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# **APPENDIX E**

CITY OF GILROY 2040 GENERAL PLAN  
GREENHOUSE GAS EMISSIONS MODELING METHODOLOGIES AND  
ASSUMPTIONS

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**To:** File  
**From:** Sally Rideout and Tanya Kalaskar  
**Date:** February 27, 2020

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**Re:** City of Gilroy 2040 General Plan Greenhouse Gas Emissions Modeling  
Methodologies and Assumptions

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## **EMFAC2017**

The Emissions Factor Model (EMFAC2017) version 1.0.2 was used to model annual operational mobile-source greenhouse gas (GHG) emissions from buildout of the Gilroy 2040 General Plan and to estimate transportation fuel demand from mobile sources. The EMFAC2017 emissions model is developed by the California Air Resources Board (CARB) and used to assess emissions from on-road vehicles including cars, trucks, and buses in California.

The first EMFAC2017 run was conducted for year 2030 to determine mobile, operational GHG emissions at 50 percent buildout of the City of Gilroy 2040 General Plan. The Custom Activity Mode template was utilized. Santa Clara County was selected in the Area/Subarea Tab, 2030 selected as the calendar year of analysis, “annual” was selected as the season, and total daily vehicle miles traveled (VMT) was selected as the VMT input type. Once the custom activity template was generated, 50 percent of the 2040 VMT data from Hexagon Transportation Consultants (2020) was utilized as input to run the model for year 2030. “Planning Inventory” was selected as the output type. Similarly, another EMFAC2017 run was conducted to determine mobile, operational GHG emissions at buildout of the City of Gilroy 2040 General Plan using 2040 as the calendar year of analysis and 2040 VMT data from Hexagon Transportation Consultants (2020). The 2030 and 2040 results are described in Section 2.7, Greenhouse Gas Emissions, of the EIR.

The EMFAC2017 model was also run to calculate transportation fuel demand using the years 2017 and 2040 as the calendar years of analysis and 2017 VMT and 2040 VMT respectively from

Hexagon Transportation Consultants (2020). The 2017 and 2040 transportation fuel demands are discussed in Section 4.2, Energy, of the EIR.

The output spreadsheets showing GHG emissions and fuel consumption are attached to this memorandum.

## **CalEEMod**

### **Methodology**

Annual non-mobile-source operational GHG emissions and construction-related GHG emissions from buildout of the Gilroy 2040 General Plan and from buildout of 50 percent of the General Plan land uses in year 2030 were estimated using California Emissions Estimator Model (CalEEMod) Version 2016.3.2 software, which is an accepted methodology for quantifying GHG emissions recommended by the Bay Area Air Quality Management District (“air district”). The CalEEMod platform calculates the annual average of GHG emissions in metric tons (MT) of carbon dioxide equivalent (CO<sub>2</sub>e). The CalEEMod software utilizes emissions models USEPA AP-42 emission factors, CARB vehicle emission models studies and studies commissioned by other California agencies such as the California Energy Commission and CalRecycle. The CalEEMod platform allows calculations of both construction and operational criteria pollutant and GHG emissions from land use projects. The model also calculates indirect emissions from processes “downstream” of the proposed project such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

### **Assumptions**

Certain assumptions for mixes of land uses were provided by Mintier Harnish during development of the *Gilroy 2040 General Plan Preferred Alternative 2020*. Unless otherwise noted, data inputs for the model scenarios were based on or derived from information provided by Mintier Harnish. The following primary assumptions were utilized in the preparation of data for inputs into the model:

1. 50 percent buildout of the City of Gilroy 2040 General Plan land uses will occur by the year 2030.
2. Full buildout of the City of Gilroy 2040 General Plan land uses will occur by the year 2040.
3. Existing development is assumed to remain unchanged in the future and is not included in the model.

4. Open space uses, infrastructure (roadways, drainage improvements, etc), and the Hecker Pass SP Commercial Agricultural uses (insufficient data) are not sources of measurable operational emissions and; therefore, are not included in the model.
5. The number of multifamily dwelling units within the Downtown SP and Mixed Use land use designations are assumed to consist of 30 percent low-rise apartments, and 70 percent mid-rise apartments;
6. Within Neighborhood District High: 65 percent single-family dwellings, 25 percent condo/townhouses, 10 percent low-rise apartments (City of Gilroy 2020).
7. The model's default CO<sub>2</sub> intensity factor of 641 pounds/megawatt hour is adjusted to 290 pounds/megawatt hour to reflect Pacific Gas & Electric's (PG&E) energy intensity projections for 2020, which is the horizon year for the provider's energy intensity factor projections. The intensity factor has been falling due to the increasing percentage of PG&E's energy portfolio obtained from renewable energy. Emissions intensity data is from PG&E's *Greenhouse Gas Factors: Guidance for PG&E Customers*, dated November 2015. PG&E's intensity factor will be significantly lower in the years 2030 and 2040, and therefore, this analysis is conservative.

In addition to these primary assumptions, it is important to note that CalEEMod Version 2016.3.2 utilizes the 2016 Title 24 Building Energy Efficiency Standards (BEES) to estimate emissions from energy consumption. Title 24 BEES are updated every three years. Currently, the 2019 BEES are in effect. Compliance with the Title 24 BEES as they are updated is anticipated to result in increased building energy efficiencies and corresponding reductions in energy demand over time. For example, the California Energy Commission (2018) has noted that compliance with the most recent 2019 BEES will result in increased building energy efficiencies over the 2016 BEES that will reduce energy demand by approximately seven percent for single-family residential uses and by approximately 30 percent for multi-family uses and non-residential uses. Additionally, compliance with the 2019 BEES that include residential solar PV requirements would further reduce energy demand for single-family uses. Development consistent with the City of Gilroy 2040 General Plan will be required to comply with the BEES in effect at the time building permits are sought. Since the modeling is based on the default 2016 BEES, and does not include adjustments for compliance with the BEES in effect at the time building permits are sought, the model overestimates emissions from non-mobile source energy consumption.

## CalEEMod Land Use Categories

Existing and proposed land uses and their respective CalEEMod land use categories used in this assessment are shown in [Table 1, Residential Land Use Categories](#), and [Table 2, Non-residential Land Use Categories](#).

**Table 1 Residential Land Use Categories**

Land Use Designations/Uses <sup>1</sup>	CalEEMod Land Use Default Categories <sup>2</sup>
Hillside Residential	Single Family Housing
Low Density Residential	Single Family Housing
Medium Density Residential	Single Family Housing
High Density Residential	Apartments Mid Rise
Hecker Pass Special Use District	Single Family Housing
Glen Loma Ranch SP/LDR	Single Family Housing
Neighborhood District High/LDR	Single Family Housing
Neighborhood District High/MDR	Apartments Low Rise
Neighborhood District High/Condo-TH	Condo/Townhouse
Mixed Use High/MDR	Apartments Low Rise
Mixed Use High/HDR	Apartments Mid Rise
Downtown SP/MDR	Apartments Low Rise
Downtown SP/HDR	Apartments Mid Rise
Downtown SP/Condo	Condo/Townhouse

**Source:** City of Gilroy 2020, Mintier Harnish 2020, and Trinity Consultants 2017.

**Notes:** 1. LDR = Low-density Residential; MDR = Medium-density Residential; HDR = High-density Residential; Condo-TH = Condominium/Townhouse

2. Descriptions of the model default land use categories and subtypes are found in the User's Guide for CalEEMod Version 2016.3.2 available online at: <http://www.aqmd.gov/caleemod/user-s-guide>

**Table 2 Non-residential Land Use Categories**

Land Use Designations/Types <sup>1</sup>	CalEEMod Land Use Default Categories <sup>2</sup>
Neighborhood District High (retail and services)	Strip Mall
Neighborhood District High (office)	General Office Building
Downtown SP (retail)	Strip Mall
Downtown SP (services)	Medical Office Building
Downtown SP (office)	General Office Building
Mixed Use (retail)	Strip Mall
Mixed Use (services)	Medical Office Building
Mixed Use (office)	General Office Building
City Gateway District	Regional Shopping Center
Employment Center (retail, services, and office)	Office Park
Employment Center (manufacturing)	Research & Development
General Services Commercial	Regional Shopping Center
Visitor Serving Commercial	Strip Mall
General Industrial	General Light Industry
Industrial Park	Industrial Park
Public/Quasi-Public	Government Office Building

**Source:** City of Gilroy 2020, Mintier Harnish 2020, and Trinity Consultants 2017.

**Notes:** 1. According to Brent Gibbons (email message, February 5, 2020), non-residential uses in the Glen Loma SP are built-up. Therefore, Glen Loma SP non-residential uses are not included in the modeling for general plan buildout.

2. Descriptions of the model default land use categories and subtypes are found in the User's Guide for CalEEMod Version 2016.3.2 available online at: <http://www.aqmd.gov/calceemod/user's-guide>

## Results

The detailed CalEEMod and EMFAC2017 results are attached to this memorandum. The modeling results are summarized in [Table 3, Emissions Modeling Results in Year 2030](#), and [Table 4, Emissions Modeling Results in Year 2040](#).

**Table 3 Emissions Modeling Results in Year 2030**

Source Category	Unmitigated GHG Emissions <sup>1,2</sup>
<b>EMFAC Results</b>	
Operational, mobile <sup>3</sup>	118,528.26
<b>CalEEMod Results</b>	
Operational, area	442.68
Operational, energy	28,567.22
Operational, solid waste	5,300.90
Operational, water	4,364.01
Construction <sup>4</sup>	895.16
<b>Total Annual Emissions</b>	<b>158,098.23</b>

**Source:** EMC Planning Group 2020

**Notes:** 1. Numbers may vary due to rounding.

2. Expressed in MT CO<sub>2</sub>e per year.

3. Operational, mobile GHG emissions are estimated at 376.60 tons per day. A U.S. ton is equal to 0.907 MT. The converted GHG volume is 341.58 MT CO<sub>2</sub> per day. The daily volume is then multiplied by 347 days per year to arrive at annual CO<sub>2</sub> emissions. Daily emissions are multiplied by 347 days per year rather than 365 days per year (California Air Resources Board 2016) to scale average annual emissions to reflect that weekday VMT are higher than weekend VMT. Total CO<sub>2</sub> emissions are projected at 118,528.26 MT CO<sub>2</sub> per year. EMFAC2017 also calculates daily CH<sub>4</sub> emissions, but the total annual volume is incidental compared to CO<sub>2</sub>, so is not included in the total annual volume.

