

Source Inventory of Bay Area Greenhouse Gas Emissions



December 2008



939 Ellis Street
San Francisco, California 94109

**SOURCE INVENTORY OF BAY AREA
GREENHOUSE GAS EMISSIONS**

Base Year 2007

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

December 2008

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TABLE OF CONTENTS

	Page
Introduction	1
Greenhouse Gas (GHG) Emissions Inventory	4
Summary of Bay Area GHG Emissions	7
GHG Emissions Trends for Bay Area	16
List of Figures and Tables	
Table A: Global Warming Potentials (GWPs)	4
Table B: Emission Factors	5
Table C: General Statistics	6
Figure 1, Table D: Bay Area Emissions Summary	8
Figure 2, Table E: Emissions by Sector	10
Figure 3, Table F: Industrial/Commercial Sector Emissions Breakdown..	12
Figure 4, Table G: Transportation Sector Emissions Breakdown	13
Figure 5, Table H: Emissions by County	14
Figure 6, Table I: County Emissions Breakdown by Sector	15
Figure 7, Table J: Emissions Trends by Sector	16
Figure 8: Bay Area Emissions Trends	17
Table K: Bay Area Emissions by Major Category	19
Table L-T: County Emissions by Major Category	20-28
Table U: Bay Area GHG Emissions Projections by Major Category	29-30
Table V: Bay Area Major GHG Emitting Facilities	31-37

Bay Area Greenhouse Gas Emissions Inventory: 2007

Introduction

The Bay Area Air Quality Management District (Air District or BAAQMD) is the regional public agency responsible for the protection of the public's health and welfare from airborne pollutants, primarily by promulgating and enforcing regulations to reduce air pollution as provided by the Federal Clean Air Act, California Clean Air Act and State legislative mandates. The District's jurisdiction encompasses all of seven counties-Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Napa- and the southern portions of Solano and Sonoma counties. The Air District is governed by a 23-member Board of Directors composed of locally elected officials from each of the nine Bay Area counties. In addition to its regulatory program, the Air District issues permits, operates an extensive incentives program, and conducts public outreach and education.

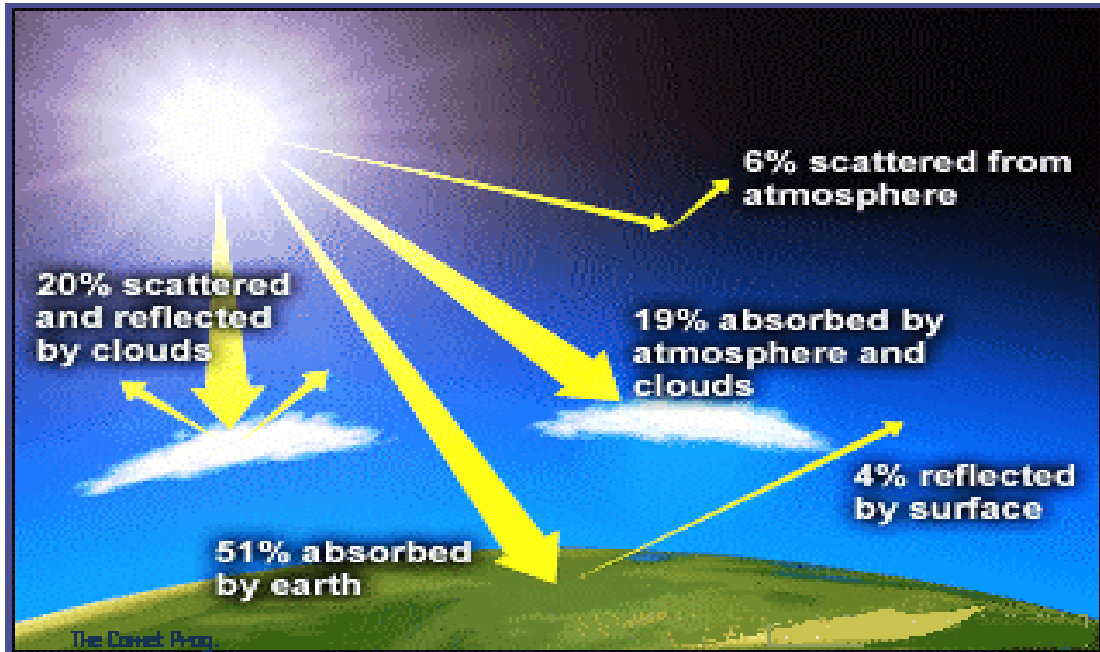
The Air District established a climate protection program in 2005 to explicitly acknowledge the link between climate change and air quality. Rising temperatures as a result of climate change threaten to undermine years of progress in improving air quality in the San Francisco Bay Area. At the same time, many longstanding air quality strategies such as programs to promote alternatives to the automobile, improve energy efficiency and encourage cleaner technologies also reduce greenhouse gases. The Air District regularly prepares inventories of criteria and toxic air pollutants to support planning, regulatory and other programs. This greenhouse gas inventory is based on the standards for criteria pollutant inventories and is intended to support the Air District's climate protection activities.

Climate Change and Greenhouse Gas Emissions

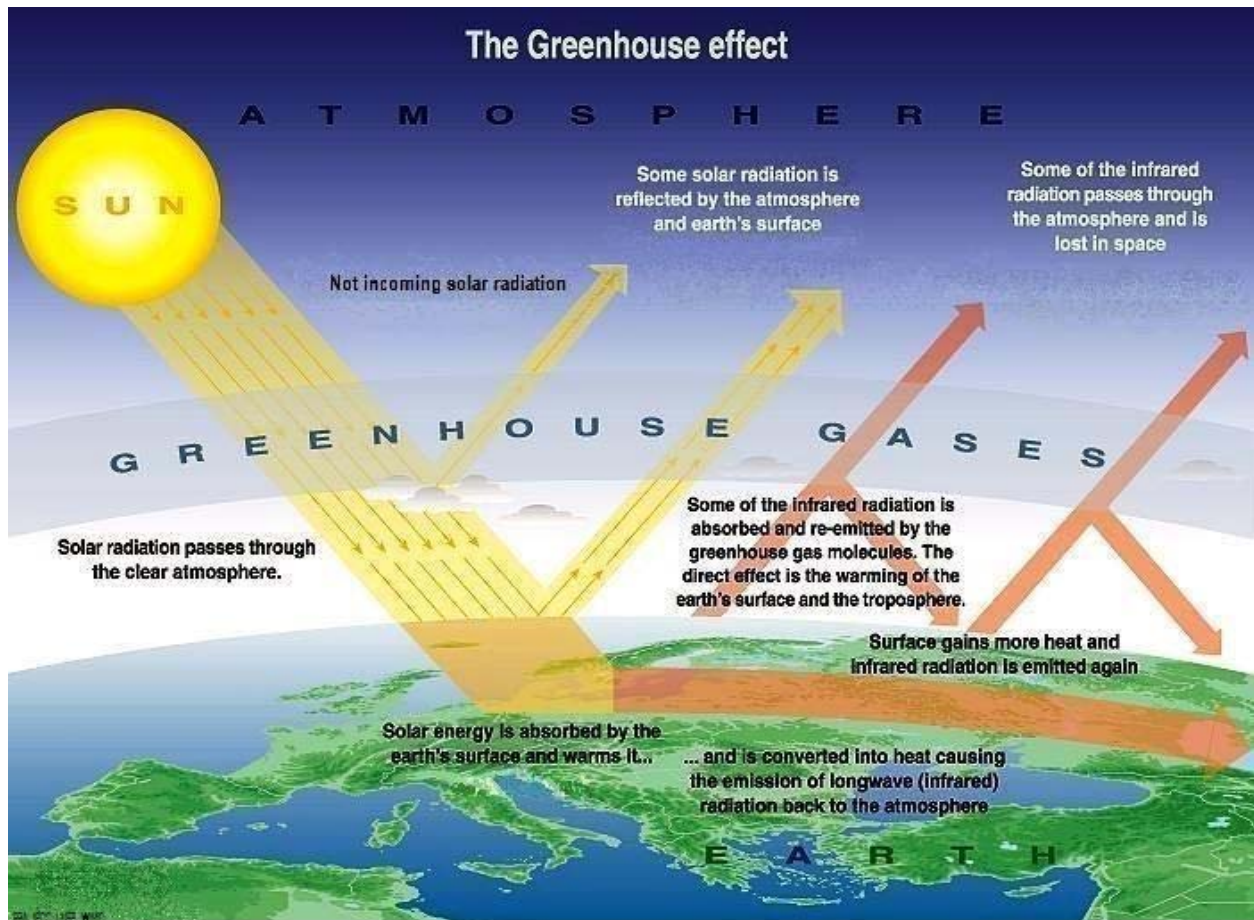
The greenhouse effect is a natural process by which some of the radiant heat from the Sun is captured in the lower atmosphere of the Earth, thus maintaining the temperature and making Earth habitable. The gases that help capture the heat are called greenhouse gases (GHG). All of these gases have been identified as forcing the earth's atmosphere and oceans to warm above naturally occurring temperatures.

Once, all climate changes on Earth occurred naturally. However, during the Industrial Revolution, we began altering our climate and environment through changing agricultural and industrial practices. Before the Industrial Revolution, human activity released very few gases into the atmosphere, but now through fossil fuel burning, deforestation and growing population (e.g. waste disposal), we are affecting the natural mixture of gases in the Earth's atmosphere. Increased concentration of these gases is upsetting the natural balance of incoming and outgoing solar energy. Emissions of carbon dioxide are the leading cause of global warming, with other pollutants also contributing. Carbon dioxide

concentrations, which ranged from 265 ppm to 280 ppm over the last 10,000 years, only began rising in the last two hundred years to current levels of 365 ppm, a 30% increase.



The natural balance of solar energy received by Earth



Some greenhouse gases occur naturally in the atmosphere, while others result from human activities. Naturally occurring greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxide, and ozone. Certain human activities, however, add to the levels of most of these naturally occurring gases. The most common greenhouse gases, and those which are identified in AB32, the Global Warming Solutions Act of 2006 and are discussed in this report, are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Carbon Dioxide (CO₂) is released to the atmosphere when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned.

Biogenic Carbon Dioxide (Bio-CO₂) emissions are a subset of total CO₂ emissions which are emitted from materials that are derived from living cells, excluding fossil fuels, limestone and other materials that have been transformed by geological processes. Bio-CO₂ originates from carbon that is present in materials such as wood, paper, vegetable oils and food, animal, and yard waste.

Methane (CH₄) is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from the decomposition of organic waste in municipal solid waste landfills and the raising of livestock.

Nitrous oxide (N₂O) is emitted from agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels and during production of adipic acid, and nitric acid.

Very powerful greenhouse gases, also known as *high global warming potential (GWP) gases* that are not naturally occurring, include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These gases are emitted from industrial processes such as semiconductor manufacturing, use as refrigerants and other products, and electric power transmission and distribution.

Each greenhouse gas differs in its ability to absorb heat in the atmosphere. High GWP gases such as HFCs, PFCs, and SF₆ are the most heat-absorbent. Methane traps over 21 times more heat per molecule than carbon dioxide, and nitrous oxide absorbs 310 times more heat per molecule than carbon dioxide. Often, estimates of greenhouse gas emissions are presented in carbon dioxide equivalents, which weight each gas by its global warming potential. Table A shows the global warming potentials for different greenhouse gases for a 100 year time horizon. The global warming potentials used in this report are in accordance with the Second Assessment Report (SAR) of the Intergovernmental Panel on Climate Change (IPCC).

Table A: Global Warming Potentials (GWPs) for Greenhouse Gases

Gas	GWP
CO ₂	1
CH ₄	21
N ₂ O	310
HFCs/PFCs	90- 11,700
SF ₆	23,900

Greenhouse Gas Emissions Inventory

An emissions inventory is a detailed estimate of the amount of air pollutants discharged into the atmosphere of a given area by various emission sources during a specific time period. This GHG emissions inventory builds on the Air District's many years of experience preparing inventories of criteria and toxic air pollutants.

This emission inventory includes direct and indirect GHG emissions due to human activities. The emissions are estimated for industrial, commercial, transportation, residential, forestry, and agriculture activities in the San Francisco Bay Area region of California. Both direct greenhouse gas emissions from locally generated electricity in the Bay Area and indirect emissions from out-of-region generated electricity for consumption in the region are reported.

Emissions of CO₂, Bio-CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ are estimated using the most current activity (e.g., cubic feet of natural gas burned or vehicle miles traveled) and emission factor data from various sources. Activity data used in preparing this GHG inventory is the same as is used in preparing the Air District's criteria and toxic inventories. Emission factor data was obtained from the U.S. Department of Energy's (DOE's) Energy Information Administration (EIA), the California Energy Commission (CEC), and the California Air Resources Board (CARB).

