0000	0.4686	
Total	5.5000e-004	5.7500e-003	2.9000e-003	1.0000e-005	2.6300e-003	2.9000e-004	2.9200e-003	1.4500e-003	2.7000e-004	1.7200e-003	0.0000	0.4649	0.4649	1.5000e-004	0.0000	0.4686	

### **Unmitigated Construction Off-Site**

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

**3.2 Site Preparation - 2021****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					2.6300e-003	0.0000	2.6300e-003	1.4500e-003	0.0000	1.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	5.5000e-004	5.7500e-003	2.9000e-003	1.0000e-005		2.9000e-004	2.9000e-004		2.7000e-004	2.7000e-004	0.0000	0.4649	0.4649	1.5000e-004	0.0000	0.4686	
Total	5.5000e-004	5.7500e-003	2.9000e-003	1.0000e-005	2.6300e-003	2.9000e-004	2.9200e-003	1.4500e-003	2.7000e-004	1.7200e-003	0.0000	0.4649	0.4649	1.5000e-004	0.0000	0.4686	

**Mitigated Construction Off-Site**

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

**4.0 Operational Detail - Mobile**

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

**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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00	-	-	-	-
Total	0.00	0.00	0.00	-	-	-	-

**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
User Defined Industrial	14.70	6.60	6.60	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
User Defined Industrial	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

Cypress Residential Development - 162KW Solar - San Diego County, Annual

## 5.0 Energy Detail

## Historical Energy Use: N

## 5.1 Mitigation Measures Energy

## Kilowatt Hours of Renewable Electricity Generated

Cypress Residential Development - 162KW Solar - San Diego County, Annual

## 5.2 Energy by Land Use - NaturalGas

## Unmitigated

### Mitigated

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	-270479	-88.3949	-0.0036	-0.0007	-88.7032
<b>Total</b>		<b>-88.3949</b>	<b>-0.0036</b>	<b>-0.0007</b>	<b>-88.7032</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005	
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005	

**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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	

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**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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	

**7.0 Water Detail****7.1 Mitigation Measures Water**

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use****Unmitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

**7.2 Water by Land Use****Mitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail****8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

## Cypress Residential Development - 162KW Solar - San Diego County, Annual

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## Cypress Residential Development - 162KW Solar - San Diego County, Annual

## 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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