4. Construction activity is estimated to generate a maximum of 8,951.56 MT CO<sub>2</sub>e of GHG emissions. Since the horizon for 2030 is 10 years, the construction GHG emissions were amortized over a 10-year period to yield an annual emissions result. Therefore, annual construction GHG emissions are 8,951.56 MT CO<sub>2</sub>e / 10 years = 895.16 MT CO<sub>2</sub>e per year.



**Table 4 Emissions Modeling Results in Year 2040**

Source Category	Unmitigated GHG Emissions <sup>1,2</sup>
<b>EMFAC Results</b>	
Operational, mobile <sup>3</sup>	211,215.43
<b>CalEEMod Results</b>	
Operational, area	885.19
Operational, energy	57,023.80
Operational, solid waste	10,601.40
Operational, water usage	8,716.62
Construction <sup>4</sup>	802.95
<b>Total Annual Emissions</b>	<b>289,245.39</b>

**Source:** EMC Planning Group 2020

**Notes:** 1. Numbers may vary due to rounding.

2. Expressed in MT CO<sub>2</sub>e per year.

3. Operational, mobile GHG emissions are estimated at 671.10 tons per day. A U.S. ton is equal to 0.907 MT. The converted GHG volume is 608.69 MT CO<sub>2</sub> per day. The daily volume is then multiplied by 347 days per year to arrive at annual CO<sub>2</sub> emissions. Daily emissions are multiplied by 347 days per year rather than 365 days per year (California Air Resources Board 2016) to scale average annual emissions to reflect that weekday VMT are higher than weekend VMT. Total CO<sub>2</sub> emissions are projected at 211,215.43 MT CO<sub>2</sub> per year. EMFAC2017 also calculates daily CH<sub>4</sub> emissions, but the total annual volume is incidental compared to CO<sub>2</sub>, so is not included in the total annual volume.

4. Construction activity is estimated to generate a maximum of 16,059.01 MT CO<sub>2</sub>e of GHG emissions. Since the planning horizon is 20 years, the construction GHG emissions were amortized over a 20-year period to yield an annual emissions result. Therefore, annual construction GHG emissions are 16,059.01 MT CO<sub>2</sub>e / 20 years = 802.95 MT CO<sub>2</sub>e per year.

## Sources

1. City of Gilroy. 2020. *2040 General Plan (Public Review Draft)*.
2. Trinity Consultants. *CalEEMod User's Guide (Version 2016.3.2)*. November 2017. Available online at: <http://www.aqmd.gov/caleemod/user's-guide>
3. California Energy Commission. March 2018. *2019 Building Energy Efficiency Standards Frequently Asked Questions*.  
[https://www.energy.ca.gov/title24/2019standards/documents/2018\\_Title\\_24\\_2019\\_Building\\_Standards\\_FAQ.pdf](https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf)
4. Mintier Harnish. January 31, 2020. *Gilroy General Plan Preferred Alternative 2020*.

5. Gibbons, Brent, Project Manager, Mintier Harnish. Email message to consultant. 5 February 2020.
6. Pacific Gas & Electric. November 2015. *Greenhouse Gas Factors: Guidance for PG&E Customers*; Accessed February 18, 2020. [https://www.ca-ilg.org/sites/main/files/file-attachments/ghg\\_emission\\_factor\\_guidance.pdf?1436996158](https://www.ca-ilg.org/sites/main/files/file-attachments/ghg_emission_factor_guidance.pdf?1436996158)
7. Hexagon Transportation Consultants. February 24, 2020. *Gilroy General Daily Vehicle Miles Traveled Per Service Population*.
8. California Air Resources Board. September 2016. *California's 2000-2014 Greenhouse Gas Emissions Inventory Technical Support Documentation*. [https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000\\_2014/ghg\\_inventory\\_00-14\\_technical\\_support\\_document.pdf](https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_00-14_technical_support_document.pdf)

**Gilroy General Plan Update CalEEMod Land Use Data Inputs<sup>1,2,3</sup>**

ACRES							TOTAL	Tl Non-Res					
		SFD	MFD	Low-Rise	Mid-Rise	TH-Condo	Units	Acres	Retail sf	Service sf	Office sf	Mfg sf	Wholesale sf
197	Hillside Residential	191	0				191	0	0	0	0	0	0
37	Low Density Residential <sup>4</sup>	130	0				130	0	0	0	0	0	0
15	Medium Density Residential <sup>5</sup>	127	0				127	0	0	0	0	0	0
15	High Density Residential <sup>6</sup>	0	259		259		259	0	0	0	0	0	0
22	Downtown Specific Plan <sup>7,8</sup>	0	1045	314	731	149	1194	22	92568	46284	69426	0	0
90	General Services Commercial	0	0				0	90	736047	184012	0	0	0
619	General Industrial	0	0				0	619	0	0	573187	4012306	1146373
60	Industrial Park	0	0				0	60	0	0	112004	448015	0
9	Public/Quasi-Public Facility	0	0				0	9	0	0	86752	0	0
321	Hecker Pass Special Use District	127	0				127		0	0	0	0	0
292	Glen Loma Ranch Specific Plan <sup>9</sup>	997	0	0	0	0	997		69957	41974	27983	0	0
19	Mixed Use <sup>7</sup>	0	143	43	100		143	19	131506	26301	17534	0	0
420	Neighborhood District High <sup>10</sup>	2151	331	331	0	827	2482	63	100576	60345	40230	0	0
482	Employment Center	0	0				0	482	356603	356603	4279236	2139618	0
10	City Gateway District	0	0				0	10	145068	72534	145068	0	0
6	Visitor Serving Commercial	0	0				0	6	52518	13129	0	0	0
<b>Totals</b>		<b>3723</b>	<b>1778</b>	<b>688</b>	<b>1090</b>	<b>976</b>	<b>5650</b>	<b>580</b>	<b>1684843</b>	<b>801182</b>	<b>5351420</b>	<b>6599939</b>	<b>15583756.92</b>

Unless otherwise noted all information derived from holding capacity information And Land Use Policies provided by Mintier Harnish;

**Residential NOTES:**

- Existing development levels assumed to be unchanged and are not modeled
- Hecker Pass Specific Plan Commercial Agriculture is not modeled (data insufficient);
- Open Space uses are assumed to be uses that are not sources of substantial emissions and are not modeled;
- Low Density Residential = CalEEMod SFD
- Medium Density Residential = CalEEMod SFD
- High Density Residential = CalEEMod Mid-rise apts
- Assume 70% Mid-Rise Apartments; 30% Low-rise Apartments (fewer stories mid-block)
- Downtown includes Historic District, Expansion District, Cannery District, Transitional District, Gateway District, Civi/Cultural Arts District with avg commercial acreage
- Glen Loma Specific Plan = Includes only SFD per Brent email dated 2/5
- Neighborhood District High = 65% SFD; 25% TH-Condo; 10% Low-rise Apartments

**Miscellaneous notes from M-H Holding Capacity Assumptions Worksheet:**

- 25% of R3 Units and all R-1 and R-2 units are CalEEMod SFD
- All R-4 units and 75% of R-3 units are multi-family
- R-4 units are CalEEMod mid-rise apartments
- R-3 units are CalEEMod low-rise apartments or TH-Condo

**Additional General Notes**

- Commercial FAR and Acreages from M-H Holding Capacity Worksheet
- General Service Commercial = CalEEMod Regional Shopping
- Remainder of Commercial = CalEEMod Strip Mall (Specialty retail including service/professional uses)
- Mixed Uses: assign acreage to commercial use, zero out acreage for upper floor uses
- Public/Quasi-public facilities = CalEEMod Government Office Building
- Office Uses = CalEEMod General Office Building - except Industrial Park, Government Office Buildings, City Gateway office sf, Employment Center office sf
- Industrial Park = CalEEMod Industrial Park
- Employment Center = Office park (retail, services, office) and R&D (manufacturing)
- Neighborhood District High = CalEEMod Strip Mall (retail, services) and General Office Building (office)
- Visitor Serving Commercial = CalEEMod Strip Mall
- General Industrial = CalEEMod Light Industry
- Glen Loma Non-residential uses are already built up per Brent email dated 2/5
- City Gateway = CalEEMod Regional Shopping

Gilroy 2040 GP\_2030 Conditions - Bay Area AQMD Air District, Annual

**Gilroy 2040 GP\_2030 Conditions**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	63.60	1000sqft	1.46	63,595.00	0
Government Office Building	43.38	1000sqft	1.00	43,376.00	0
Medical Office Building	36.29	1000sqft	0.83	36,293.00	0
Office Park	2,496.22	1000sqft	57.31	2,496,221.00	0
Research & Development	1,069.81	1000sqft	24.56	1,069,809.00	0
General Light Industry	2,865.93	1000sqft	65.79	2,865,933.00	0
Industrial Park	280.01	1000sqft	6.43	280,010.00	0
Strip Mall	192.50	1000sqft	4.42	192,498.00	0
Regional Shopping Center	641.37	1000sqft	14.72	641,365.00	0
Single Family Housing	1,862.00	Dwelling Unit	604.55	3,351,600.00	5325
Apartments Low Rise	344.00	Dwelling Unit	21.50	344,000.00	984
Apartments Mid Rise	545.00	Dwelling Unit	14.34	545,000.00	1559
Condo/Townhouse	488.00	Dwelling Unit	30.50	488,000.00	1396

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4	<b>Operational Year</b>		2030	
<b>Utility Company</b>	Pacific Gas & Electric Company				

CO2 Intensity 291  
(lb/MW hr)

CH4 Intensity 0.029  
(lb/MW hr)

N2O Intensity 0.006  
(lb/MW hr)