Methodology

Emission sources can be broadly divided between stationary and mobile sources. Stationary sources can be further divided between point and area sources. Stationary emission sources identified on an individual basis or as a single source are called point sources. Electric power generating plants and oil refineries are examples of point sources. Based on Air District permits for stationary sources, the Air District maintains a computer database with detailed information on operations and emission characteristics for nearly 4,000 facilities, which include roughly 25,000 different sources, throughout the Bay Area. Activity data on the sources are collected at the process level from each facility and are updated regularly as part of permit renewal. The greenhouse gas emissions from these sources are calculated by multiplying activity data by standardized

emission factors for each greenhouse gas. These emission factors take into account fuel-specific carbon content and the percent of carbon that oxidizes to convert to carbon dioxide emissions. Some of the combustion emission factors for various fuels used for this emissions inventory are shown in Table B. Examples of activity data used to develop the inventory are shown in Table C.

Stationary emission sources that are not identified individually are called area sources. Area sources are groups of numerous small emission sources, which individually do not emit significant amounts of pollutants but together make an appreciable contribution to the emission inventory. Many area sources do not require permits from the Air District, such as residential heating, restaurants, and the wide range of consumer products such as paints, solvents, and cleaners. Some facilities considered as area sources do require permits from the Air District, such as gas stations and dry cleaners. Emissions estimates for area sources are developed based on estimated activities and emission factors for various categories.

Mobile sources consist of on-road motor vehicles and other mobile sources. Examples of on-road motor vehicles are cars, trucks, buses and motorcycles. Other mobile sources include boats, ships, trains, aircraft, and garden, farm and construction equipment. Greenhouse gas emissions for on-road motor vehicles were calculated using CARB's EMFAC2007 model together with vehicle miles travelled (VMT) and other activity data by county from the Metropolitan Transportation Commission's (MTC) Regional Transportation Plan (RTP2030). Other off- and on- road mobile source emissions were calculated based on estimated fuel used and emission factors in Table B. GHG emissions for ships are calculated for ship travel within 100 miles of the San Francisco coastline. Aircraft emissions are calculated for air travel within the Air District boundaries.

Table B: Generalized GHG Emission Factors (Lbs. /Usage Unit)

Fuel	CO ₂	CH ₄	N ₂ O	Unit
Liquid Fuels				
Distillate Fuel (Fuel Oil, Diesel)	22.4	0.00053	0.00019	Gallon
Jet Fuel	21.1	0.00052	0.00019	Gallon
Kerosene/Naphtha	21.5	0.00050	0.00018	Gallon
Liquified Petroleum Gases (LPG)	12.8	0.00025	0.00002	Gallon
Motor Gasoline	19.6	0.00055	0.00020	Gallon
Residual Fuel (Bunker C Fuel Oil)	26.0	0.00022	0.00021	Gallon
Aviation Gasoline	18.4	0.00052	0.00019	Gallon
Bio-diesel	20.7	0.00049	0.00018	Gallon
Propane	12.7	0.000003	2.3E-07	Gallon
Butane	14.7	0.000003	2.3E-07	Gallon

Table B (continued)

Fuel	CO ₂	CH ₄	N ₂ O	Unit
Gaseous Fuels				
Natural Gas	120.6	0.00020	0.00020	1000 ft ³
Landfill Gas	110.5	0.21050	0.00024	1000 ft ³
Digester Gas	104.7	0.02997	0.00030	1000 ft ³
Carbon Monoxide	116.1	0.00270	0.00019	1000 ft ³
Refinery Waste Gases	139.0	0.00320	0.00022	1000 ft ³
Solids				
Refuse/Waste	2,000	0.29790	0.08980	Ton
Wood and Other	3,814	0.29790	0.08980	Ton
Agriculture Waste Burning	174	0.14000	0.35000	Ton
Petroleum Coke	6,769	0.44920	0.10630	Ton

Table C: 2007 General Statistics

County	Population (1000's)	Daily Electricity Usage (Megawatt hours)	Daily Natural Gas Usage (Million cu.ft.)	Daily Gasoline Sales (1000's gal.)	Daily Vehicle Miles Traveled (Millions)
Alameda	1,532	31,395	150	1,759	38.0
Contra Costa	1,039	23,204	636	1,150	25.7
Marin	255	4,033	24	337	6.2
Napa	136	2,679	13	169	4.5
San Francisco	801	17,720	118	961	12.4
San Mateo	729	12,909	71	947	19.4
Santa Clara	1,805	44,114	212	2,160	40.1
Solano*	308	6,443	44	353	7.2
Sonoma*	431	6,977	31	489	10.6
Total	7,036	149,474	1,300	8,327	164.1

* Portion within Bay Area Air Quality Management District

Revisions to the Previous GHG Inventory

This emissions inventory estimates greenhouse gas emissions produced by the San Francisco Bay Area in 2007. This inventory updates the Air District's previous GHG emission inventory for base year 2002 (published November 2006). All activity data has been updated to reflect more current industrial activity, motor vehicle travel, and economic and population growth. Most of the methodologies for calculating emissions remain the same, with certain exceptions: 1) emissions from electricity consumed in the Bay Area but generated outside the region are now included; 2) emissions of ozone depleting substance (ODS) substitutes such as hydrofluorocarbons and perfluorocarbons used as refrigerants etc. are now included; 3) more complete oil refinery process emissions are included in this inventory; 4) certain off-road equipment (e.g., construction and industrial) previously was included in the transportation sector and is now reported separately; 5) ship emissions are now calculated for travel within 100 mile of the California coastline rather than 3 miles to be consistent with the Air District's criteria pollutant inventory and; 6) biogenic CO₂ emissions are calculated but not included in the total CO₂ equivalent estimates for the region.

Because of these revisions, caution should be used in comparing this 2007 GHG emission inventory to the previous 2002 inventory. These revisions have resulted in different estimates of Bay Area greenhouse gas emissions. Consequently, the percentage contributions from individual sectors may be affected. For example, estimates of transportation emissions have not changed significantly between the two inventories, but the percentage from the transportation sector has changed because the estimated total emissions are greater in this inventory (due mainly to increased estimated emissions resulting from the revisions summarized above). Such ongoing updates are typical of emission inventories. Examining emissions forecasts and backcasts in a single emission inventory is more useful in determining trends than comparing one inventory against another.

Summary of Bay Area GHG Emissions

In 2007, 102.6 million metric tons of CO₂-equivalent (MMTCO₂E) greenhouse gases were emitted by the San Francisco Bay Area (95.5 MMTCO₂E were emitted within the Bay Area Air District and 7.1 MMTCO₂E were indirect emissions from imported electricity). A breakdown of Bay Area greenhouse gas emissions by pollutant is shown in Figure 1 and Table D.

Figure 1: 2007 CO₂-Equivalent Emissions by Pollutant

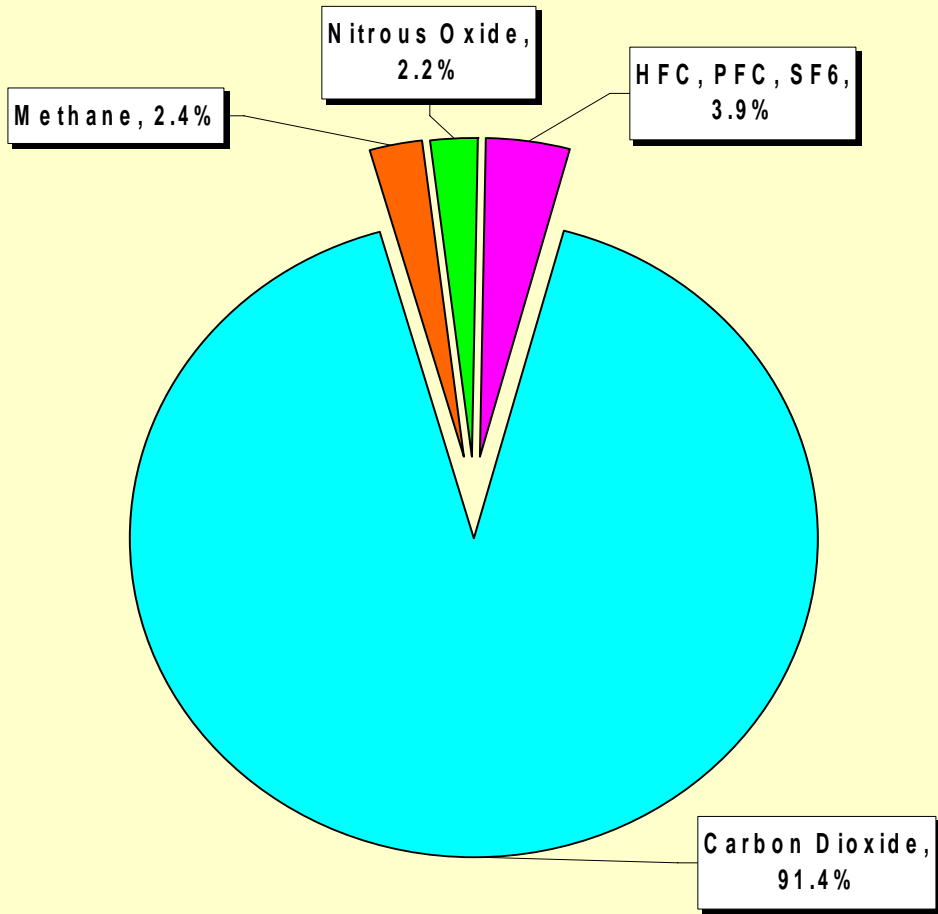


Table D: 2007 CO₂-Equivalent Emissions by Pollutant

Pollutant	Percentage	CO ₂ -Equivalent (Million Metric Tons / Year)
Carbon Dioxide	91.4%	93.7
Methane	2.4%	2.5
Nitrous Oxide	2.2%	2.3
HFC, PFC, SF6	3.9%	4.0
Total	100%	102.6

The greenhouse gas with the greatest emissions is carbon dioxide (CO₂). Carbon dioxide emissions from various activities in the Bay Area represented about 91.4 percent of total greenhouse gas emissions in 2007. Carbon dioxide emissions are mainly associated with combustion of carbon-bearing fossil fuels such as gasoline, diesel, and natural gas used in mobile sources and energy-generation-related activities. Other activities that produce CO₂ emissions include oil refining processes, cement manufacturing, waste combustion, and waste and forest management.

Bio-CO₂ emissions are from materials that were grown through the process of photosynthesis and thus the carbon they contain was relatively recently in the atmosphere. Burning of these materials does not add any net CO₂ to the atmosphere. Bio-CO₂ emissions are tracked and shown separately in Tables K through T and Table V and are not counted in the anthropogenic emissions inventory directly. This is consistent with CARB's methodology for GHG inventories. Landfills, fireplaces, and wastewater treatment plants are the largest sources of Bio-CO₂ emissions.

Methane (CH₄) emissions from various sources represent 2.4 percent of Bay Area's total CO₂-equivalent GHG emissions. Landfills, natural gas distribution systems, agricultural activities, stationary and mobile fuel combustion, and gas and oil production fields categories are the major sources of these emissions.

Nitrous oxide (N₂O) emissions represent 2.2 percent of the overall greenhouse gas emissions inventory. Municipal wastewater treatment facilities, fuel combustion, and agricultural soil and manure management are the major contributors of nitrous oxide emissions in the Bay Area.

Emissions from high GWP gases such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) make up about 3.9 percent of the total CO₂-equivalent emissions. Industrial processes such as semiconductor manufacturing, use as refrigerants and other products, and electric power transmission and distribution systems are the major sources of HFCs, PFCs and SF₆ emissions in the Bay Area.

GHG Emissions by Sector

Greenhouse gas emissions by end-use sectors are shown in Figure 2 and Table E. Fossil fuel consumption in the transportation sector was the single largest source of the San Francisco Bay Area's greenhouse gas emissions in 2007. The transportation sector contributed over 40.6 percent of greenhouse gas emissions in the Bay Area. Categories included in this sector are on-road motor vehicles, locomotives, ships and boats, and aircraft.