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

Project Characteristics - Adjusted PG&E CO2 Intensity Factor for 2020

Land Use - 50 percent of Gilroy GP 2040 land uses

Construction Phase - Construction adjusted to end in 2029

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	990.00	348.00
tblConstructionPhase	NumDays	13,950.00	648.00
tblConstructionPhase	NumDays	900.00	348.00
tblConstructionPhase	NumDays	1,395.00	348.00
tblConstructionPhase	NumDays	990.00	348.00
tblConstructionPhase	NumDays	540.00	348.00
tblConstructionPhase	PhaseEndDate	12/4/2091	2/23/2029
tblConstructionPhase	PhaseEndDate	5/2/2084	6/25/2026
tblConstructionPhase	PhaseEndDate	6/13/2023	4/30/2021
tblConstructionPhase	PhaseEndDate	11/12/2030	1/1/2024
tblConstructionPhase	PhaseEndDate	2/17/2088	10/26/2027
tblConstructionPhase	PhaseEndDate	7/8/2025	8/31/2022
tblConstructionPhase	PhaseStartDate	2/18/2088	10/27/2027
tblConstructionPhase	PhaseStartDate	11/13/2030	1/2/2024
tblConstructionPhase	PhaseStartDate	7/9/2025	9/1/2022
tblConstructionPhase	PhaseStartDate	5/3/2084	6/26/2026
tblConstructionPhase	PhaseStartDate	6/14/2023	5/1/2021
tblGrading	AcresOfGrading	870.00	3,487.50
tblLandUse	LandUseSquareFeet	2,496,220.00	2,496,221.00
tblLandUse	LandUseSquareFeet	1,069,810.00	1,069,809.00
tblLandUse	LandUseSquareFeet	2,865,930.00	2,865,933.00

## 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					
2020	0.4404	4.3540	2.8979	5.2400e-003	0.0155	0.2174	0.2329	4.1300e-003	0.2021	0.2062	0.0000	458.9851	458.9851	0.1261	0.0000	462.1365
2021	0.4831	4.9002	2.8281	5.1600e-003	1.5983	0.2457	1.8441	0.8736	0.2267	1.1003	0.0000	453.5953	453.5953	0.1361	0.0000	456.9979
2022	0.4388	4.5560	3.0172	6.1600e-003	3.6931	0.2107	3.9039	1.2078	0.1939	1.4017	0.0000	542.0940	542.0940	0.1706	0.0000	546.3590
2023	0.4388	4.4915	3.6960	8.2500e-003	2.6527	0.1853	2.8380	0.6355	0.1705	0.8060	0.0000	725.0480	725.0480	0.2296	0.0000	730.7881
2024	2.1000	18.4691	16.7210	0.0955	7.8022	0.1269	7.9291	1.8161	0.1190	1.9351	0.0000	8,942.8516	8,942.8516	0.3485	0.0000	8,951.5635
2025	1.9922	18.0577	15.8163	0.0936	5.9499	0.1142	6.0641	1.6148	0.1072	1.7219	0.0000	8,766.1188	8,766.1188	0.3371	0.0000	8,774.5467
2026	0.9878	9.1767	8.2828	0.0460	2.8804	0.0829	2.9633	0.7817	0.0773	0.8589	0.0000	4,298.8156	4,298.8156	0.2023	0.0000	4,303.8730
2027	10.2721	0.9684	1.9210	3.8400e-003	0.1808	0.0468	0.2277	0.0481	0.0432	0.0913	0.0000	340.7365	340.7365	0.0712	0.0000	342.5155
2028	55.0806	0.2741	1.7742	6.9300e-003	0.9112	0.0114	0.9226	0.2424	0.0110	0.2534	0.0000	625.9965	625.9965	0.0105	0.0000	626.2582
2029	8.4717	0.0407	0.2587	1.0400e-003	0.1402	1.7000e-003	0.1419	0.0373	1.6500e-003	0.0389	0.0000	93.7489	93.7489	1.5000e-003	0.0000	93.7864
<b>Maximum</b>	<b>55.0806</b>	<b>18.4691</b>	<b>16.7210</b>	<b>0.0955</b>	<b>7.8022</b>	<b>0.2457</b>	<b>7.9291</b>	<b>1.8161</b>	<b>0.2267</b>	<b>1.9351</b>	<b>0.0000</b>	<b>8,942.8516</b>	<b>8,942.8516</b>	<b>0.3485</b>	<b>0.0000</b>	<b>8,951.5635</b>

### 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	70.7110	0.5908	44.3899	0.0429		3.0604	3.0604		3.0604	3.0604	299.4577	123.3208	422.7785	0.5859	0.0177	442.6837

Energy	1.2775	11.4037	8.2141	0.0697		0.8827	0.8827		0.8827	0.8827	0.0000	28,356.39	28,356.393	1.8083	0.5558	28,567.22
												37	7			11
Waste						0.0000	0.0000		0.0000	0.0000	2,139.654	0.0000	2,139.6547	126.4500	0.0000	5,300.903
											7					9
Water						0.0000	0.0000		0.0000	0.0000	632.7484	1,635.111	2,267.8597	65.1523	1.5683	4,364.006
											2					0

## 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	15,713.26	15,713.267	1.5659	0.3240	15,848.96
												72	2			28
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15,713.26	15,713.267	1.5659	0.3240	15,848.96
												72	2			28
NaturalGas Mitigated	1.2775	11.4037	8.2141	0.0697		0.8827	0.8827		0.8827	0.8827	0.0000	12,643.12	12,643.126	0.2423	0.2318	12,718.25
												65	5			83
NaturalGas Unmitigated	1.2775	11.4037	8.2141	0.0697		0.8827	0.8827		0.8827	0.8827	0.0000	12,643.12	12,643.126	0.2423	0.2318	12,718.25
												65	5			83

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.5084e+06	0.0189	0.1617	0.0688	1.0300e-003		0.0131	0.0131		0.0131	0.0131	0.0000	187.2218	187.2218	3.5900e-003	3.4300e-003	188.3344
Apartments Mid Rise	4.7085e+06	0.0254	0.2170	0.0923	1.3800e-003		0.0175	0.0175		0.0175	0.0175	0.0000	251.2635	251.2635	4.8200e-003	4.6100e-003	252.7566
Condo/Townhouse	9.13683e+06	0.0493	0.4210	0.1792	2.6900e-003		0.0340	0.0340		0.0340	0.0340	0.0000	487.5760	487.5760	9.3500e-003	8.9400e-003	490.4734
General Light Industry	7.56033e+07	0.4077	3.7060	3.1131	0.0222		0.2817	0.2817		0.2817	0.2817	0.0000	4,034.4807	4,034.4807	0.0773	0.0740	4,058.4556
													7				
General Office Building	1.04105e+06	5.6100e-003	0.0510	0.0429	3.1000e-004		3.8800e-003	3.8800e-003		3.8800e-003	3.8800e-003	0.0000	55.5544	55.5544	1.0600e-003	1.0200e-003	55.8845
Government Office Building	710065	3.8300e-003	0.0348	0.0292	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	37.8918	37.8918	7.3000e-004	6.9000e-004	38.1170

Industrial Park	4.58376e+006	0.0247	0.2247	0.1887	1.3500e-003	0.0171	0.0171	0.0171	0.0171	0.0000	244.6071	244.6071	4.6900e-003	4.4800e-003	246.0607
Medical Office Building	594116	3.2000e-003	0.0291	0.0245	1.7000e-004	2.2100e-003	2.2100e-003	2.2100e-003	2.2100e-003	0.0000	31.7043	31.7043	6.1000e-004	5.8000e-004	31.8927
Office Park	5.27202e+007	0.2843	2.5843	2.1708	0.0155	0.1964	0.1964	0.1964	0.1964	0.0000	2,813.3500	2,813.3500	0.0539	0.0516	2,830.0683
Regional Shopping Center	1.52004e+006	8.2000e-003	0.0745	0.0626	4.5000e-004	5.6600e-003	5.6600e-003	5.6600e-003	5.6600e-003	0.0000	81.1149	81.1149	1.5500e-003	1.4900e-003	81.5969
Research & Development	2.82216e+007	0.1522	1.3834	1.1621	8.3000e-003	0.1051	0.1051	0.1051	0.1051	0.0000	1,506.0100	1,506.0100	0.0289	0.0276	1,514.9595
Single Family Housing	5.41192e+007	0.2918	2.4937	1.0612	0.0159	0.2016	0.2016	0.2016	0.2016	0.0000	2,888.0065	2,888.0065	0.0554	0.0530	2,905.1685
Strip Mall	456220	2.4600e-003	0.0224	0.0188	1.3000e-004	1.7000e-003	1.7000e-003	1.7000e-003	1.7000e-003	0.0000	24.3457	24.3457	4.7000e-004	4.5000e-004	24.4903
<b>Total</b>		<b>1.2775</b>	<b>11.4037</b>	<b>8.2141</b>	<b>0.0697</b>	<b>0.8827</b>	<b>0.8827</b>	<b>0.8827</b>	<b>0.8827</b>	<b>0.0000</b>	<b>12,643.1265</b>	<b>12,643.1265</b>	<b>0.2423</b>	<b>0.2318</b>	<b>12,718.2583</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.49599e+006	197.4634	0.0197	4.0700e-003	199.1686
Apartments Mid Rise	2.24995e+006	296.9831	0.0296	6.1200e-003	299.5478
Condo/Townhouse	2.46217e+006	324.9950	0.0324	6.7000e-003	327.8016
General Light Industry	2.36726e+007	3,124.6747	0.3114	0.0644	3,151.6586
General Office Building	1.1339e+006	149.6694	0.0149	3.0900e-003	150.9619
Government Office Building	773394	102.0845	0.0102	2.1000e-003	102.9660
Industrial Park	4.99258e+006	658.9973	0.0657	0.0136	664.6882
Medical Office Building	647104	85.4148	8.5100e-003	1.7600e-003	86.1524
Office Park	4.88011e+007	6,441.5224	0.6419	0.1328	6,497.1497
Regional Shopping Center	6.85619e+006	904.9857	0.0902	0.0187	912.8009



Research & Development	8.83662e+006	1,166.3933	0.1162	0.0241	1,176.4660
Single Family Housing	1.50646e+007	1,988.4631	0.1982	0.0410	2,005.6349
Strip Mall	2.0578e+006	271.6206	0.0271	5.6000e-003	273.9662
<b>Total</b>		<b>15,713.2672</b>	<b>1.5659</b>	<b>0.3240</b>	<b>15,848.9628</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	70.7110	0.5908	44.3899	0.0429		3.0604	3.0604		3.0604	3.0604	299.4577	123.3208	422.7785	0.5859	0.0177	442.6837
Unmitigated	70.7110	0.5908	44.3899	0.0429		3.0604	3.0604		3.0604	3.0604	299.4577	123.3208	422.7785	0.5859	0.0177	442.6837