Figure 2: 2007 Bay Area GHG Emissions by Sector

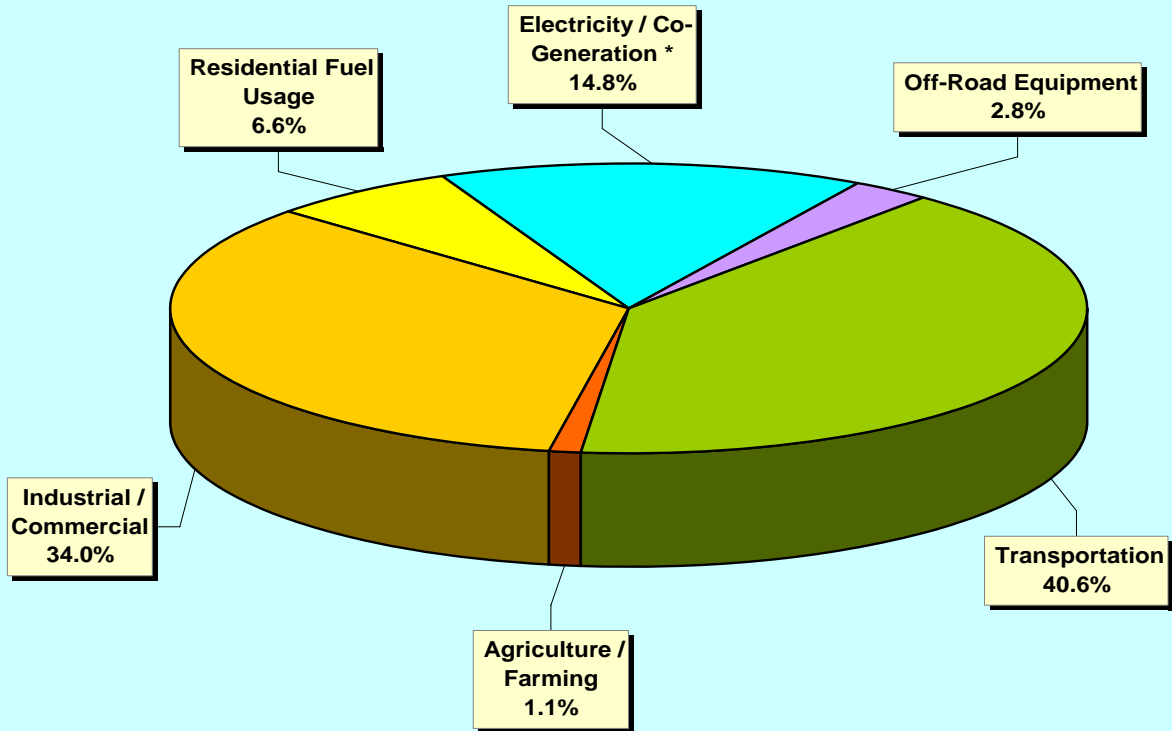


Table E: 2007 Bay Area GHG Emissions by Sector

End-Use Sector	% of Total Emissions	CO2- Equivalent (Million Metric Tons / Year)
Industrial / Commercial	34.0%	34.9
Residential Fuel Usage	6.6%	6.8
Electricity / Co-Generation *	14.8%	15.2
Off-Road Equipment	2.8%	2.9
Transportation	40.6%	41.6
Agriculture / Farming	1.1%	1.1
Total	100%	102.6

* Includes Imported Electricity emissions of 7.1 MMTCO₂E

The industrial and commercial sector (excluding electricity/co-generation and agriculture/farming, which are reported separately) was the second largest contributor with 34.0 percent of total GHG emissions. Industrial and commercial sources include industrial processes such as oil refining, natural gas and other fuel combustion, waste management, cement manufacturing, fuel distribution, refrigerant usage, and some other small sources.

Energy production activities such as electricity generation and co-generation were the third largest contributor with 14.8 percent of the total GHG emissions (including imported electricity emissions). California imports about one-fifth to one-third of its total electricity usage, mainly from the northwestern and southwestern states. The Bay Area used about 54.6 million megawatt hours of electricity in 2007, about one-third of it was generated outside of the Bay Area. Electricity and co-generation facilities within the Bay Area Air District emitted about 8.1 million metric tons of CO₂-equivalent (MMTCO₂E) emissions in 2007 and emissions from electricity imports were estimated to be 7.1 MMTCO₂E. While imported electricity is a relatively small share of the Bay Area's electricity mix, out-of-region electricity generation sources contribute a larger share of GHG emissions. This is due to the fact that electricity generation in the Bay Area is mainly from natural gas-fired and other cleaner burning power plants. Out-of-state electricity generation is mostly from coal-fired power plants which have higher carbon intensity.

The contribution from residential fuel combustion was the fourth largest with 6.6 percent of the total GHG emissions. Residential fuel combustion emissions are primarily from space heating, cooking and water heating.

Off-road equipment such as construction, industrial, commercial, and lawn and garden equipment contributed 2.8 percent of GHG emissions.

Agriculture and farming was the smallest sector with 1.1 percent of the total greenhouse emissions in the Bay Area.

More detailed information on greenhouse gas emissions by source category, for the region and for each county, is provided in Tables K through U. Table V contains the list of the 200 largest greenhouse gas emission point sources/facilities in the San Francisco Bay Area.

An emissions breakdown for the two largest greenhouse gas emitting sectors in the Bay Area, industrial/commercial and transportation, is shown in Figure 3, Table F and Figure 4, Table G respectively.

Figure 3: 2007 Industrial/ Comm. Sector Emissions Breakdown

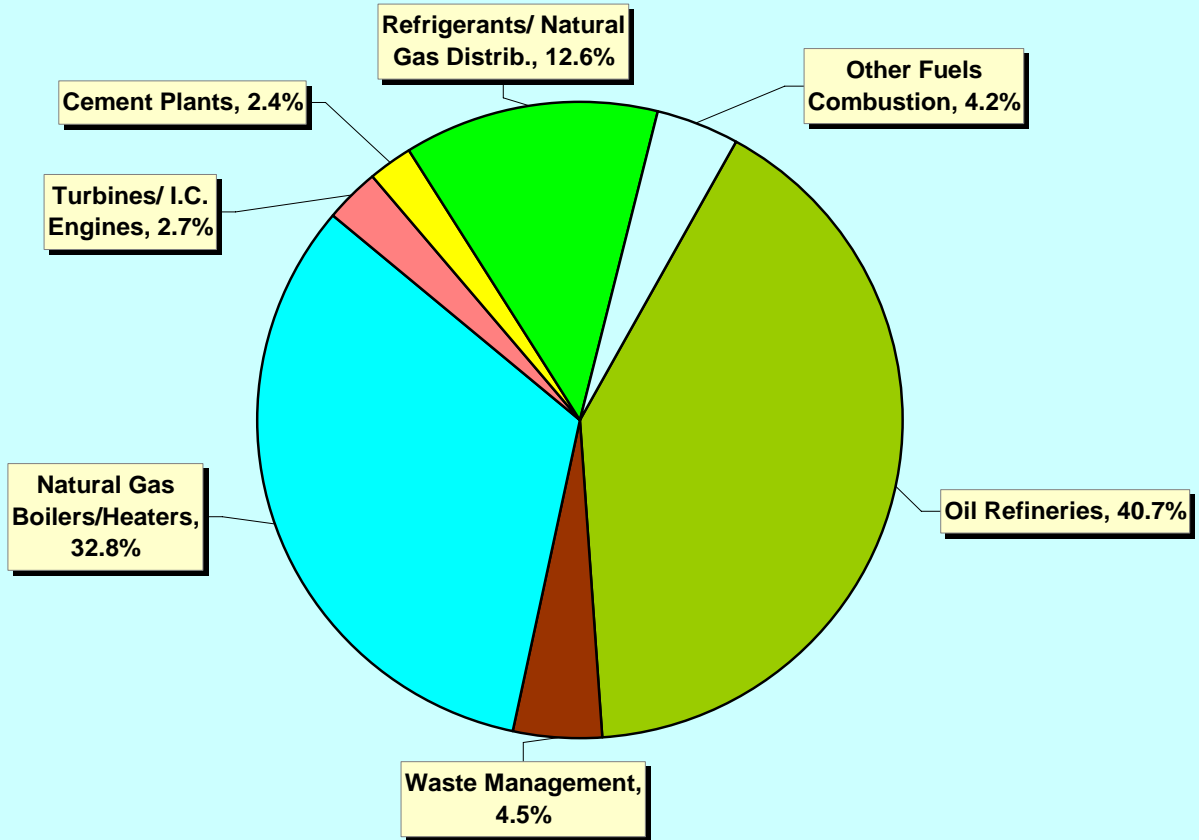


Table F: 2007 Industrial/ Commercial Sector Emissions Breakdown

Source Category	% of Total Emissions	CO2-Equivalent (Million Metric Tons / Year)
Oil Refineries	40.7%	14.2
Waste Management	4.5%	1.6
Natural Gas Boilers/Heaters	32.8%	11.4
Turbines/ I.C. Engines	2.7%	1.0
Cement Plants	2.4%	0.8
Refrigerants/ Natural Gas Distrib.	12.6%	4.4
Other Fuels Combustion	4.2%	1.5
Total	100%	34.9

Figure 4: 2007 Transportation Sector Emissions Breakdown

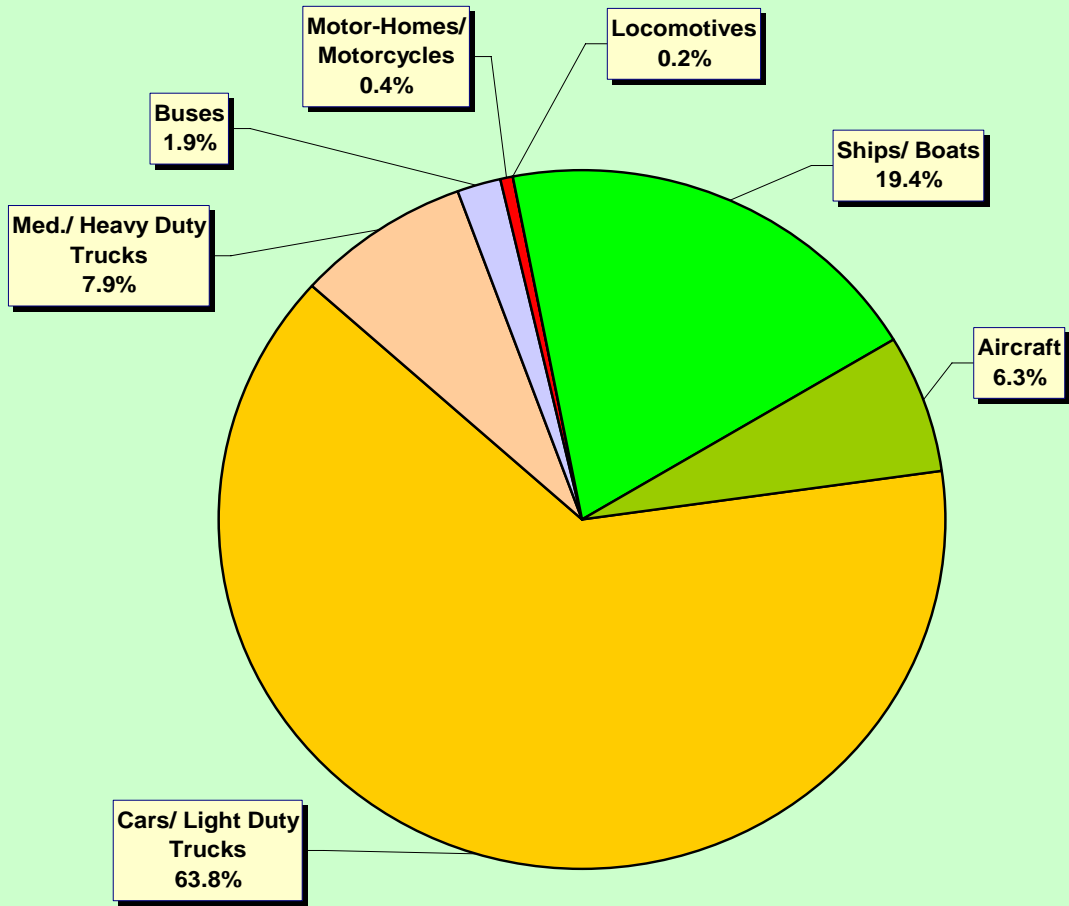


Table G: 2007 Transportation Sector Emissions Breakdown

Source Category	% of Total Emissions	CO ₂ -Equivalent (Million Metric Tons / Year)
Cars/ Light Duty Trucks	63.8%	26.6
Med./ Heavy Duty Trucks	7.9%	3.3
Buses	1.9%	0.8
Motor-Homes/ Motorcycles	0.4%	0.2
Locomotives	0.2%	0.1
Ships/ Boats	19.4%	8.1
Aircraft	6.3%	2.6
Total	100%	41.6

GHG Emissions by County

GHG emissions for the nine Bay Area counties under the Air District's jurisdiction are summarized in Figure 5 and Table H. See Tables K-T for detailed emissions information.