### 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	7.3380					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	48.4973					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	14.1518	0.3136	20.3332	0.0416		2.9268	2.9268		2.9268	2.9268	299.4577	83.8983	383.3559	0.5481	0.0177	402.3165
Landscaping	0.7239	0.2772	24.0567	1.2800e-003		0.1336	0.1336		0.1336	0.1336	0.0000	39.4226	39.4226	0.0378	0.0000	40.3671
<b>Total</b>	<b>70.7110</b>	<b>0.5908</b>	<b>44.3899</b>	<b>0.0429</b>		<b>3.0604</b>	<b>3.0604</b>		<b>3.0604</b>	<b>3.0604</b>	<b>299.4577</b>	<b>123.3208</b>	<b>422.7785</b>	<b>0.5859</b>	<b>0.0177</b>	<b>442.6837</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,267.8597	65.1523	1.5683	4,364.0060
Unmitigated	2,267.8597	65.1523	1.5683	4,364.0060

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	22.413 / 14.1299	29.6464	0.7326	0.0177	53.2381
Apartments Mid Rise	35.5089 / 22.3861	46.9688	1.1606	0.0281	84.3452
Condo/Townhouse	31.7952 / 20.0448	42.0565	1.0392	0.0251	75.5238
General Light Industry	662.746 / 0	683.6101	21.6428	0.5197	1,379.5437
General Office Building	11.3021 / 6.92709	14.8581	0.3694	8.9300e-003	26.7538
Government Office Building	8.61786 / 5.28191	11.3293	0.2817	6.8100e-003	20.3998
Industrial Park	64.7523 / 0	66.7908	2.1146	0.0508	134.7856
Medical Office Building	4.55369 / 0.867369	5.0978	0.1488	3.5800e-003	9.8829
Office Park	443.663 / 271.922	583.2531	14.5009	0.3505	1,050.2170
Regional Shopping Center	47.5079 / 29.1177	62.4554	1.5528	0.0375	112.4584
Research & Development	526.019 / 0	542.5786	17.1778	0.4125	1,094.9383
Single Family Housing	121.317 / 76.4823	160.4696	3.9653	0.0959	288.1665
Strip Mall	14.259 / 8.73936	18.7453	0.4661	0.0113	33.7531
<b>Total</b>		<b>2,267.8597</b>	<b>65.1523</b>	<b>1.5683</b>	<b>4,364.0060</b>

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2,139.6547	126.4500	0.0000	5,300.9039
Unmitigated	2,139.6547	126.4500	0.0000	5,300.9039

### 8.2 Waste by Land Use

#### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	158.24	32.1213	1.8983	0.0000	79.5791
Apartments Mid Rise	250.7	50.8898	3.0075	0.0000	126.0774
Condo/Townhouse	224.48	45.5674	2.6930	0.0000	112.8913
General Light Industry	3553.75	721.3791	42.6323	0.0000	1,787.1863
General Office Building	59.14	12.0049	0.7095	0.0000	29.7416
Government Office Building	40.34	8.1887	0.4839	0.0000	20.2871
Industrial Park	347.21	70.4805	4.1653	0.0000	174.6124
Medical Office Building	391.93	79.5583	4.7018	0.0000	197.1022
Office Park	2321.48	471.2395	27.8495	0.0000	1,167.4758
Regional Shopping Center	673.44	136.7022	8.0789	0.0000	338.6740
Research & Development	81.3	16.5032	0.9753	0.0000	40.8859

Single Family Housing	2236.5	453.9893	26.8300	0.0000	1,124.7393
Strip Mall	202.13	41.0306	2.4248	0.0000	101.6515
<b>Total</b>		<b>2,139.6547</b>	<b>126.4500</b>	<b>0.0000</b>	<b>5,300.9039</b>

Gilroy 2040 GP Buildout - Bay Area AQMD Air District, Annual

**Gilroy 2040 GP Buildout**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	127.19	1000sqft	2.92	127,190.00	0
Government Office Building	86.75	1000sqft	1.99	86,752.00	0
Medical Office Building	72.58	1000sqft	1.67	72,585.00	0
Office Park	4,992.44	1000sqft	114.61	4,992,442.00	0
Research & Development	2,139.62	1000sqft	49.12	2,139,618.00	0
General Light Industry	5,731.87	1000sqft	131.59	5,731,866.00	0
Industrial Park	560.02	1000sqft	12.86	560,019.00	0
Apartments Low Rise	688.00	Dwelling Unit	43.00	688,000.00	1968
Apartments Mid Rise	1,090.00	Dwelling Unit	28.68	1,090,000.00	3117
Condo/Townhouse	976.00	Dwelling Unit	61.00	976,000.00	2791
Single Family Housing	3,723.00	Dwelling Unit	1,208.77	6,701,400.00	10648
Regional Shopping Center	1,282.73	1000sqft	29.45	1,282,729.00	0
Strip Mall	385.00	1000sqft	8.84	384,995.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	4	<b>Operational Year</b>		2040	
<b>Utility Company</b>	Pacific Gas & Electric Company				

CO2 Intensity 290  
(lb/MW hr)

CH4 Intensity 0.029  
(lb/MW hr)

N2O Intensity 0.006  
(lb/MW hr)

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

Project Characteristics - Adjusted PG&E CO2 intensity for 2020

Land Use - from Gilroy GP Preferred Alternative 2020

Construction Phase - construction adjusted to end in year 2039

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	783.00
tblConstructionPhase	NumDays	6,000.00	785.00
tblConstructionPhase	NumDays	15,500.00	783.00
tblConstructionPhase	NumDays	155,000.00	1,044.00
tblConstructionPhase	NumDays	11,000.00	783.00
tblConstructionPhase	NumDays	11,000.00	784.00
tblConstructionPhase	PhaseEndDate	4/30/2058	1/1/2023
tblConstructionPhase	PhaseEndDate	4/29/2081	1/2/2026
tblConstructionPhase	PhaseEndDate	9/27/2140	1/3/2029
tblConstructionPhase	PhaseEndDate	11/13/2734	1/4/2033
tblConstructionPhase	PhaseEndDate	1/11/2777	1/5/2036
tblConstructionPhase	PhaseEndDate	3/12/2819	1/6/2039
tblConstructionPhase	PhaseStartDate	5/1/2058	1/2/2023
tblConstructionPhase	PhaseStartDate	4/30/2081	1/3/2026
tblConstructionPhase	PhaseStartDate	9/28/2140	1/4/2029
tblConstructionPhase	PhaseStartDate	11/14/2734	1/5/2033
tblConstructionPhase	PhaseStartDate	1/12/2777	1/6/2036
tblGrading	AcresOfGrading	1,957.50	38,750.00
tblLandUse	LandUseSquareFeet	86,750.00	86,752.00
tblLandUse	LandUseSquareFeet	72,580.00	72,585.00
tblLandUse	LandUseSquareFeet	4,992,440.00	4,992,442.00

tblLandUse	LandUseSquareFeet	2,139,620.00	2,139,618.00
tblLandUse	LandUseSquareFeet	5,731,870.00	5,731,866.00
tblLandUse	LandUseSquareFeet	560,020.00	560,019.00
tblLandUse	LandUseSquareFeet	1,282,730.00	1,282,729.00
tblLandUse	LandUseSquareFeet	385,000.00	384,995.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290

## 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					
2020	0.4404	4.3540	2.8979	5.2400e-003	0.0155	0.2174	0.2329	4.1300e-003	0.2021	0.2062	0.0000	458.9851	458.9851	0.1261	0.0000	462.1365
2021	0.4191	4.1072	2.8581	5.2100e-003	0.0155	0.2026	0.2180	4.1100e-003	0.1882	0.1923	0.0000	456.7861	456.7861	0.1252	0.0000	459.9156
2022	0.3487	3.3472	2.7174	5.1900e-003	0.0154	0.1616	0.1771	4.1000e-003	0.1503	0.1544	0.0000	454.4212	454.4212	0.1244	0.0000	457.5307
2023	0.3520	3.5821	2.4161	5.1100e-003	2.3671	0.1647	2.5318	1.2959	0.1515	1.4474	0.0000	449.3403	449.3403	0.1409	0.0000	452.8634
2024	0.3545	3.5637	2.4434	5.1400e-003	2.3853	0.1612	2.5465	1.3059	0.1483	1.4541	0.0000	452.3026	452.3026	0.1420	0.0000	455.8528
2025	0.3283	3.2963	2.3757	5.1200e-003	2.3762	0.1419	2.5182	1.3009	0.1306	1.4315	0.0000	450.1375	450.1375	0.1415	0.0000	453.6746
2026	0.3841	3.6472	3.4674	8.2300e-003	21.3657	0.1477	21.5134	2.6627	0.1359	2.7986	0.0000	723.5229	723.5229	0.2296	0.0000	729.2630
2027	0.3842	3.6496	3.4733	8.2500e-003	21.3537	0.1477	21.5014	2.6561	0.1359	2.7920	0.0000	725.1517	725.1517	0.2303	0.0000	730.9083
2028	0.3824	3.6354	3.4577	8.2200e-003	21.3506	0.1471	21.4977	2.6544	0.1354	2.7898	0.0000	721.9473	721.9473	0.2294	0.0000	727.6814
2029	3.1534	32.2958	24.3828	0.1703	32.3196	0.1456	32.4651	5.4161	0.1365	5.5526	0.0000	16,016.7343	16,016.7343	0.5399	0.0000	16,030.2320
2030	3.0249	31.6703	23.7080	0.1706	11.9000	0.0924	11.9924	3.2296	0.0877	3.3173	0.0000	16,047.1308	16,047.1308	0.4753	0.0000	16,059.0124
2031	2.8652	31.3591	22.8474	0.1688	11.9000	0.0892	11.9892	3.2296	0.0847	3.3143	0.0000	15,887.5503	15,887.5503	0.4657	0.0000	15,899.1919
2032	2.7377	31.2092	22.1975	0.1680	11.9456	0.0866	12.0322	3.2420	0.0823	3.3243	0.0000	15,814.0339	15,814.0339	0.4593	0.0000	15,825.5175