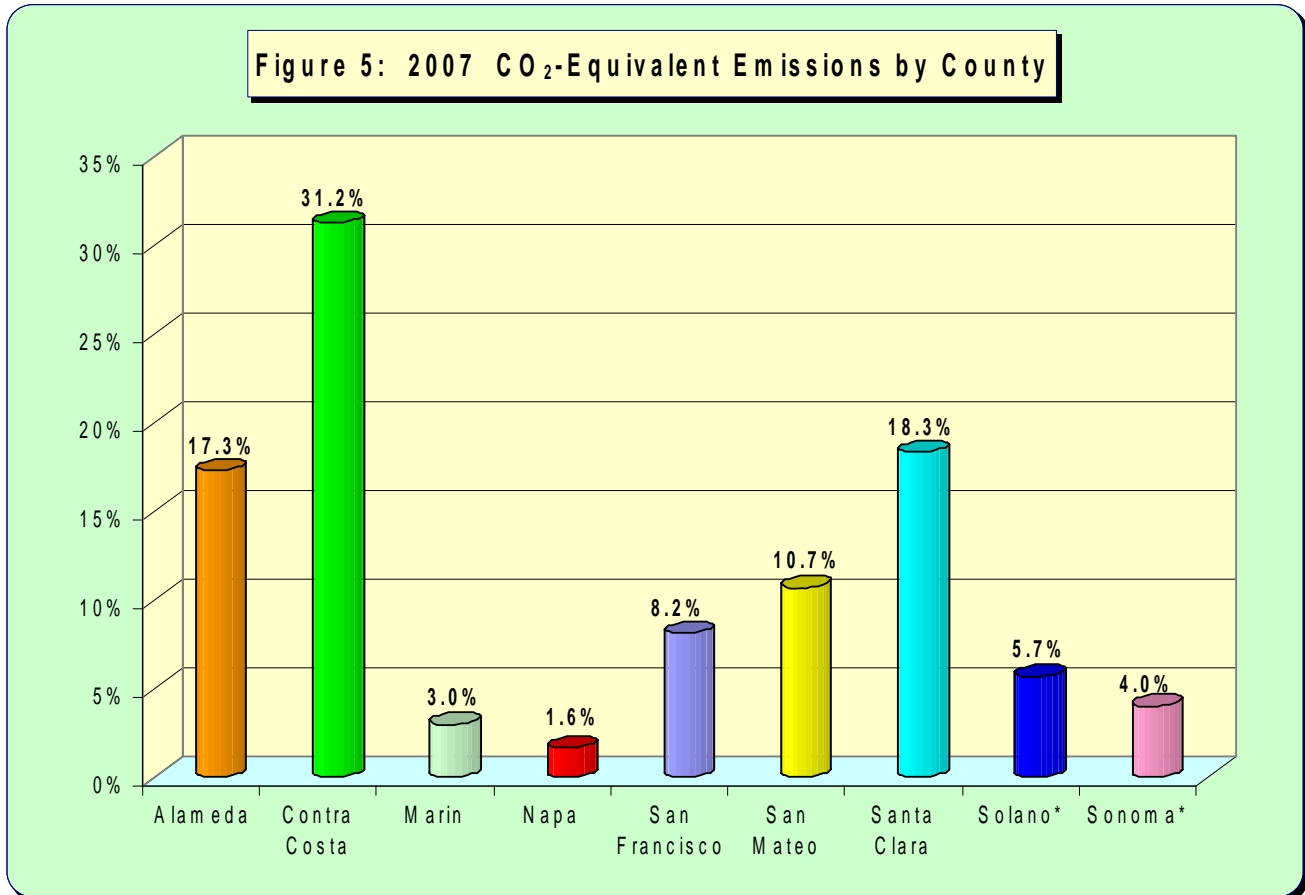


Table H: 2007 CO₂- Equivalent Emissions by County

County	% of Total Emissions	CO ₂ - Equivalent (Million Metric Tons / Year)
Alameda	17.3%	17.7
Contra Costa	31.2%	32.0
Marin	3.0%	3.1
Napa	1.6%	1.7
San Francisco	8.2%	8.4
San Mateo	10.7%	11.0
Santa Clara	18.3%	18.8
Solano*	5.7%	5.8
Sonoma*	4.0%	4.1
Total	100%	102.6

* Portion within BAAQMD

A breakdown of emissions by end-use sectors for each county is shown in Figure 6 and Table I. This figure and table show relatively higher industrial/commercial sector emissions in Contra Costa and Solano Counties due to the oil refining industry. All other counties show the largest contribution from the transportation sector.

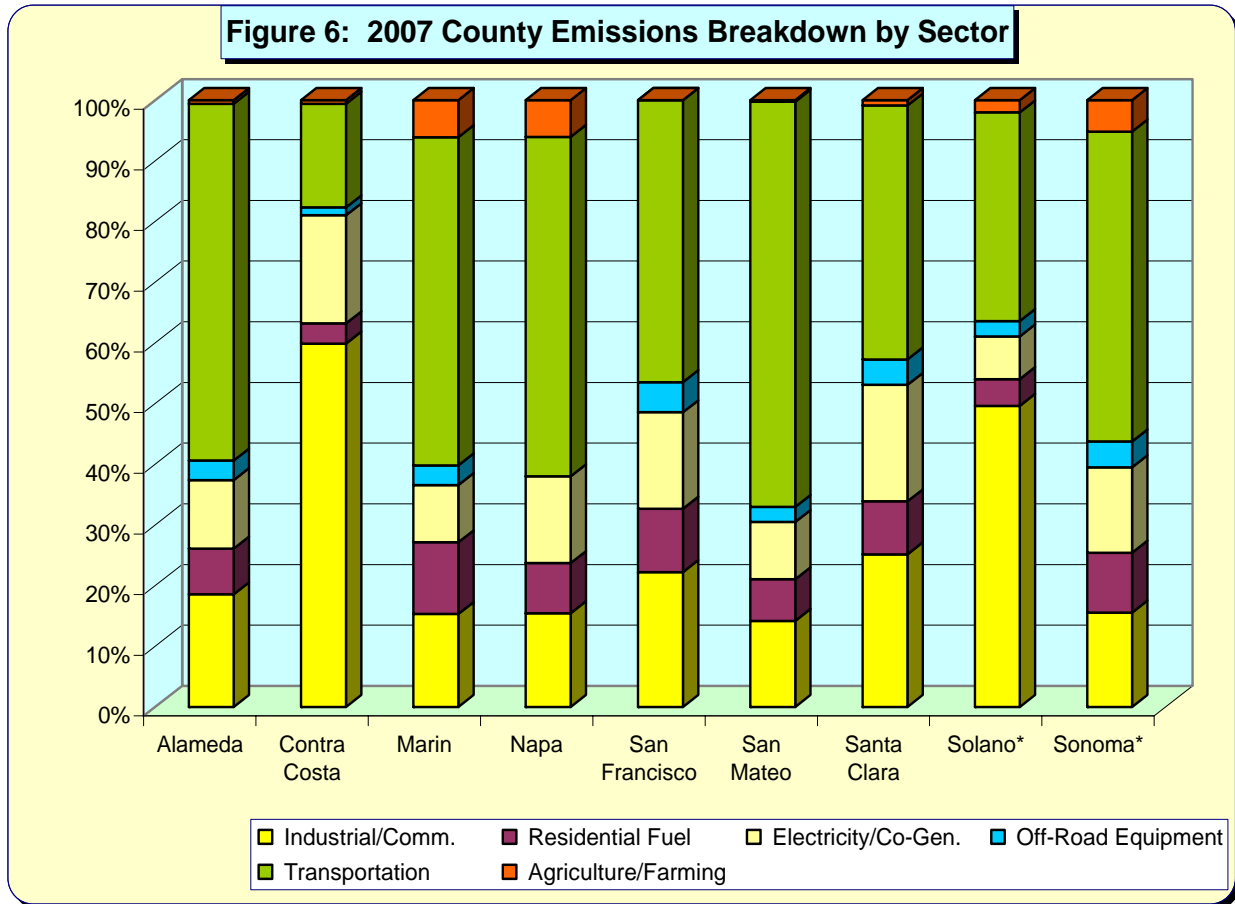


Table I: 2007 County Emissions Breakdown by Sector (Million Metric Tons CO2-Equiv./Yr.)

Sector	Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano*	Sonoma*
Industrial/Comm.	3.3	19.2	0.5	0.3	1.9	1.6	4.7	2.9	0.6
Residential Fuel	1.3	1.1	0.4	0.1	0.9	0.8	1.6	0.3	0.4
Electricity/Co-Gen.	2.0	5.7	0.3	0.2	1.3	1.0	3.6	0.4	0.6
Off-Road Equipment	0.6	0.4	0.1	0.0	0.4	0.3	0.8	0.1	0.2
Transportation	10.4	5.5	1.7	0.9	3.9	7.3	7.9	2.0	2.1
Agriculture/Farming	0.1	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.2
Total	17.7	32.0	3.1	1.6	8.4	11.0	18.8	5.8	4.1

* Portion within BAAQMD

GHG Emission Trends for Bay Area

Under “business as usual” conditions, greenhouse gas emissions are expected to grow in the future due to population growth and economic expansion. Figure 7 and Tables J and U show emissions trends by sectors for the period 1990 to 2029.

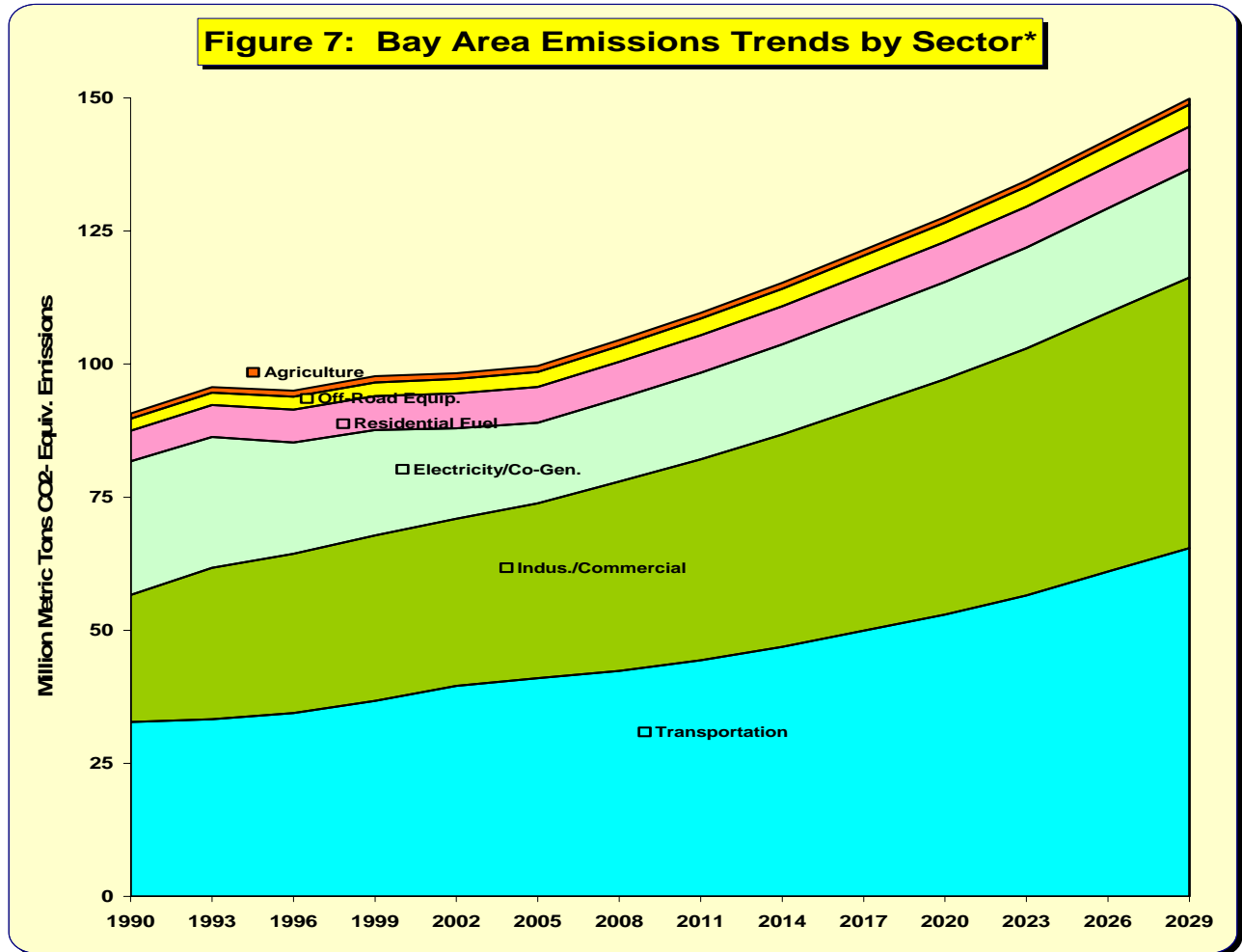
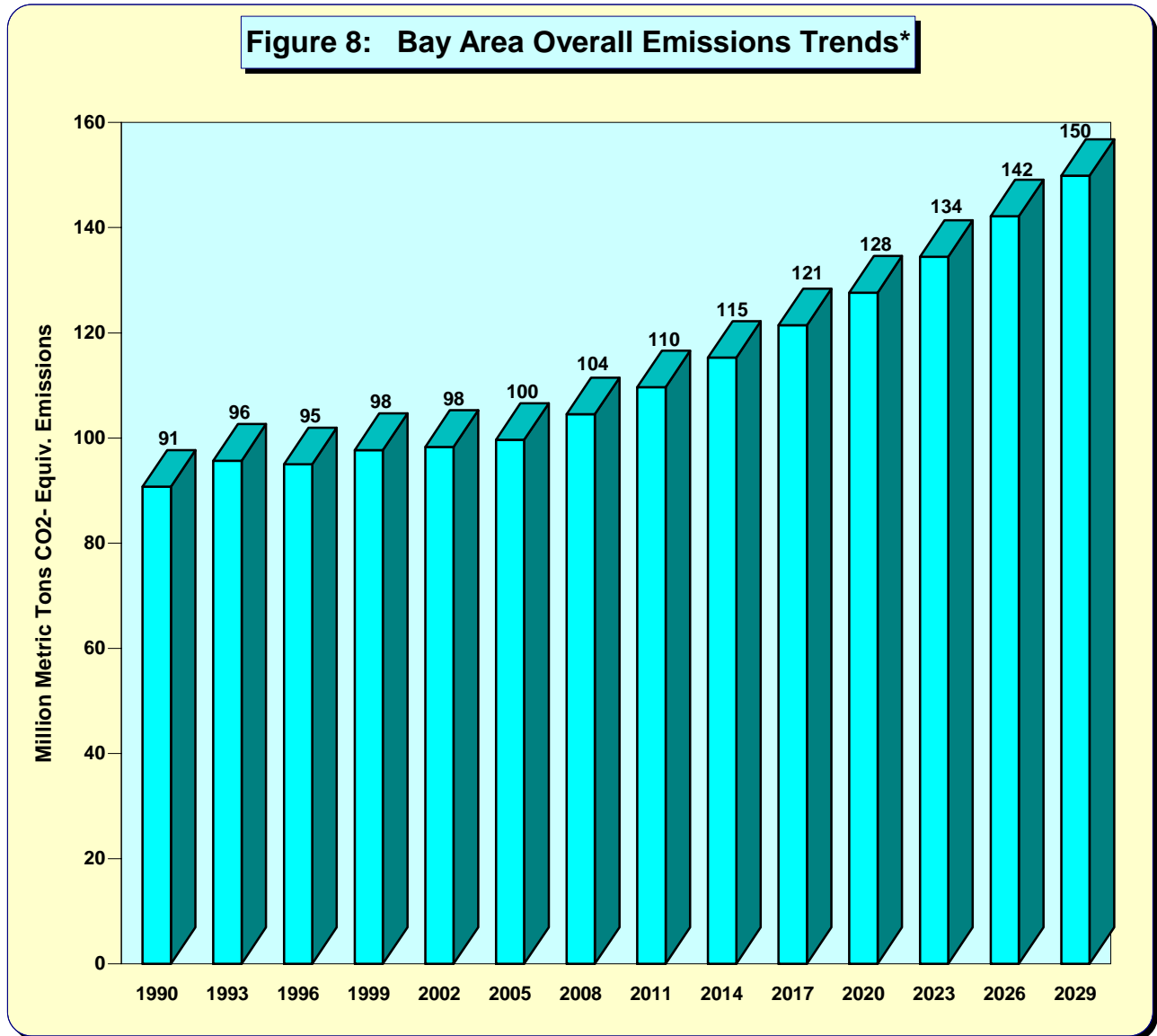