2033	0.2014	1.1563	2.2286	4.9900e-003	0.1065	0.0434	0.1498	0.0288	0.0433	0.0721	0.0000	439.5919	439.5919	0.0181	0.0000	440.0451
2034	0.1826	0.9270	2.0790	3.7400e-003	0.0154	0.0430	0.0584	4.1000e-003	0.0430	0.0471	0.0000	322.0875	322.0875	0.0148	0.0000	322.4569
2035	0.1514	0.6376	2.0824	3.7600e-003	0.0155	0.0245	0.0400	4.1100e-003	0.0245	0.0286	0.0000	323.2079	323.2079	0.0122	0.0000	323.5126
2036	48.6043	0.2593	2.3498	0.0117	1.8096	7.4700e-003	1.8170	0.4814	7.0100e-003	0.4884	0.0000	1,056.6374	1,056.6374	0.0114	0.0000	1,056.9217
2037	49.1671	0.2524	2.3449	0.0118	1.8304	7.1800e-003	1.8375	0.4869	6.7100e-003	0.4936	0.0000	1,063.9130	1,063.9130	0.0113	0.0000	1,064.1958
2038	49.1671	0.2524	2.3449	0.0118	1.8304	7.1800e-003	1.8375	0.4869	6.7100e-003	0.4936	0.0000	1,063.9130	1,063.9130	0.0113	0.0000	1,064.1958
2039	0.7535	3.8700e-003	0.0359	1.8000e-004	0.0281	1.1000e-004	0.0282	7.4600e-003	1.0000e-004	7.5700e-003	0.0000	16.3052	16.3052	1.7000e-004	0.0000	16.3095
<b>Maximum</b>	<b>49.1671</b>	<b>32.2958</b>	<b>24.3828</b>	<b>0.1706</b>	<b>32.3196</b>	<b>0.2174</b>	<b>32.4651</b>	<b>5.4161</b>	<b>0.2021</b>	<b>5.5526</b>	<b>0.0000</b>	<b>16,047.1308</b>	<b>16,047.1308</b>	<b>0.5399</b>	<b>0.0000</b>	<b>16,059.0124</b>

## 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	141.4050	1.1811	88.6795	0.0857		6.1195	6.1195		6.1195	6.1195	598.7882	246.5983	845.3865	1.1714	0.0353	885.1866
Energy	2.5549	22.8060	16.4276	0.1394		1.7652	1.7652		1.7652	1.7652	0.0000	56,602.1676	56,602.1676	3.6164	1.1115	57,023.8040
Waste						0.0000	0.0000		0.0000	0.0000	4,279.1429	0.0000	4,279.1429	252.8901	0.0000	10,601.3954
Water						0.0000	0.0000		0.0000	0.0000	1,265.4767	3,258.9200	4,524.3966	130.3025	3.1365	8,716.6221
<b>Total</b>	<b>168.7546</b>	<b>189.7349</b>	<b>391.1264</b>	<b>1.7940</b>	<b>181.1648</b>	<b>8.5562</b>	<b>189.7210</b>	<b>48.5954</b>	<b>8.5101</b>	<b>57.1055</b>	<b>6,143.4078</b>	<b>205,525.0775</b>	<b>211,668.4852</b>	<b>392.3329</b>	<b>4.2832</b>	<b>222,753.2125</b>

## 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
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Category	tons/yr								MT/yr						
Electricity Mitigated					0.0000	0.0000		0.0000	0.0000	0.0000	31,317.4676	31,317.4676	3.1318	0.6480	31,588.8496
Electricity Unmitigated					0.0000	0.0000		0.0000	0.0000	0.0000	31,317.4676	31,317.4676	3.1318	0.6480	31,588.8496
NaturalGas Mitigated	2.5549	22.8060	16.4276	0.1394	1.7652	1.7652		1.7652	1.7652	0.0000	25,284.7000	25,284.7000	0.4846	0.4636	25,434.9544
NaturalGas Unmitigated	2.5549	22.8060	16.4276	0.1394	1.7652	1.7652		1.7652	1.7652	0.0000	25,284.7000	25,284.7000	0.4846	0.4636	25,434.9544

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	7.01681e+006	0.0378	0.3233	0.1376	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.4436	374.4436	7.1800e-003	6.8600e-003	376.6688
Apartments Mid Rise	9.417e+006	0.0508	0.4339	0.1847	2.7700e-003		0.0351	0.0351		0.0351	0.0351	0.0000	502.5270	502.5270	9.6300e-003	9.2100e-003	505.5133
Condo/Townhouse	1.82737e+007	0.0985	0.8420	0.3583	5.3700e-003		0.0681	0.0681		0.0681	0.0681	0.0000	975.1520	975.1520	0.0187	0.0179	980.9468
General Light Industry	1.51207e+008	0.8153	7.4121	6.2262	0.0445		0.5633	0.5633		0.5633	0.5633	0.0000	8,068.9613	8,068.9613	0.1547	0.1479	8,116.9112
General Office Building	2.0821e+006	0.0112	0.1021	0.0857	6.1000e-004		7.7600e-003	7.7600e-003		7.7600e-003	7.7600e-003	0.0000	111.1088	111.1088	2.1300e-003	2.0400e-003	111.7691
Government Office Building	1.42013e+006	7.6600e-003	0.0696	0.0585	4.2000e-004		5.2900e-003	5.2900e-003		5.2900e-003	5.2900e-003	0.0000	75.7836	75.7836	1.4500e-003	1.3900e-003	76.2339
Industrial Park	9.16751e+006	0.0494	0.4494	0.3775	2.7000e-003		0.0342	0.0342		0.0342	0.0342	0.0000	489.2133	489.2133	9.3800e-003	8.9700e-003	492.1205
Medical Office Building	1.18822e+006	6.4100e-003	0.0583	0.0489	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003	0.0000	63.4078	63.4078	1.2200e-003	1.1600e-003	63.7846
Office Park	1.0544e+008	0.5686	5.1687	4.3417	0.0310		0.3928	0.3928		0.3928	0.3928	0.0000	5,626.7000	5,626.7000	0.1079	0.1032	5,660.1366
Regional Shopping Center	3.04007e+006	0.0164	0.1490	0.1252	8.9000e-004		0.0113	0.0113		0.0113	0.0113	0.0000	162.2296	162.2296	3.1100e-003	2.9700e-003	163.1936
Research & Development	5.64431e+007	0.3044	2.7668	2.3241	0.0166		0.2103	0.2103		0.2103	0.2103	0.0000	3,012.0200	3,012.0200	0.0577	0.0552	3,029.9189
Single Family Housing	1.08209e+008	0.5835	4.9861	2.1218	0.0318		0.4031	0.4031		0.4031	0.4031	0.0000	5,774.4619	5,774.4619	0.1107	0.1059	5,808.7767
Strip Mall	912438	4.9200e-003	0.0447	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003	0.0000	48.6912	48.6912	9.3000e-004	8.9000e-004	48.9805

Total		2.5549	22.8060	16.4276	0.1394		1.7652	1.7652		1.7652	1.7652	0.0000	25,284.700	25,284.70	0.4846	0.4636	25,434.954
													0	00			4

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.99197e+006	393.5697	0.0394	8.1400e-003	396.9801
Apartments Mid Rise	4.4999e+006	591.9251	0.0592	0.0123	597.0544
Condo/Townhouse	4.92434e+006	647.7564	0.0648	0.0134	653.3696
General Light Industry	4.73452e+007	6,227.8740	0.6228	0.1289	6,281.8417
General Office Building	2.2678e+006	298.3102	0.0298	6.1700e-003	300.8952
Government Office Building	1.54679e+006	203.4673	0.0204	4.2100e-003	205.2304
Industrial Park	9.98514e+006	1,313.4630	0.1314	0.0272	1,324.8448
Medical Office Building	1.29419e+006	170.2401	0.0170	3.5200e-003	171.7154
Office Park	9.76022e+007	12,838.7732	1.2839	0.2656	12,950.0279
Regional Shopping Center	1.37124e+007	1,803.7501	0.1804	0.0373	1,819.3805
Research & Development	1.76732e+007	2,324.7702	0.2325	0.0481	2,344.9155
Single Family Housing	3.01212e+007	3,962.1955	0.3962	0.0820	3,996.5299
Strip Mall	4.1156e+006	541.3729	0.0541	0.0112	546.0642
<b>Total</b>		<b>31,317.4676</b>	<b>3.1318</b>	<b>0.6480</b>	<b>31,588.8496</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	141.4050	1.1811	88.6795	0.0857		6.1195	6.1195		6.1195	6.1195	598.7882	246.5983	845.3865	1.1714	0.0353	885.1866
Unmitigated	141.4050	1.1811	88.6795	0.0857		6.1195	6.1195		6.1195	6.1195	598.7882	246.5983	845.3865	1.1714	0.0353	885.1866

## 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	14.6748					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	96.9876					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	28.2976	0.6271	40.6579	0.0832		5.8523	5.8523		5.8523	5.8523	598.7882	167.7653	766.5535	1.0959	0.0353	804.4666
Landscaping	1.4449	0.5539	48.0216	2.5500e-003		0.2672	0.2672		0.2672	0.2672	0.0000	78.8330	78.8330	0.0755	0.0000	80.7201
<b>Total</b>	<b>141.4050</b>	<b>1.1811</b>	<b>88.6795</b>	<b>0.0857</b>		<b>6.1195</b>	<b>6.1195</b>		<b>6.1195</b>	<b>6.1195</b>	<b>598.7882</b>	<b>246.5983</b>	<b>845.3865</b>	<b>1.1714</b>	<b>0.0353</b>	<b>885.1866</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4,524.3966	130.3025	3.1365	8,716.6221
Unmitigated	4,524.3966	130.3025	3.1365	8,716.6221

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	44.826 / 28.2599	59.1378	1.4652	0.0354	106.3212
Apartments Mid Rise	71.0179 / 44.7721	93.6922	2.3212	0.0561	168.4450
Condo/Townhouse	63.5903 / 40.0896	83.8932	2.0785	0.0502	150.8278
General Light Industry	1325.49 / 0	1,363.9694	43.2856	1.0394	2,755.8388
General Office Building	22.606 / 13.8553	29.6410	0.7389	0.0179	53.4343
Government Office Building	17.2337 / 10.5626	22.5970	0.5633	0.0136	40.7358
Industrial Park	129.505 / 0	133.2637	4.2291	0.1016	269.2533
Medical Office Building	9.10738 / 1.73474	10.1704	0.2975	7.1600e-003	19.7408
Office Park	887.325 / 543.844	1,163.4649	29.0017	0.7010	2,097.3927
Regional Shopping Center	95.015 / 58.235	124.5842	3.1055	0.0751	224.5895
Research & Development	1052.04 / 0	1,082.5752	34.3556	0.8249	2,187.2945
Single Family Housing	242.568 / 152.924	320.0148	7.9284	0.1917	575.3400
Strip Mall	28.5179 / 17.4787	37.3928	0.9321	0.0225	67.4085
<b>Total</b>		<b>4,524.3966</b>	<b>130.3025</b>	<b>3.1365</b>	<b>8,716.6221</b>

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	4,279.1429	252.8901	0.0000	10,601.3954
Unmitigated	4,279.1429	252.8901	0.0000	10,601.3954

## 8.2 Waste by Land Use

### Unmitigated

Land Use	Waste Disposed tons	Total CO2 MT/yr	CH4 MT/yr	N2O MT/yr	CO2e MT/yr
Apartments Low Rise	316.48	64.2426	3.7966	0.0000	159.1583
Apartments Mid Rise	501.4	101.7797	6.0150	0.0000	252.1548
Condo/Townhouse	448.96	91.1348	5.3859	0.0000	225.7827
General Light Industry	7107.52	1,442.7623	85.2648	0.0000	3,574.3826
General Office Building	118.29	24.0118	1.4191	0.0000	59.4882
Government Office Building	80.68	16.3773	0.9679	0.0000	40.5741
Industrial Park	694.42	140.9610	8.3306	0.0000	349.2249
Medical Office Building	783.86	159.1165	9.4035	0.0000	394.2044
Office Park	4642.97	942.4810	55.6990	0.0000	2,334.9567
Regional Shopping Center	1346.87	273.4024	16.1576	0.0000	677.3430
Research & Development	162.6	33.0063	1.9506	0.0000	81.7718
Single Family Housing	4472.16	907.8081	53.6499	0.0000	2,249.0561
Strip Mall	404.25	82.0591	4.8496	0.0000	203.2979
<b>Total</b>		<b>4,279.1429</b>	<b>252.8901</b>	<b>0.0000</b>	<b>10,601.3953</b>

Gilroy 2040 General Plan  
CO2 Volumes in 2030

Sub-Area	Cal. Year	Season	Veh Tech	EMFAC2007 Category	VMT	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX
Santa Clara (SF)	2030	Annual	All Vehicles	All Vehicles	1,223,112.0	365.2	3.05	8.33	376.6
Santa Clara (SF)	2030	Annual	ALL OTHER BUSES - DSL	OBUS - DSL	884.4	0.9367	0.0110		0.9478
Santa Clara (SF)	2030	Annual	LDA - DSL	LDA - DSL	8,096.7	1.47			1.47
Santa Clara (SF)	2030	Annual	LDA - GAS	LDA - GAS	720,030.7	157.0		4.47	161.5
Santa Clara (SF)	2030	Annual	LDT1 - DSL	LDT1 - DSL	8.44	0.0030			0.0030
Santa Clara (SF)	2030	Annual	LDT1 - GAS	LDT1 - GAS	65,981.2	17.3		0.5342	17.9
Santa Clara (SF)	2030	Annual	LDT2 - DSL	LDT2 - DSL	1,950.7	0.4823			0.4823
Santa Clara (SF)	2030	Annual	LDT2 - GAS	LDT2 - GAS	207,649.5	56.5		1.77	58.3
Santa Clara (SF)	2030	Annual	LHD1 - DSL	LHDT1 - DSL	12,231.3	6.39	0.0461		6.44
Santa Clara (SF)	2030	Annual	LHD1 - GAS	LHDT1 - GAS	13,502.2	13.2	0.0471	0.1000	13.4
Santa Clara (SF)	2030	Annual	LHD2 - DSL	LHDT2 - DSL	4,830.5	2.85	0.0307		2.88
Santa Clara (SF)	2030	Annual	LHD2 - GAS	LHDT2 - GAS	1,964.2	2.19	0.0079	0.0168	2.22
Santa Clara (SF)	2030	Annual	MCY - GAS	MCY - GAS	6,083.3	1.16		0.0782	1.23
Santa Clara (SF)	2030	Annual	MDV - DSL	MDV - DSL	4,201.3	1.35			1.35
Santa Clara (SF)	2030	Annual	MDV - GAS	MDV - GAS	126,061.3	41.4		1.33	42.7
Santa Clara (SF)	2030	Annual	MH - DSL	MH - DSL	264.4	0.2638			0.2638
Santa Clara (SF)	2030	Annual	MH - GAS	MH - GAS	625.4	1.05		0.0001	1.05
Santa Clara (SF)	2030	Annual	MOTOR COACH - DSL	OBUS - DSL	344.7	0.4939	0.0309		0.5249
Santa Clara (SF)	2030	Annual	OBUS - GAS	OBUS - GAS	535.3	0.9020	0.0045	0.0051	0.9116
Santa Clara (SF)	2030	Annual	PTO - DSL	HHDT - DSL	292.4	0.6046			0.6046
Santa Clara (SF)	2030	Annual	SBUS - DSL	SBUS - DSL	736.7	0.8466	0.0899		0.9365
Santa Clara (SF)	2030	Annual	SBUS - GAS	SBUS - GAS	364.4	0.3197	0.0212	0.0012	0.3422
Santa Clara (SF)	2030	Annual	T6 AG - DSL	MHDT - DSL	0.1023	0.0001	0.0000		0.0001
Santa Clara (SF)	2030	Annual	T6 CAIRP HEAVY - DSL	MHDT - DSL	201.8	0.1610	0.0006		0.1616
Santa Clara (SF)	2030	Annual	T6 CAIRP SMALL - DSL	MHDT - DSL	26.6	0.0234	0.0003		0.0237
Santa Clara (SF)	2030	Annual	T6 INSTATE CONSTRUCTION HEAVY - DSL	MHDT - DSL	584.8	0.7155	0.0062		0.7216
Santa Clara (SF)	2030	Annual	T6 INSTATE CONSTRUCTION SMALL - DSL	MHDT - DSL	1,334.0	1.53	0.0164		1.54
Santa Clara (SF)	2030	Annual	T6 INSTATE HEAVY - DSL	MHDT - DSL	4,797.7	4.49	0.0275		4.52
Santa Clara (SF)	2030	Annual	T6 INSTATE SMALL - DSL	MHDT - DSL	6,871.5	6.80	0.0983		6.90
Santa Clara (SF)	2030	Annual	T6 OOS HEAVY - DSL	MHDT - DSL	113.1	0.0902	0.0004		0.0906
Santa Clara (SF)	2030	Annual	T6 OOS SMALL - DSL	MHDT - DSL	14.9	0.0131	0.0002		0.0133
Santa Clara (SF)	2030	Annual	T6 PUBLIC - DSL	MHDT - DSL	361.8	0.3957	0.0759		0.4715
Santa Clara (SF)	2030	Annual	T6 UTILITY - DSL	MHDT - DSL	59.8	0.0560	0.0057		0.0616
Santa Clara (SF)	2030	Annual	T6TS - GAS	MHDT - GAS	2,313.0	3.82	0.0228	0.0276	3.87
Santa Clara (SF)	2030	Annual	T7 AG - DSL	HHDT - DSL	0.0000	0.0000	0		0.0000
Santa Clara (SF)	2030	Annual	T7 CAIRP - DSL	HHDT - DSL	4,406.4	5.19	0.5422		5.73
Santa Clara (SF)	2030	Annual	T7 CAIRP CONSTRUCTION - DSL	HHDT - DSL	420.0	0.6486	0.0084		0.6570
Santa Clara (SF)	2030	Annual	T7 NNOOS - DSL	HHDT - DSL	5,371.6	5.97	0.8673		6.84
Santa Clara (SF)	2030	Annual	T7 NOOS - DSL	HHDT - DSL	1,731.2	2.04	0.2690		2.31
Santa Clara (SF)	2030	Annual	T7 OTHER PORT - DSL	HHDT - DSL	515.0	0.7504	0.0107		0.7611
Santa Clara (SF)	2030	Annual	T7 POAK - DSL	HHDT - DSL	3,512.6	5.22	0.1449		5.37
Santa Clara (SF)	2030	Annual	T7 POLA - DSL	HHDT - DSL	0.0000	0.0000	0.0000		0.0000
Santa Clara (SF)	2030	Annual	T7 PUBLIC - DSL	HHDT - DSL	255.3	0.4543	0.0421		0.4965
Santa Clara (SF)	2030	Annual	T7 SINGLE - DSL	HHDT - DSL	1,472.5	2.26	0.1364		2.40
Santa Clara (SF)	2030	Annual	T7 SINGLE CONSTRUCTION - DSL	HHDT - DSL	1,042.1	1.79	0.0590		1.85
Santa Clara (SF)	2030	Annual	T7 SWCV - DSL	HHDT - DSL	539.7	1.88	0.0547		1.94
Santa Clara (SF)	2030	Annual	T7 TRACTOR - DSL	HHDT - DSL	8,173.9	9.90	0.3221		10.2
Santa Clara (SF)	2030	Annual	T7 TRACTOR CONSTRUCTION - DSL	HHDT - DSL	859.6	1.48	0.0494		1.53
Santa Clara (SF)	2030	Annual	T7 UTILITY - DSL	HHDT - DSL	33.0	0.0519	0.0027		0.0546
Santa Clara (SF)	2030	Annual	T7IS - GAS	HHDT - GAS	20.3	0.0362		0.0001	0.0363
Santa Clara (SF)	2030	Annual	UBUS - DSL	UBUS - DSL	1,415.2	2.52			2.52
Santa Clara (SF)	2030	Annual	UBUS - GAS	UBUS - GAS	25.5	0.0545		0.0001	0.0546