Table J: Bay Area Emissions Trends by Sector (Million Metric Tons CO₂-Equiv.)*

Category	1990	1993	1996	1999	2002	2005	2008	2011	2014	2017	2020	2023	2026	2029
Transportation	32.8	33.3	34.4	36.7	39.6	41.0	42.4	44.4	46.9	49.9	52.9	56.5	61.0	65.4
Indus./Commercial	23.9	28.5	29.9	31.1	31.4	32.8	35.6	37.7	39.9	42.0	44.2	46.4	48.6	50.8
Electricity/Co-Gen.	25.1	24.6	20.9	19.8	17.0	15.1	15.6	16.3	16.9	17.6	18.3	18.9	19.6	20.4
Residential Fuel	5.8	6.0	6.2	6.4	6.6	6.7	6.9	7.0	7.2	7.4	7.5	7.7	7.9	8.0
Off-Road Equip.	2.2	2.3	2.5	2.6	2.7	2.8	3.0	3.1	3.3	3.4	3.6	3.8	3.9	4.1
Agriculture	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Total	90.7	95.7	95.0	97.7	98.3	99.6	104.5	109.6	115.3	121.5	127.7	134.4	142.2	149.8

* “Business as usual” projection

Figure 8 shows the San Francisco Bay Area region's overall greenhouse gas emissions trends. More details on emissions trends are provided in Table U.



* “Business as usual” projection

These projections reflect regulatory programs in place as of 2007 (benefits of CARB GHG regulations for motor vehicles adopted in 2004, the Pavley regulations, are not included in this inventory, pending U.S. EPA approval of a waiver under the Clean Air Act to implement the regulations). If current trends continue, Bay Area GHG emissions are expected to increase at an average rate of approximately 1.4 percent per year. The long term GHG emissions trends are expected to go upwards *absent policy changes*. Year-to-year fluctuation in emissions trends is due to variation in economic activity and

the fraction of electric power generation in this region. Power generation in the Bay Area varies year-to-year depending on various factors including the availability of hydroelectric and other imported power.

Greenhouse gas emissions are projected based on estimated growth in various source categories. For example, CARB's EMFAC2007 computer model was utilized to project GHG emissions from transportation sources. In these models, fuel consumption estimates were based on the anticipated change of fleet mix and the growth of various types of on-road and off-road vehicles. Growth in VMT is based on the MTC's Regional Transportation Plan (RTP2030). For aircraft categories, the fleet mix and the growth data from the MTC's Regional Airport System Plan were incorporated into the GHG projection models.

The projected GHG emissions from power plants operating in the Bay Area were based on the California Energy Commission's 2003 Fuel Usage Forecasts for the Bay Area.

Emission projections for the oil refineries were based on the California Energy Commission's report on California's Petroleum Infrastructure (2007).

The GHG projections from other major sources such as landfills, natural gas fuel distribution, and cement manufacturing were estimated by using Association of Bay Area Government's employment and population data. California Integrated Waste Management data were also considered in the landfill projection process.

Climate protection activities in California are occurring at the state, regional and local level. CARB and other state agencies are identifying measures to achieve the AB32 emission reduction goal of meeting statewide 1990 GHG emissions levels by 2020. Specifically, in December 2008 CARB adopted the AB32 Scoping Plan which outlines a strategy to achieve AB32 goals. The Scoping Plan does not set emission reduction goals for regions within the state, but it is expected that all California communities will need to contribute to statewide reductions. The Air District and our regional agency partners are implementing climate protection programs. Bay Area cities and counties are preparing local climate action plans. These efforts are expected to reduce future Bay Area GHG Emissions below the projections presented here.

This GHG emissions inventory will be updated as climate protection programs are implemented and as additional information about activity data, emission factors and other inputs becomes available.

Table K:

Annual GHG Emissions: Bay Area Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	3,445,064	79	--	--	--	3,446,782	--
Refinery Make Gas Combustion	4,772,971	97	6	--	--	4,776,959	--
Natural Gas and Other Gases Combustion	4,860,268	267	18	--	--	4,871,495	--
Liquid Fuel Combustion	89,450	1	1	--	--	89,760	--
Solid Fuel Combustion	1,000,216	29	6	--	--	1,002,637	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	1,241	1	--	--	26,455	584,565
Landfill Fugitive Sources	--	56,747	3	--	--	1,192,596	154,411
Composting/POTWs	--	2,773	965	--	--	357,224	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	841,350	13	3	--	--	842,475	--
Commercial Cooking	134,612	--	--	--	--	134,612	--
ODS Substitutes/Nat. Gas Distrib./Other	--	16,356	--	2,184	0.13	4,390,999	21
Reciprocating Engines	550,270	1,989	1	--	--	593,584	234,013
Turbines	354,697	78	1	--	--	356,663	66,141
Natural Gas- Major Combustion Sources	2,400,044	51	3	--	--	2,402,179	--
Natural Gas- Minor Combustion Sources	8,979,100	172	165	--	--	9,033,745	--
Coke Coal	989,442	28	6	--	--	991,823	--
Other Fuels Combustion	349,171	132	2	--	--	352,485	85,346
Subtotal	28,766,652	80,052	1,181	2,184	0.13	34,862,465	1,124,497
RESIDENTIAL FUEL USAGE							
Natural Gas	6,456,173	124	118	--	--	6,495,464	--
LPgas/Liquid Fuel	166,508	3	11	--	--	169,911	--
Solid Fuel	--	6,242	67	--	--	151,742	628,550
Subtotal	6,622,682	6,369	196	--	--	6,817,118	628,550
ELECTRICITY/ CO-GENERATION							
Co-Generation	5,292,826	1,261	4	--	--	5,320,398	89,512
Electricity Generation	2,730,973	163	1	--	1.18	2,762,968	3,525
Electricity Imports	7,102,311	59	33	--	--	7,113,680	--
Subtotal	15,126,111	1,483	37	--	1.18	15,197,047	93,037
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	105,742	192	77	--	--	133,803	--
Construction Equipment	1,785,078	289	11	--	--	1,794,433	--
Industrial Equipment	729,035	433	41	--	--	750,852	--
Light Commercial Equipment	226,118	111	42	--	--	241,375	--
Subtotal	2,845,974	1,025	171	--	--	2,920,462	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	88,092	5	35	--	--	99,152	--
Ships	6,420,131	351	2,342	--	--	7,153,619	--
Boats	849,257	266	253	--	--	933,293	--
Commercial Aircraft	1,877,665	91	68	--	--	1,900,661	--
General Aviation	231,066	46	8	--	--	234,642	--
Military Aircraft	478,178	31	15	--	--	483,454	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	26,070,815	2,783	1,480	--	--	26,587,907	--
Medium/Heavy Duty Trucks > 10,000 lbs	3,232,949	181	208	--	--	3,301,335	--
Urban, School and Other Buses	722,698	21	192	--	--	782,755	--
Motor-Homes and Motorcycles	156,636	147	42	--	--	172,846	--
Subtotal	40,127,493	3,919	4,645	--	--	41,649,683	--
AGRICULTURE/ FARMING							
Agricultural Equipment	183,929	34	2	--	--	185,364	--
Animal Waste	--	25,860	254	--	--	621,761	--
Soil Management	15,954	--	899	--	--	294,758	43,110
Biomass Burning	--	97	8	--	--	4,363	3,145
Subtotal	199,883	25,991	1,163	--	--	1,106,246	46,255
GRAND TOTAL EMISSIONS	93,688,798	118,839	7,392	2,184	1.3	102,552,991	1,892,340

Table L:

Annual GHG Emissions: ALAMEDA Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	--	--	--	--	--	--	--
Refinery Make Gas Combustion	--	--	--	--	--	--	--
Natural Gas and Other Gases Combustion	--	--	--	--	--	--	--
Liquid Fuel Combustion	--	--	--	--	--	--	--
Solid Fuel Combustion	--	--	--	--	--	--	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	304	--	--	--	6,475	143,077
Landfill Fugitive Sources	--	17,818	1	--	--	374,448	48,018
Composting/POTWs	--	280	196	--	--	66,683	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	--	--	--	--	--	--	--
Commercial Cooking	26,922	--	--	--	--	26,922	--
ODS Substitutes/Nat. Gas Distrib./Other	--	1,659	--	479	0.13	945,746	--
Reciprocating Engines	73,600	129	--	--	--	76,331	16,585
Turbines	31,710	71	--	--	--	33,325	66,141
Natural Gas- Major Combustion Sources	497,257	18	1	--	--	497,927	--
Natural Gas- Minor Combustion Sources	1,141,243	22	21	--	--	1,148,189	--
Coke Coal	25,266	--	--	--	--	25,313	--
Other Fuels Combustion	88,518	25	--	--	--	89,133	9,320
Subtotal	1,884,516	20,325	220	479	0.13	3,290,493	283,142
RESIDENTIAL FUEL USAGE							
Natural Gas	1,286,715	25	24	--	--	1,294,546	--
LPgas/Liquid Fuel	24,050	--	2	--	--	24,543	--
Solid Fuel	--	710	8	--	--	17,255	71,930
Subtotal	1,310,766	735	33	--	--	1,336,344	71,930
ELECTRICITY/ CO-GENERATION							
Co-Generation	111,703	394	--	--	--	120,085	55,974
Electricity Generation	26,465	1	--	--	0.26	32,715	396
Electricity Imports	1,846,601	15	8	--	--	1,849,556	--
Subtotal	1,984,769	411	9	--	0.26	2,002,356	56,370
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	23,536	43	17	--	--	29,781	--
Construction Equipment	360,793	58	2	--	--	362,691	--
Industrial Equipment	122,557	75	7	--	--	126,281	--
Light Commercial Equipment	46,774	23	9	--	--	49,913	--
Subtotal	553,660	199	35	--	--	568,666	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	24,977	1	10	--	--	28,113	--
Ships	1,715,011	94	626	--	--	1,910,947	--
Boats	543,073	45	175	--	--	598,272	--
Commercial Aircraft	482,494	20	17	--	--	488,135	--
General Aviation	64,925	11	2	--	--	65,881	--
Military Aircraft	3,677	--	--	--	--	3,694	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	5,744,125	621	336	--	--	5,861,250	--
Medium/Heavy Duty Trucks > 10,000 lbs	1,209,381	54	60	--	--	1,229,050	--
Urban,School and Other Buses	186,711	4	57	--	--	204,517	--
Motor-Homes and Motorcycles	30,728	29	9	--	--	34,017	--
Subtotal	10,005,096	880	1,291	--	--	10,423,873	--
AGRICULTURE/ FARMING							
Agricultural Equipment	15,487	3	--	--	--	15,607	--
Animal Waste	--	2,814	52	--	--	75,340	--
Soil Management	954	--	40	--	--	13,305	1,146
Biomass Burning	--	58	3	--	--	2,269	1,199
Subtotal	16,441	2,875	96	--	--	106,522	2,345
GRAND TOTAL EMISSIONS	15,755,254	25,424	1,684	479	0.4	17,728,259	413,788