Gilroy 2040 General Plan  
CO2 volumes in 2040

Sub-Area	Cal. Year	Season	Veh Tech	EMFAC2007 Category	VMT	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX
Santa Clara (SF)	2040	Annual	All Vehicles	All Vehicles	2,446,223.0	650.3	5.44	15.4	671.1
Santa Clara (SF)	2040	Annual	ALL OTHER BUSES - DSL	OBUS - DSL	1,675.4	1.66	0.0195		1.68
Santa Clara (SF)	2040	Annual	LDA - DSL	LDA - DSL	16,728.5	2.78			2.78
Santa Clara (SF)	2040	Annual	LDA - GAS	LDA - GAS	1,437,485.3	280.8		8.37	289.1
Santa Clara (SF)	2040	Annual	LDT1 - DSL	LDT1 - DSL	17.5	0.0055			0.0055
Santa Clara (SF)	2040	Annual	LDT1 - GAS	LDT1 - GAS	133,707.1	31.2		1.01	32.2
Santa Clara (SF)	2040	Annual	LDT2 - DSL	LDT2 - DSL	4,048.1	0.8969			0.8969
Santa Clara (SF)	2040	Annual	LDT2 - GAS	LDT2 - GAS	408,524.4	95.7		3.11	98.9
Santa Clara (SF)	2040	Annual	LHD1 - DSL	LHDT1 - DSL	26,173.5	12.7	0.0989		12.8
Santa Clara (SF)	2040	Annual	LHD1 - GAS	LHDT1 - GAS	26,684.1	24.1	0.0895	0.1921	24.4
Santa Clara (SF)	2040	Annual	LHD2 - DSL	LHDT2 - DSL	10,288.6	5.61	0.0660		5.68
Santa Clara (SF)	2040	Annual	LHD2 - GAS	LHDT2 - GAS	3,987.2	4.12	0.0155	0.0335	4.17
Santa Clara (SF)	2040	Annual	MCY - GAS	MCY - GAS	12,096.8	2.31		0.1645	2.47
Santa Clara (SF)	2040	Annual	MDV - DSL	MDV - DSL	8,838.0	2.55			2.55
Santa Clara (SF)	2040	Annual	MDV - GAS	MDV - GAS	254,734.9	72.1		2.43	74.5
Santa Clara (SF)	2040	Annual	MH - DSL	MH - DSL	544.2	0.5026			0.5026
Santa Clara (SF)	2040	Annual	MH - GAS	MH - GAS	1,248.0	1.93		0.0003	1.94
Santa Clara (SF)	2040	Annual	MOTOR COACH - DSL	OBUS - DSL	700.6	0.9137	0.0534		0.9672
Santa Clara (SF)	2040	Annual	OBUS - GAS	OBUS - GAS	1,029.0	1.59	0.0085	0.0097	1.61
Santa Clara (SF)	2040	Annual	PTO - DSL	HHDT - DSL	483.3	0.8831			0.8831
Santa Clara (SF)	2040	Annual	SBUS - DSL	SBUS - DSL	1,218.7	1.19	0.1254		1.32
Santa Clara (SF)	2040	Annual	SBUS - GAS	SBUS - GAS	837.5	0.6823	0.0481	0.0027	0.7331
Santa Clara (SF)	2040	Annual	T6 AG - DSL	MHDT - DSL	0.0367	0.0000	0.0000		0.0000
Santa Clara (SF)	2040	Annual	T6 CAIRP HEAVY - DSL	MHDT - DSL	410.8	0.3059	0.0013		0.3072
Santa Clara (SF)	2040	Annual	T6 CAIRP SMALL - DSL	MHDT - DSL	54.0	0.0446	0.0007		0.0452
Santa Clara (SF)	2040	Annual	T6 INSTATE CONSTRUCTION HEAVY - DSL	MHDT - DSL	1,200.3	1.36	0.0107		1.37
Santa Clara (SF)	2040	Annual	T6 INSTATE CONSTRUCTION SMALL - DSL	MHDT - DSL	2,738.1	2.85	0.0302		2.88
Santa Clara (SF)	2040	Annual	T6 INSTATE HEAVY - DSL	MHDT - DSL	9,959.9	8.49	0.0572		8.55
Santa Clara (SF)	2040	Annual	T6 INSTATE SMALL - DSL	MHDT - DSL	13,243.8	11.8	0.1650		12.0
Santa Clara (SF)	2040	Annual	T6 OOS HEAVY - DSL	MHDT - DSL	230.0	0.1712	0.0007		0.1719
Santa Clara (SF)	2040	Annual	T6 OOS SMALL - DSL	MHDT - DSL	30.2	0.0250	0.0004		0.0254
Santa Clara (SF)	2040	Annual	T6 PUBLIC - DSL	MHDT - DSL	707.2	0.6887	0.1341		0.8228
Santa Clara (SF)	2040	Annual	T6 UTILITY - DSL	MHDT - DSL	116.8	0.1007	0.0102		0.1109
Santa Clara (SF)	2040	Annual	T6TS - GAS	MHDT - GAS	4,913.5	7.53	0.0489	0.0592	7.64
Santa Clara (SF)	2040	Annual	T7 AG - DSL	HHDT - DSL	0.0000	0.0000	0		0.0000
Santa Clara (SF)	2040	Annual	T7 CAIRP - DSL	HHDT - DSL	8,954.5	9.27	0.9105		10.2
Santa Clara (SF)	2040	Annual	T7 CAIRP CONSTRUCTION - DSL	HHDT - DSL	862.2	1.21	0.0158		1.22
Santa Clara (SF)	2040	Annual	T7 NNOOS - DSL	HHDT - DSL	10,915.8	11.3	1.75		13.0
Santa Clara (SF)	2040	Annual	T7 NOOS - DSL	HHDT - DSL	3,518.2	3.64	0.4495		4.09
Santa Clara (SF)	2040	Annual	T7 OTHER PORT - DSL	HHDT - DSL	1,088.8	1.37	0.0213		1.39
Santa Clara (SF)	2040	Annual	T7 POAK - DSL	HHDT - DSL	9,020.0	11.4	0.2772		11.7
Santa Clara (SF)	2040	Annual	T7 POLA - DSL	HHDT - DSL	0.0000	0.0000	0.0000		0.0000
Santa Clara (SF)	2040	Annual	T7 PUBLIC - DSL	HHDT - DSL	408.2	0.6080	0.0581		0.6661
Santa Clara (SF)	2040	Annual	T7 SINGLE - DSL	HHDT - DSL	2,433.9	3.30	0.1653		3.46
Santa Clara (SF)	2040	Annual	T7 SINGLE CONSTRUCTION - DSL	HHDT - DSL	2,138.9	3.27	0.0989		3.37
Santa Clara (SF)	2040	Annual	T7 SWCV - DSL	HHDT - DSL	836.2	2.45	0.0731		2.53
Santa Clara (SF)	2040	Annual	T7 TRACTOR - DSL	HHDT - DSL	16,886.6	17.4	0.5464		17.9
Santa Clara (SF)	2040	Annual	T7 TRACTOR CONSTRUCTION - DSL	HHDT - DSL	1,764.4	2.64	0.0808		2.72
Santa Clara (SF)	2040	Annual	T7 UTILITY - DSL	HHDT - DSL	64.4	0.0849	0.0045		0.0893
Santa Clara (SF)	2040	Annual	T7IS - GAS	HHDT - GAS	45.6	0.0743		0.0003	0.0746
Santa Clara (SF)	2040	Annual	UBUS - DSL	UBUS - DSL	2,583.3	4.61			4.61
Santa Clara (SF)	2040	Annual	UBUS - GAS	UBUS - GAS	46.6	0.0882		0.0001	0.0883

Gilroy 2040 General Plan  
2017 (Existing) Fuel Demand

calendar_y	season_month	sub_area	vehicle_class	fuel	process	pollutant	emission
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	0.0063222
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	0.0004074
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	4.21E-07
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	1.02E-06
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	0.0003585
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	0.000328
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	0.0311386
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	5.59E-05
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	9.29E-07
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	8.64E-07
2017	Annual	Santa Clara (SF)	T6TS	Gas	STREX	Fuel	0.004489
2017	Annual	Santa Clara (SF)	T6TS	Gas	HOTSOAK	Fuel	0.0001428
2017	Annual	Santa Clara (SF)	T6TS	Gas	HOTSOAK	Fuel	0.0001526
2017	Annual	Santa Clara (SF)	T6TS	Gas	HOTSOAK	Fuel	0.0001526
2017	Annual	Santa Clara (SF)	T6TS	Gas	HOTSOAK	Fuel	2.49E-05
2017	Annual	Santa Clara (SF)	T6TS	Gas	RUNLOSS	Fuel	0.0007444
2017	Annual	Santa Clara (SF)	T6TS	Gas	RUNLOSS	Fuel	0.0007959
2017	Annual	Santa Clara (SF)	T6TS	Gas	RUNLOSS	Fuel	0.0007959
2017	Annual	Santa Clara (SF)	T6TS	Gas	RUNLOSS	Fuel	0.000105
2017	Annual	Santa Clara (SF)	T6TS	Gas	RESTLOSS	Fuel	1.43E-06
2017	Annual	Santa Clara (SF)	T6TS	Gas	RESTLOSS	Fuel	1.55E-06
2017	Annual	Santa Clara (SF)	T6TS	Gas	RESTLOSS	Fuel	1.55E-06
2017	Annual	Santa Clara (SF)	T6TS	Gas	RESTLOSS	Fuel	4.52E-07
2017	Annual	Santa Clara (SF)	T6TS	Gas	DIURN	Fuel	3.12E-06
2017	Annual	Santa Clara (SF)	T6TS	Gas	DIURN	Fuel	3.39E-06
2017	Annual	Santa Clara (SF)	T6TS	Gas	DIURN	Fuel	3.39E-06
2017	Annual	Santa Clara (SF)	T6TS	Gas	DIURN	Fuel	8.22E-07
2017	Annual	Santa Clara (SF)	T6TS	Gas	PMTW	Fuel	2.58E-05
2017	Annual	Santa Clara (SF)	T6TS	Gas	PMTW	Fuel	2.58E-05
2017	Annual	Santa Clara (SF)	T6TS	Gas	PMTW	Fuel	6.45E-06
2017	Annual	Santa Clara (SF)	T6TS	Gas	PMBW	Fuel	0.0002858
2017	Annual	Santa Clara (SF)	T6TS	Gas	PMBW	Fuel	0.00028
2017	Annual	Santa Clara (SF)	T6TS	Gas	PMBW	Fuel	0.00012
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	3.03E-05
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	0.0008611
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	0.0001163
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	3.52E-07
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	5.07E-08
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	3.28E-05
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	2.35E-05
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	0.0337836
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	3.87E-06
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	4.61E-08
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	4.28E-08
2017	Annual	Santa Clara (SF)	T7IS	Gas	RUNEX	Fuel	0.0037513
2017	Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	7.11E-09



Gilroy 2040 General Plan  
2017 (Existing) Fuel Demand

2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	1.62E-05
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	3.21E-06
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	2.98E-09
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	1.37E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	7.42E-09
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	6.77E-09
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	0.0002729
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	1.63E-09
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	1.27E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	1.19E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	STREX	Fuel	3.18E-05
2017 Annual	Santa Clara (SF)	T7IS	Gas	HOTSOAK	Fuel	1.69E-06
2017 Annual	Santa Clara (SF)	T7IS	Gas	HOTSOAK	Fuel	1.81E-06
2017 Annual	Santa Clara (SF)	T7IS	Gas	HOTSOAK	Fuel	1.81E-06
2017 Annual	Santa Clara (SF)	T7IS	Gas	HOTSOAK	Fuel	2.71E-07
2017 Annual	Santa Clara (SF)	T7IS	Gas	RUNLOSS	Fuel	8.85E-06
2017 Annual	Santa Clara (SF)	T7IS	Gas	RUNLOSS	Fuel	9.46E-06
2017 Annual	Santa Clara (SF)	T7IS	Gas	RUNLOSS	Fuel	9.46E-06
2017 Annual	Santa Clara (SF)	T7IS	Gas	RUNLOSS	Fuel	1.16E-06
2017 Annual	Santa Clara (SF)	T7IS	Gas	RESTLOSS	Fuel	1.52E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	RESTLOSS	Fuel	1.65E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	RESTLOSS	Fuel	1.65E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	RESTLOSS	Fuel	4.57E-09
2017 Annual	Santa Clara (SF)	T7IS	Gas	DIURN	Fuel	2.99E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	DIURN	Fuel	3.25E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	DIURN	Fuel	3.25E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	DIURN	Fuel	7.69E-09
2017 Annual	Santa Clara (SF)	T7IS	Gas	PMTW	Fuel	3.12E-07
2017 Annual	Santa Clara (SF)	T7IS	Gas	PMTW	Fuel	3.12E-07
2017 Annual	Santa Clara (SF)	T7IS	Gas	PMTW	Fuel	7.80E-08
2017 Annual	Santa Clara (SF)	T7IS	Gas	PMBW	Fuel	9.83E-07
2017 Annual	Santa Clara (SF)	T7IS	Gas	PMBW	Fuel	9.64E-07
2017 Annual	Santa Clara (SF)	T7IS	Gas	PMBW	Fuel	4.13E-07
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	8.67E-06
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	6.11E-05
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	6.34E-05
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	1.65E-07
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	8.96E-06
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	1.25E-05
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	1.10E-05
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	0.017328
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	5.10E-07
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	8.90E-06
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	8.52E-06
2017 Annual	Santa Clara (SF)	LDT1	Dsl	RUNEX	Fuel	0.0015595
2017 Annual	Santa Clara (SF)	LDT1	Dsl	PMTW	Fuel	3.27E-07
2017 Annual	Santa Clara (SF)	LDT1	Dsl	PMTW	Fuel	3.27E-07

Gilroy 2040 General Plan  
2017 (Existing) Fuel Demand

2017 Annual	Santa Clara (SF)	LDT1	Dsl	PMTW	Fuel	8.18E-08
2017 Annual	Santa Clara (SF)	LDT1	Dsl	PMBW	Fuel	1.53E-06
2017 Annual	Santa Clara (SF)	LDT1	Dsl	PMBW	Fuel	1.50E-06
2017 Annual	Santa Clara (SF)	LDT1	Dsl	PMBW	Fuel	6.44E-07
2017 Annual	Santa Clara (SF)	LDT2	Dsl	RUNEX	Fuel	2.02E-05
2017 Annual	Santa Clara (SF)	LDT2	Dsl	RUNEX	Fuel	0.0001842
2017 Annual	Santa Clara (SF)	LDT2	Dsl	RUNEX	Fuel	9.52E-05
Thousands of Gallons of fuel per day =						0.105117
Gallons of fuel per year = (1000x365x0.105117)						38,367.70

Gilroy 2040 General Plan  
2040 (Buildout) Fuel Demand

calendar_y	season_mc	sub_area	vehicle_cla	fuel	process	pollutant	emission
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	0.0070307
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	0.0008066
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	7.13E-07
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	1.16E-06
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	0.0003949
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	0.0003607
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	0.059204
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	7.21E-05
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	1.04E-06
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	9.57E-07
2040	Annual	Santa Clara	T6TS	Gas	STREX	Fuel	0.0076075
2040	Annual	Santa Clara	T6TS	Gas	HOTSOAK	Fuel	0.0001027
2040	Annual	Santa Clara	T6TS	Gas	HOTSOAK	Fuel	0.0001098
2040	Annual	Santa Clara	T6TS	Gas	HOTSOAK	Fuel	0.0001098
2040	Annual	Santa Clara	T6TS	Gas	HOTSOAK	Fuel	2.19E-05
2040	Annual	Santa Clara	T6TS	Gas	RUNLOSS	Fuel	0.000511
2040	Annual	Santa Clara	T6TS	Gas	RUNLOSS	Fuel	0.0005463
2040	Annual	Santa Clara	T6TS	Gas	RUNLOSS	Fuel	0.0005463
2040	Annual	Santa Clara	T6TS	Gas	RUNLOSS	Fuel	8.81E-05
2040	Annual	Santa Clara	T6TS	Gas	RESTLOSS	Fuel	1.46E-06
2040	Annual	Santa Clara	T6TS	Gas	RESTLOSS	Fuel	1.59E-06
2040	Annual	Santa Clara	T6TS	Gas	RESTLOSS	Fuel	1.59E-06
2040	Annual	Santa Clara	T6TS	Gas	RESTLOSS	Fuel	5.44E-07
2040	Annual	Santa Clara	T6TS	Gas	DIURN	Fuel	2.30E-06
2040	Annual	Santa Clara	T6TS	Gas	DIURN	Fuel	2.50E-06
2040	Annual	Santa Clara	T6TS	Gas	DIURN	Fuel	2.50E-06
2040	Annual	Santa Clara	T6TS	Gas	DIURN	Fuel	7.56E-07
2040	Annual	Santa Clara	T6TS	Gas	PMTW	Fuel	6.50E-05
2040	Annual	Santa Clara	T6TS	Gas	PMTW	Fuel	6.50E-05
2040	Annual	Santa Clara	T6TS	Gas	PMTW	Fuel	1.62E-05
2040	Annual	Santa Clara	T6TS	Gas	PMBW	Fuel	0.0007204
2040	Annual	Santa Clara	T6TS	Gas	PMBW	Fuel	0.000706
2040	Annual	Santa Clara	T6TS	Gas	PMBW	Fuel	0.0003026
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	2.14E-05
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	0.0014935
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	0.000155
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	7.66E-07
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	6.63E-08
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	2.31E-05
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	1.59E-05
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	0.0743304
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	3.58E-06
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	5.93E-08
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	5.45E-08
2040	Annual	Santa Clara	T7IS	Gas	RUNEX	Fuel	0.0081711
2040	Annual	Santa Clara	T7IS	Gas	STREX	Fuel	1.37E-08

Gilroy 2040 General Plan  
2040 (Buildout) Fuel Demand

2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	4.51E-05
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	2.20E-06
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	3.31E-09
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	4.56E-09
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	1.43E-08
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	1.31E-08
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	0.0002607
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	3.34E-09
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	4.07E-09
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	3.75E-09
2040 Annual	Santa Clara T7IS	Gas	STREX	Fuel	3.53E-05
2040 Annual	Santa Clara T7IS	Gas	HOTSOAK	Fuel	4.06E-07
2040 Annual	Santa Clara T7IS	Gas	HOTSOAK	Fuel	4.34E-07
2040 Annual	Santa Clara T7IS	Gas	HOTSOAK	Fuel	4.34E-07
2040 Annual	Santa Clara T7IS	Gas	HOTSOAK	Fuel	8.79E-08
2040 Annual	Santa Clara T7IS	Gas	RUNLOSS	Fuel	2.05E-06
2040 Annual	Santa Clara T7IS	Gas	RUNLOSS	Fuel	2.19E-06
2040 Annual	Santa Clara T7IS	Gas	RUNLOSS	Fuel	2.19E-06
2040 Annual	Santa Clara T7IS	Gas	RUNLOSS	Fuel	3.59E-07
2040 Annual	Santa Clara T7IS	Gas	RESTLOSS	Fuel	5.92E-09
2040 Annual	Santa Clara T7IS	Gas	RESTLOSS	Fuel	6.43E-09
2040 Annual	Santa Clara T7IS	Gas	RESTLOSS	Fuel	6.43E-09
2040 Annual	Santa Clara T7IS	Gas	RESTLOSS	Fuel	2.22E-09
2040 Annual	Santa Clara T7IS	Gas	DIURN	Fuel	9.26E-09
2040 Annual	Santa Clara T7IS	Gas	DIURN	Fuel	1.01E-08
2040 Annual	Santa Clara T7IS	Gas	DIURN	Fuel	1.01E-08
2040 Annual	Santa Clara T7IS	Gas	DIURN	Fuel	3.06E-09
2040 Annual	Santa Clara T7IS	Gas	PMTW	Fuel	1.01E-06
2040 Annual	Santa Clara T7IS	Gas	PMTW	Fuel	1.01E-06
2040 Annual	Santa Clara T7IS	Gas	PMTW	Fuel	2.52E-07
2040 Annual	Santa Clara T7IS	Gas	PMBW	Fuel	3.17E-06
2040 Annual	Santa Clara T7IS	Gas	PMBW	Fuel	3.11E-06
2040 Annual	Santa Clara T7IS	Gas	PMBW	Fuel	1.33E-06
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	2.02E-07
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	2.67E-06
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	7.05E-07
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	5.28E-08
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	8.59E-08
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	2.91E-07
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	2.56E-07
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	0.0055283
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	1.19E-08
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	8.54E-08
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	8.17E-08
2040 Annual	Santa Clara LDT1	Dsl	RUNEX	Fuel	0.0004975
2040 Annual	Santa Clara LDT1	Dsl	PMTW	Fuel	1.55E-07
2040 Annual	Santa Clara LDT1	Dsl	PMTW	Fuel	1.55E-07

Gilroy 2040 General Plan  
2040 (Buildout) Fuel Demand

2040 Annual	Santa Clara LDT1	Dsl	PMTW	Fuel	3.87E-08
2040 Annual	Santa Clara LDT1	Dsl	PMBW	Fuel	7.25E-07
2040 Annual	Santa Clara LDT1	Dsl	PMBW	Fuel	7.10E-07
2040 Annual	Santa Clara LDT1	Dsl	PMBW	Fuel	3.04E-07
2040 Annual	Santa Clara LDT2	Dsl	RUNEX	Fuel	4.54E-05
2040 Annual	Santa Clara LDT2	Dsl	RUNEX	Fuel	0.0005966
2040 Annual	Santa Clara LDT2	Dsl	RUNEX	Fuel	0.0001265
Thousands of Gallons of fuel per day =					0.1707818
Gallons of fuel per year = (1000x365x0.170782)					62,335.37