Table M:

Annual GHG Emissions: CONTRA COSTA Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	2,910,760	71	--	--	--	2,912,287	--
Refinery Make Gas Combustion	3,455,837	70	5	--	--	3,458,717	--
Natural Gas and Other Gases Combustion	4,773,383	258	18	--	--	4,784,246	--
Liquid Fuel Combustion	89,450	1	1	--	--	89,760	--
Solid Fuel Combustion	1,000,216	29	6	--	--	1,002,637	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	83	--	--	--	1,761	38,904
Landfill Fugitive Sources	--	6,168	--	--	--	129,622	17,044
Composting/POTWs	--	65	87	--	--	28,228	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	--	--	--	--	--	--	--
Commercial Cooking	13,461	--	--	--	--	13,461	--
ODS Substitutes/Nat. Gas Distrib./Other	--	8,604	--	282	--	686,738	--
Reciprocating Engines	81,825	391	--	--	--	90,082	18,464
Turbines	3,781	--	--	--	--	3,788	--
Natural Gas- Major Combustion Sources	633,351	7	1	--	--	633,758	--
Natural Gas- Minor Combustion Sources	4,137,569	79	76	--	--	4,162,750	--
Coke Coal	964,175	28	6	--	--	966,509	--
Other Fuels Combustion	213,592	26	1	--	--	214,332	34,769
Subtotal	18,277,402	15,880	199	282	--	19,178,675	109,181
RESIDENTIAL FUEL USAGE							
Natural Gas	994,896	19	18	--	--	1,000,951	--
LPgas/Liquid Fuel	18,887	--	1	--	--	19,288	--
Solid Fuel	--	1,666	18	--	--	40,504	167,246
Subtotal	1,013,783	1,686	37	--	--	1,060,743	167,246
ELECTRICITY/ CO-GENERATION							
Co-Generation	4,245,060	372	2	--	--	4,253,633	--
Electricity Generation	1,449,714	73	--	--	0.17	1,455,466	1,620
Electricity Imports	--	--	--	--	--	--	--
Subtotal	5,694,774	444	3	--	0.17	5,709,099	1,620
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	16,040	29	12	--	--	20,296	--
Construction Equipment	303,191	49	2	--	--	304,760	--
Industrial Equipment	52,636	29	2	--	--	53,996	--
Light Commercial Equipment	25,132	12	5	--	--	26,861	--
Subtotal	397,000	120	21	--	--	405,913	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	24,562	1	10	--	--	27,646	--
Ships	430,797	24	157	--	--	480,014	--
Boats	126,930	45	27	--	--	136,329	--
Commercial Aircraft	--	--	--	--	--	--	--
General Aviation	19,607	11	1	--	--	20,037	--
Military Aircraft	--	--	--	--	--	--	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	4,178,993	432	234	--	--	4,260,682	--
Medium/Heavy Duty Trucks > 10,000 lbs	401,364	23	27	--	--	410,348	--
Urban,School and Other Buses	102,211	2	15	--	--	106,770	--
Motor-Homes and Motorcycles	29,368	27	8	--	--	32,309	--
Subtotal	5,313,835	564	479	--	--	5,474,136	--
AGRICULTURE/ FARMING							
Agricultural Equipment	19,349	4	--	--	--	19,500	--
Animal Waste	--	4,440	44	--	--	106,901	--
Soil Management	913	--	204	--	--	64,034	589
Biomass Burning	--	10	1	--	--	431	274
Subtotal	20,262	4,454	249	--	--	190,867	863
GRAND TOTAL EMISSIONS	30,717,048	23,148	987	282	0.17	32,019,421	278,910

Table N:

Annual GHG Emissions:

MARIN

Year 2007

(Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	--	--	--	--	--	--	--
Refinery Make Gas Combustion	--	--	--	--	--	--	--
Natural Gas and Other Gases Combustion	--	--	--	--	--	--	--
Liquid Fuel Combustion	--	--	--	--	--	--	--
Solid Fuel Combustion	--	--	--	--	--	--	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	131	--	--	--	2,788	61,597
Landfill Fugitive Sources	--	5,278	--	--	--	110,927	14,093
Composting/POTWs	--	39	37	--	--	12,390	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	--	--	--	--	--	--	--
Commercial Cooking	4,038	--	--	--	--	4,038	--
ODS Substitutes/Nat. Gas Distrib./Other	--	273	--	87	--	161,358	--
Reciprocating Engines	16,158	4	--	--	--	16,237	401
Turbines	1	--	--	--	--	1	--
Natural Gas- Major Combustion Sources	22,929	--	--	--	--	22,950	--
Natural Gas- Minor Combustion Sources	132,891	3	2	--	--	133,699	--
Coke Coal	--	--	--	--	--	--	--
Other Fuels Combustion	4,472	6	--	--	--	4,602	1,173
Subtotal	180,489	5,733	40	87	--	468,992	77,263
RESIDENTIAL FUEL USAGE							
Natural Gas	331,202	6	6	--	--	333,217	--
LPgas/Liquid Fuel	14,330	--	1	--	--	14,630	--
Solid Fuel	--	587	6	--	--	14,264	58,869
Subtotal	345,532	593	13	--	--	362,111	58,869
ELECTRICITY/ CO-GENERATION							
Co-Generation	2,581	31	--	--	--	3,224	1,776
Electricity Generation	--	--	--	--	0.04	1,022	--
Electricity Imports	284,092	2	1	--	--	284,547	--
Subtotal	286,673	33	1	--	0.04	288,793	1,776
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	6,259	11	5	--	--	7,920	--
Construction Equipment	66,234	11	--	--	--	66,583	--
Industrial Equipment	11,942	6	1	--	--	12,230	--
Light Commercial Equipment	11,588	6	2	--	--	12,345	--
Subtotal	96,023	34	8	--	--	99,079	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	725	--	--	--	--	817	--
Ships	380,559	21	139	--	--	424,037	--
Boats	20,978	48	6	--	--	23,809	--
Commercial Aircraft	--	--	--	--	--	--	--
General Aviation	17,302	3	1	--	--	17,559	--
Military Aircraft	--	--	--	--	--	--	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	1,008,598	108	59	--	--	1,029,239	--
Medium/Heavy Duty Trucks > 10,000 lbs	80,905	6	8	--	--	83,376	--
Urban,School and Other Buses	64,651	1	20	--	--	71,011	--
Motor-Homes and Motorcycles	5,642	6	2	--	--	6,283	--
Subtotal	1,579,359	192	235	--	--	1,656,131	--
AGRICULTURE/ FARMING							
Agricultural Equipment	7,486	1	--	--	--	7,544	--
Animal Waste	--	7,352	44	--	--	168,172	--
Soil Management	695	--	34	--	--	11,178	--
Biomass Burning	--	3	--	--	--	120	104
Subtotal	8,181	7,356	79	--	--	187,014	104
GRAND TOTAL EMISSIONS	2,496,258	13,941	376	87	0.04	3,062,121	138,012

Table O:

Annual GHG Emissions: NAPA Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	--	--	--	--	--	--	--
Refinery Make Gas Combustion	--	--	--	--	--	--	--
Natural Gas and Other Gases Combustion	--	--	--	--	--	--	--
Liquid Fuel Combustion	--	--	--	--	--	--	--
Solid Fuel Combustion	--	--	--	--	--	--	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	31	--	--	--	651	14,380
Landfill Fugitive Sources	--	535	--	--	--	11,245	1,669
Composting/POTWs	--	149	43	--	--	16,359	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	--	--	--	--	--	--	--
Commercial Cooking	2,692	--	--	--	--	2,692	--
ODS Substitutes/Nat. Gas Distrib./Other	--	128	--	40	--	74,966	--
Reciprocating Engines	17,563	106	--	--	--	19,801	15,424
Turbines	6	--	--	--	--	6	--
Natural Gas- Major Combustion Sources	32,505	1	--	--	--	32,534	--
Natural Gas- Minor Combustion Sources	94,281	2	2	--	--	94,854	--
Coke Coal	--	--	--	--	--	--	--
Other Fuels Combustion	460	2	--	--	--	511	1,106
Subtotal	147,506	953	45	40	--	253,621	32,580
RESIDENTIAL FUEL USAGE							
Natural Gas	121,376	2	2	--	--	122,115	--
LPgas/Liquid Fuel	6,334	--	--	--	--	6,468	--
Solid Fuel	--	275	3	--	--	6,688	27,600
Subtotal	127,710	278	6	--	--	135,271	27,600
ELECTRICITY/ CO-GENERATION							
Co-Generation	12,847	1	--	--	--	12,874	--
Electricity Generation	7,917	1	--	--	0.02	8,474	--
Electricity Imports	213,069	2	1	--	--	213,410	--
Subtotal	233,833	3	1	--	0.02	234,758	--
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	2,252	4	2	--	--	2,850	--
Construction Equipment	31,597	5	--	--	--	31,763	--
Industrial Equipment	10,994	6	--	--	--	11,267	--
Light Commercial Equipment	4,050	2	1	--	--	4,340	--
Subtotal	48,893	17	3	--	--	50,220	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	4,353	--	2	--	--	4,899	--
Ships	--	--	--	--	--	--	--
Boats	24,628	29	6	--	--	27,189	--
Commercial Aircraft	--	--	--	--	--	--	--
General Aviation	16,274	3	1	--	--	16,517	--
Military Aircraft	--	--	--	--	--	--	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	747,955	89	50	--	--	765,209	--
Medium/Heavy Duty Trucks > 10,000 lbs	83,920	6	6	--	--	85,933	--
Urban,School and Other Buses	9,640	--	2	--	--	10,289	--
Motor-Homes and Motorcycles	6,650	4	2	--	--	7,213	--
Subtotal	893,420	131	68	--	--	917,248	--
AGRICULTURE/ FARMING							
Agricultural Equipment	32,463	6	--	--	--	32,716	--
Animal Waste	--	1,131	21	--	--	30,180	--
Soil Management	7,431	--	93	--	--	36,148	35
Biomass Burning	--	2	1	--	--	423	596
Subtotal	39,894	1,139	115	--	--	99,467	631
GRAND TOTAL EMISSIONS	1,491,256	2,522	237	40	0.02	1,690,586	60,810

Table P:

Annual GHG Emissions: SAN FRANCISCO Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	--	--	--	--	--	--	--
Refinery Make Gas Combustion	--	--	--	--	--	--	--
Natural Gas and Other Gases Combustion	--	--	--	--	--	--	--
Liquid Fuel Combustion	--	--	--	--	--	--	--
Solid Fuel Combustion	--	--	--	--	--	--	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	--	--	--	--	--	--
Landfill Fugitive Sources	--	--	--	--	--	--	--
Composting/POTWs	--	8	74	--	--	23,029	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	--	--	--	--	--	--	--
Commercial Cooking	25,576	--	--	--	--	25,576	--
ODS Substitutes/Nat. Gas Distrib./Other	--	1,595	--	279	--	534,013	1
Reciprocating Engines	68,970	56	--	--	--	71,300	--
Turbines	45,071	1	--	--	--	45,197	--
Natural Gas- Major Combustion Sources	674,021	5	1	--	--	674,276	--
Natural Gas- Minor Combustion Sources	470,505	9	9	--	--	473,368	--
Coke Coal	--	--	--	--	--	--	--
Other Fuels Combustion	11,686	43	--	--	--	12,653	16,498
Subtotal	1,295,829	1,716	84	279	--	1,859,413	16,499
RESIDENTIAL FUEL USAGE							
Natural Gas	838,011	16	15	--	--	843,111	--
LPgas/Liquid Fuel	23,226	--	1	--	--	23,647	--
Solid Fuel	--	104	1	--	--	2,525	10,988
Subtotal	861,237	120	18	--	--	869,283	10,988
ELECTRICITY/ CO-GENERATION							
Co-Generation	178,970	89	--	--	--	180,863	100
Electricity Generation	7,504	--	--	--	0.14	10,753	--
Electricity Imports	1,136,370	9	5	--	--	1,138,188	--
Subtotal	1,322,843	99	5	--	0.14	1,329,804	100
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	11,250	20	8	--	--	14,235	--
Construction Equipment	292,545	47	2	--	--	294,071	--
Industrial Equipment	60,802	38	4	--	--	62,697	--
Light Commercial Equipment	41,246	20	7	--	--	43,884	--
Subtotal	405,842	125	21	--	--	414,888	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	2,176	--	1	--	--	2,450	--
Ships	1,200,354	66	438	--	--	1,337,492	--
Boats	59,880	25	18	--	--	66,017	--
Commercial Aircraft	--	--	--	--	--	--	--
General Aviation	--	--	--	--	--	--	--
Military Aircraft	--	--	--	--	--	--	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	2,059,302	221	106	--	--	2,096,833	--
Medium/Heavy Duty Trucks > 10,000 lbs	212,244	14	19	--	--	218,391	--
Urban,School and Other Buses	140,574	4	48	--	--	155,441	--
Motor-Homes and Motorcycles	7,248	12	3	--	--	8,344	--
Subtotal	3,681,780	342	632	--	--	3,884,973	--
AGRICULTURE/ FARMING							
Agricultural Equipment	110	--	--	--	--	111	--
Animal Waste	--	--	--	--	--	--	--
Soil Management	4	--	--	--	--	4	1,007
Biomass Burning	--	--	--	--	--	--	--
Subtotal	115	--	--	--	--	116	1,007
GRAND TOTAL EMISSIONS	7,567,654	2,402	760	279	0.14	8,358,473	28,594

Table Q:

Annual GHG Emissions: **SAN MATEO** Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	--	--	--	--	--	--	--
Refinery Make Gas Combustion	--	--	--	--	--	--	--
Natural Gas and Other Gases Combustion	--	--	--	--	--	--	--
Liquid Fuel Combustion	--	--	--	--	--	--	--
Solid Fuel Combustion	--	--	--	--	--	--	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	245	--	--	--	5,234	115,658
Landfill Fugitive Sources	--	8,537	--	--	--	179,414	22,593
Composting/POTWs	--	60	86	--	--	27,932	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	--	--	--	--	--	--	--
Commercial Cooking	13,461	--	--	--	--	13,461	--
ODS Substitutes/Nat. Gas Distrib./Other	--	835	--	236	--	442,682	20
Reciprocating Engines	46,803	112	--	--	--	49,172	18,613
Turbines	18	--	--	--	--	18	--
Natural Gas- Major Combustion Sources	76,685	1	--	--	--	76,754	--
Natural Gas- Minor Combustion Sources	747,061	14	14	--	--	751,608	--
Coke Coal	--	--	--	--	--	--	--
Other Fuels Combustion	5,274	16	--	--	--	5,632	4,455
Subtotal	889,303	9,821	101	236	--	1,551,908	161,338
RESIDENTIAL FUEL USAGE							
Natural Gas	719,218	14	13	--	--	723,595	--
LPgas/Liquid Fuel	19,086	--	1	--	--	19,481	--
Solid Fuel	--	379	4	--	--	9,203	38,326
Subtotal	738,303	393	18	--	--	752,278	38,326
ELECTRICITY/ CO-GENERATION							
Co-Generation	36,874	24	--	--	--	37,399	1,344
Electricity Generation	--	--	--	--	0.12	2,939	--
Electricity Imports	994,323	8	5	--	--	995,915	--
Subtotal	1,031,197	32	5	--	0.12	1,036,254	1,344
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	11,208	20	8	--	--	14,182	--
Construction Equipment	173,531	28	1	--	--	174,445	--
Industrial Equipment	52,204	32	3	--	--	53,797	--
Light Commercial Equipment	25,539	12	5	--	--	27,226	--
Subtotal	262,482	93	17	--	--	269,650	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	4,353	--	2	--	--	4,899	--
Ships	2,528,483	138	922	--	--	2,817,357	--
Boats	26,489	19	8	--	--	29,439	--
Commercial Aircraft	1,076,869	61	39	--	--	1,090,389	--
General Aviation	25,284	4	1	--	--	25,664	--
Military Aircraft	4,449	--	--	--	--	4,470	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	2,972,646	281	154	--	--	3,026,154	--
Medium/Heavy Duty Trucks > 10,000 lbs	224,315	14	21	--	--	230,958	--
Urban,School and Other Buses	74,368	2	19	--	--	80,264	--
Motor-Homes and Motorcycles	12,494	16	4	--	--	14,098	--
Subtotal	6,949,752	535	1,170	--	--	7,323,687	--
AGRICULTURE/ FARMING							
Agricultural Equipment	9,233	2	--	--	--	9,305	--
Animal Waste	--	257	9	--	--	8,101	--
Soil Management	348	--	30	--	--	9,520	139
Biomass Burning	--	3	--	--	--	136	98
Subtotal	9,581	262	39	--	--	27,062	237
GRAND TOTAL EMISSIONS	9,880,623	11,136	1,349	236	0.12	10,960,839	201,245

Table R:

Annual GHG Emissions: SANTA CLARA Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	--	--	--	--	--	--	--
Refinery Make Gas Combustion	--	--	--	--	--	--	--
Natural Gas and Other Gases Combustion	--	--	--	--	--	--	--
Liquid Fuel Combustion	--	--	--	--	--	--	--
Solid Fuel Combustion	--	--	--	--	--	--	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	440	--	--	--	9,374	207,134
Landfill Fugitive Sources	--	12,444	1	--	--	261,566	35,205
Composting/POTWs	--	1,382	309	--	--	124,918	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	841,350	13	3	--	--	842,475	--
Commercial Cooking	30,961	--	--	--	--	30,961	--
ODS Substitutes/Nat. Gas Distrib./Other	--	2,426	--	582	--	1,167,459	--
Reciprocating Engines	193,233	742	1	--	--	209,049	104,164
Turbines	349	--	--	--	--	350	--
Natural Gas- Major Combustion Sources	361,211	5	1	--	--	361,532	--
Natural Gas- Minor Combustion Sources	1,691,662	32	31	--	--	1,701,957	--
Coke Coal	--	--	--	--	--	--	--
Other Fuels Combustion	15,307	5	--	--	--	15,554	15,266
Subtotal	3,134,075	17,489	346	582	--	4,725,195	361,770
RESIDENTIAL FUEL USAGE							
Natural Gas	1,555,938	30	29	--	--	1,565,407	--
LPgas/Liquid Fuel	40,631	1	3	--	--	41,464	--
Solid Fuel	--	1,238	13	--	--	30,092	124,813
Subtotal	1,596,569	1,268	44	--	--	1,636,963	124,813
ELECTRICITY/ CO-GENERATION							
Co-Generation	322,599	242	--	--	--	327,843	24,023
Electricity Generation	1,207,022	88	--	--	0.30	1,216,062	1,510
Electricity Imports	2,059,670	17	9	--	--	2,062,967	--
Subtotal	3,589,291	347	10	--	0.30	3,606,872	25,533
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	26,010	47	19	--	--	32,912	--
Construction Equipment	370,445	60	2	--	--	372,396	--
Industrial Equipment	316,775	216	22	--	--	328,058	--
Light Commercial Equipment	52,797	26	10	--	--	56,451	--
Subtotal	766,027	349	53	--	--	789,817	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	16,064	1	6	--	--	18,081	--
Ships	--	--	--	--	--	--	--
Boats	17,208	10	4	--	--	18,730	--
Commercial Aircraft	318,300	9	12	--	--	322,137	--
General Aviation	63,542	10	2	--	--	64,493	--
Military Aircraft	46,921	9	2	--	--	47,627	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	6,428,736	704	363	--	--	6,555,920	--
Medium/Heavy Duty Trucks > 10,000 lbs	678,747	40	45	--	--	693,658	--
Urban,School and Other Buses	88,596	3	22	--	--	95,407	--
Motor-Homes and Motorcycles	39,091	32	10	--	--	42,785	--
Subtotal	7,697,206	818	466	--	--	7,858,843	--
AGRICULTURE/ FARMING							
Agricultural Equipment	35,719	7	--	--	--	35,997	--
Animal Waste	--	2,095	44	--	--	57,557	--
Soil Management	1,034	--	225	--	--	70,707	318
Biomass Burning	--	2	--	--	--	139	141
Subtotal	36,753	2,104	269	--	--	164,401	459
GRAND TOTAL EMISSIONS	16,819,924	22,376	1,189	582	0.30	18,782,087	512,575

Table S:

Annual GHG Emissions: SOLANO* Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	534,305	9	--	--	--	534,495	--
Refinery Make Gas Combustion	1,317,135	27	2	--	--	1,318,241	--
Natural Gas and Other Gases Combustion	86,885	9	1	--	--	87,249	--
Liquid Fuel Combustion	--	--	--	--	--	--	--
Solid Fuel Combustion	--	--	--	--	--	--	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	8	--	--	--	172	3,803
Landfill Fugitive Sources	--	1,550	--	--	--	32,564	4,120
Composting/POTWs	--	218	44	--	--	18,110	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	--	--	--	--	--	--	--
Commercial Cooking	8,077	--	--	--	--	8,077	--
ODS Substitutes/Nat. Gas Distrib./Other	--	498	--	84	--	160,727	--
Reciprocating Engines	27,294	71	--	--	--	28,792	1,775
Turbines	273,754	6	--	--	--	273,970	--
Natural Gas- Major Combustion Sources	76,427	14	--	--	--	76,769	--
Natural Gas- Minor Combustion Sources	348,389	7	6	--	--	350,509	--
Coke Coal	--	--	--	--	--	--	--
Other Fuels Combustion	3,506	6	--	--	--	3,635	2,344
Subtotal	2,675,772	2,421	53	84	--	2,893,310	12,042
RESIDENTIAL FUEL USAGE							
Natural Gas	245,980	5	5	--	--	247,477	--
LPgas/Liquid Fuel	3,763	--	--	--	--	3,843	--
Solid Fuel	--	264	3	--	--	6,426	26,568
Subtotal	249,744	269	8	--	--	257,747	26,568
ELECTRICITY/ CO-GENERATION							
Co-Generation	375,712	12	--	--	--	375,968	--
Electricity Generation	32,350	1	--	--	0.05	33,595	--
Electricity Imports	--	--	--	--	--	--	--
Subtotal	408,063	12	--	--	0.05	409,563	--
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	3,045	6	2	--	--	3,853	--
Construction Equipment	68,732	11	--	--	--	69,093	--
Industrial Equipment	66,709	12	1	--	--	67,152	--
Light Commercial Equipment	6,391	3	1	--	--	6,848	--
Subtotal	144,876	32	5	--	--	146,946	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	5,804	--	2	--	--	6,532	--
Ships	164,928	9	60	--	--	183,771	--
Boats	11,535	25	3	--	--	13,007	--
Commercial Aircraft	--	--	--	--	--	--	--
General Aviation	--	--	--	--	--	--	--
Military Aircraft	423,131	21	13	--	--	427,663	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	1,139,899	114	63	--	--	1,161,801	--
Medium/Heavy Duty Trucks > 10,000 lbs	168,039	9	9	--	--	170,918	--
Urban,School and Other Buses	30,727	--	5	--	--	32,268	--
Motor-Homes and Motorcycles	9,193	8	2	--	--	10,048	--
Subtotal	1,953,256	185	158	--	--	2,006,009	--
AGRICULTURE/ FARMING							
Agricultural Equipment	32,041	6	--	--	--	32,291	--
Animal Waste	--	1,037	3	--	--	22,727	--
Soil Management	871	--	197	--	--	62,013	39,600
Biomass Burning	--	2	--	--	--	95	76
Subtotal	32,912	1,045	201	--	--	117,126	39,676
GRAND TOTAL EMISSIONS	5,464,625	3,965	424	84	0.05	5,830,697	78,287

* BAAQMD Jurisdiction only

Table T:

Annual GHG Emissions: SONOMA* Year 2007 (Metric Tons / Year)

SOURCE CATEGORY	CO ₂	CH ₄	N ₂ O	PFC/HFC	SF ₆	Total GHG CO ₂ - Equivalent	Biogenic CO ₂
INDUSTRIAL/ COMMERCIAL							
<i>Oil Refineries</i>							
Refining Processes	--	--	--	--	--	--	--
Refinery Make Gas Combustion	--	--	--	--	--	--	--
Natural Gas and Other Gases Combustion	--	--	--	--	--	--	--
Liquid Fuel Combustion	--	--	--	--	--	--	--
Solid Fuel Combustion	--	--	--	--	--	--	--
<i>Waste Management</i>							
Landfill Combustion Sources	--	--	--	--	--	1	13
Landfill Fugitive Sources	--	4,416	--	--	--	92,809	11,669
Composting/POTWs	--	573	89	--	--	39,574	--
<i>Other Industrial/ Commercial</i>							
Cement Plants	--	--	--	--	--	--	--
Commercial Cooking	9,423	--	--	--	--	9,423	--
ODS Substitutes/Nat. Gas Distrib./Other	--	337	--	117	--	217,310	--
Reciprocating Engines	24,824	379	--	--	--	32,820	58,586
Turbines	7	--	--	--	--	7	--
Natural Gas- Major Combustion Sources	25,653	--	--	--	--	25,676	--
Natural Gas- Minor Combustion Sources	215,498	4	4	--	--	216,810	--
Coke Coal	--	--	--	--	--	--	--
Other Fuels Combustion	6,357	3	--	--	--	6,433	415
Subtotal	281,761	5,713	93	117	--	640,862	70,682
RESIDENTIAL FUEL USAGE							
Natural Gas	362,837	7	7	--	--	365,045	--
LPgas/Liquid Fuel	16,199	--	1	--	--	16,546	--
Solid Fuel	--	1,020	11	--	--	24,786	102,209
Subtotal	379,036	1,027	19	--	--	406,377	102,209
ELECTRICITY/ CO-GENERATION							
Co-Generation	6,478	96	--	--	--	8,506	6,294
Electricity Generation	--	--	--	--	0.08	1,940	--
Electricity Imports	568,185	5	3	--	--	569,094	--
Subtotal	574,663	101	3	--	0.08	579,541	6,294
OFF-ROAD EQUIPMENT							
Lawn and Garden Equipment	6,143	11	5	--	--	7,773	--
Construction Equipment	118,009	19	1	--	--	118,631	--
Industrial Equipment	34,416	20	2	--	--	35,374	--
Light Commercial Equipment	12,601	6	2	--	--	13,506	--
Subtotal	171,169	56	9	--	--	175,285	--
TRANSPORTATION							
<i>Off-Road</i>							
Locomotives	5,078	--	2	--	--	5,716	--
Ships	--	--	--	--	--	--	--
Boats	18,536	19	5	--	--	20,501	--
Commercial Aircraft	--	--	--	--	--	--	--
General Aviation	24,133	4	1	--	--	24,492	--
Military Aircraft	--	--	--	--	--	--	--
<i>On-Road</i>							
Passenger Cars/Trucks up to 10,000 lbs	1,790,567	211	115	--	--	1,830,792	--
Medium/Heavy Duty Trucks > 10,000 lbs	174,035	12	14	--	--	178,612	--
Urban,School and Other Buses	25,221	1	5	--	--	26,677	--
Motor-Homes and Motorcycles	16,221	13	4	--	--	17,730	--
Subtotal	2,053,792	260	146	--	--	2,104,520	--
AGRICULTURE/ FARMING							
Agricultural Equipment	32,040	6	--	--	--	32,290	--
Animal Waste	--	6,735	37	--	--	152,783	--
Soil Management	3,703	--	78	--	--	27,848	277
Biomass Burning	--	16	1	--	--	750	657
Subtotal	35,744	6,757	116	--	--	213,671	934
GRAND TOTAL EMISSIONS	3,496,165	13,914	386	117	0.08	4,120,255	180,119

* BAAQMD Jurisdiction only

Table U: Bay Area Greenhouse Gas Emission Inventory Projections : 1990 - 2029
(Million Metric Tons CO₂- Equivalent)

SOURCE CATEGORY	Year 1990	1993	1996	1999	2002	2005	2008	2011	2014	2017	2020	2023	2026	2029
INDUSTRIAL/ COMMERCIAL														
<i>Oil Refineries</i>														
Refining Processes	3.3	3.5	3.6	3.7	3.5	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.2	4.3
Refinery Make Gas Combustion	3.8	4.0	3.7	4.4	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.8	5.9
Natural Gas and Other Gases Combustion	4.5	4.3	4.5	4.5	4.6	4.8	4.9	5.1	5.2	5.4	5.5	5.7	5.9	6.1
Liquid Fuel Combustion	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Solid Fuel Combustion	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2
<i>Waste Management</i>														
Landfill Combustion Sources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Landfill Fugitive Sources	1.7	1.4	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1
Composting/POTWs	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
<i>Other Industrial/ Commercial</i>														
Cement Plants	0.9	0.9	0.9	1.0	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1
Commercial Cooking	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
ODS Substitutes/Nat. Gas Distrib./Other	1.1	1.3	1.8	2.4	2.9	3.6	4.8	5.9	7.1	8.3	9.4	10.6	11.7	12.8
Reciprocating Engines	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8
Turbines	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
Natural Gas- Major Combustion Sources	1.9	1.8	1.6	1.8	1.5	1.6	2.4	2.5	2.6	2.7	2.8	3.0	3.1	3.2
Natural Gas- Minor Combustion Sources	2.3	7.2	8.5	8.5	8.5	8.8	9.1	9.4	9.7	10.1	10.4	10.7	11.0	11.3
Coke Coal	1.7	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.3
Other Fuels Combustion	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
Subtotal	23.9	28.5	29.9	31.1	31.4	32.8	35.6	37.7	39.9	42.0	44.2	46.4	48.6	50.8
RESIDENTIAL FUEL USAGE														
Natural Gas	5.4	5.6	5.9	6.1	6.2	6.4	6.5	6.7	6.9	7.0	7.2	7.4	7.5	7.7
LPgas/Liquid Fuel	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Solid Fuel	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Subtotal	5.8	6.0	6.2	6.4	6.6	6.7	6.9	7.0	7.2	7.4	7.5	7.7	7.9	8.0
ELECTRICITY/ CO-GENERATION														
Co-Generation	8.6	7.2	6.7	5.2	5.4	5.5	5.4	5.6	5.9	6.1	6.4	6.7	6.9	7.2
Electricity Generation	7.6	8.5	4.0	4.6	4.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0
Electricity Imports	8.9	8.8	10.3	10.1	6.9	6.8	7.2	7.5	7.8	8.1	8.3	8.6	8.9	9.1
Subtotal	25.1	24.6	20.9	19.8	17.0	15.1	15.6	16.3	16.9	17.6	18.3	18.9	19.6	20.4
OFF-ROAD EQUIPMENT														
Lawn and Garden Equipment	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Construction Equipment	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.4
Industrial Equipment	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2
Light Commercial Equipment	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Subtotal	2.2	2.3	2.5	2.6	2.7	2.8	3.0	3.1	3.3	3.4	3.6	3.8	3.9	4.1

Table U: Bay Area Greenhouse Gas Emission Inventory Projections : 1990 - 2029
(Million Metric Tons CO₂- Equivalent)

SOURCE CATEGORY	Year 1990	1993	1996	1999	2002	2005	2008	2011	2014	2017	2020	2023	2026	2029
TRANSPORTATION														
<i>Off-Road</i>														
Locomotives	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ships	3.1	3.6	4.2	5.0	5.7	6.5	7.5	8.6	9.9	11.3	13.0	15.2	17.8	20.6
Boats	1.0	0.9	0.9	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.9
Commercial Aircraft	1.6	1.7	1.8	1.9	1.7	1.8	1.9	2.1	2.2	2.4	2.6	2.7	2.9	3.2
General Aviation	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
Military Aircraft	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<i>On-Road</i>														
Passenger Cars/Trucks up to 10,000 lbs	22.3	22.6	23.1	24.3	26.4	26.6	26.9	27.6	28.6	29.9	30.9	31.9	33.5	34.7
Medium/Heavy Duty Trucks > 10,000 lbs	3.1	2.8	2.8	2.9	3.0	3.3	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
Urban, School and Other Buses	0.5	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
Motor-Homes and Motorcycles	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Subtotal	32.8	33.3	34.4	36.7	39.6	41.0	42.4	44.4	46.9	49.9	52.9	56.5	61.0	65.4
AGRICULTURE/ FARMING														
Agricultural Equipment	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Animal Waste	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Soil Management	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Biomass Burning	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
GRAND TOTAL EMISSIONS	90.7	95.7	95.0	97.7	98.3	99.6	104.5	109.6	115.3	121.5	127.7	134.4	142.2	149.8

Table V:

2007 BAY AREA MAJOR (TOP 200) GHG EMITTING FACILITIES

No.	Plant #	Plant Name	Plant Address	City	Zipcode	CO2 Equivalent Emissions (Metric Tons per year)		
						Biogenic	Non-Biogenic	Total
1	11	Shell Martinez Refinery	3485 Pacheco Blvd	Martinez	94553	-	4,976,544	4,976,544
2	10	Chevron Products Company	841 Chevron Way	Richmond	94802	-	4,303,800	4,303,800
3	14628	Tesoro Refining and Marketing Company	150 Solano Way, Avon Refinery	Martinez	94553	-	2,804,678	2,804,678
4	12626	Valero Refining Company - California	3400 E 2nd Street	Benicia	94510	-	2,568,988	2,568,988
5	12095	Delta Energy Center	Arcy Lane	Pittsburg	94565	-	1,895,320	1,895,320
6	16	ConocoPhillips - San Francisco Refinery	1380 San Pablo Ave	Rodeo	94572	-	1,577,872	1,577,872
7	11866	Los Medanos Energy Center	750 E 3rd Street	Pittsburg	94565	-	1,368,588	1,368,588
8	12183	Metcalf Energy Center	One Blanchard Road	Coyote	95013	-	1,120,115	1,120,115
9	17	Lehigh Southwest Cement Company	24001 Stevens Creek Blvd	Cupertino	95014	-	842,475	842,475
10	26	Mirant Potrero, LLC	1201 Illinois Street	San Francisco	94107	-	462,505	462,505
11	8664	Crockett Cogeneration, A Cal Ltd Partnership	550 Loring Avenue	Crockett	94525	-	427,300	427,300
12	1820	Martinez Cogen Limited Partnership	550 Solano Way, Avon Refinery	Martinez	94553	-	410,970	410,970
13	10295	Air Products & Chemicals, Inc	Tesoro, Avon Refinery	Martinez	94553	-	361,179	361,179
14	2066	Waste Management of Alameda County	10840 Altamont Pass Rd	Livermore	94551	121,019	143,881	264,900
15	2266	Browning-Ferris Industries of CA, Inc	12310 San Mateo Road	Half Moon Bay	94019	109,503	130,538	240,041
16	3981	GWF Power Systems,LP (Site 4)	3400 Wilbur Avenue	Antioch	94509	-	201,672	201,672
17	3243	GWF Power Systems,LP (Site 1)	895 E 3rd Street	Pittsburg	94565	-	200,700	200,700
18	3244	GWF Power Systems,LP (Site 2)	1600 Loveridge Road	Pittsburg	94565	-	196,800	196,800
19	3245	GWF Power Systems,LP (Site 3)	1900 Wilbur Avenue	Antioch	94509	-	184,660	184,660
20	3246	GWF Power Systems,LP (Site 5)	555 Nichols Road	Pittsburg	94565	-	183,237	183,237
21	1812	Kirby Canyon Landfill	910 Coyote Creek Glf Dr	San Jose	95198	120,641	50,361	171,002
22	1179	Redwood Landfill Inc	8950 Redwood Hwy	Novato	94948	72,532	93,942	166,474
23	2254	Sonoma County Department of Public Works	500 Mecham Road	Petaluma	94952	68,119	87,311	155,430
24	732	Bluegrass Mills Holding Co	2600 De La Cruz Blvd	Santa Clara	95050	-	128,963	128,963
25	11326	PE Berkeley, Inc	Univ of Calif, Berkeley Campus	Berkeley	94720	-	126,541	126,541
26	51	United Airlines, SF Maintenance Center	SF Int'l Airport	San Francisco	94128	-	123,861	123,861
27	12	Mirant Delta, LLC	696 W 10th Street	Pittsburg	94565	-	121,624	121,624
28	2246	Tri-Cities Recycling	7010 Auto Mall Pkwy	Fremont	94538	54,680	65,197	119,877
29	11928	Calpine Pittsburg LLC	Loveridge Road	Pittsburg	94565	-	116,440	116,440

Table V:

2007 BAY AREA MAJOR (TOP 200) GHG EMITTING FACILITIES

No.	Plant #	Plant Name	Plant Address	City	Zipcode	CO2 Equivalent Emissions (Metric Tons per year)		
						Biogenic	Non-Biogenic	Total
30	5095	Republic Services Vasco Road, LLC	4001 N Vasco Road	Livermore	94550	48,063	57,316	105,378
31	6044	O L S Energy-Agnews	3530 Zanker Road	San Jose	95134	-	104,777	104,777
32	2740	City of Mountain View (Shoreline)	2600 Shoreline Boulevard	Mountain View	94043	53,132	48,687	101,819
33	11180	LLC	1400 Pacheco Pass Hwy	Gilroy	95020	-	94,712	94,712
34	10978	Seagate Technology	311 Turquoise Street	Milpitas	95035	-	86,229	86,229
35	151	Hexion Specialty Chemicals, Inc	41100 Boyce Road	Fremont	94538	-	80,865	80,865
36	18	Mirant Delta, LLC	3201 Wilbur Avenue	Antioch	94509	-	80,803	80,803
37	606	Anheuser-Busch, Inc	3101 Busch Drive	Fairfield	94533	38,630	37,409	76,039
38	778	San Jose/Santa Clara Water Pollution Control	700 Los Esteros Road	San Jose	95134	47,537	26,689	74,226
39	2371	USS-POSCO Industries	900 Loveridge Road	Pittsburg	94565	-	68,215	68,215
40	3921	Seagate Technology, LLC	47010 Kato Road	Fremont	94538	-	68,048	68,048
41	2478	UCSF/Parnassus	3rd Avenue & Parnassus	San Francisco	94122	-	64,882	64,882
42	16151	NRG Energy Center LLC	465 Stevenson Street	San Francisco	94103	-	64,559	64,559
43	1840	West Contra Costa County Landfill	Foot of Parr Blvd	Richmond	94801	28,773	34,212	62,984
44	907	Central Contra Costa Sanitary District	5019 Imhoff Place	Martinez	94553	33,215	29,239	62,454
45	4618	Keller Canyon Landfill Company	901 Bailey Road	Pittsburg	94565	26,956	32,134	59,089
46	30	Owens-Brockway Glass Container Inc	3600 Alameda Avenue	Oakland	94601	-	53,055	53,055
47	14483	California Water Service Company	1720 N 1st Street	San Jose	95112	-	50,164	50,164
48	591	East Bay Municipal Utility District	2020 Wake Avenue	Oakland	94607	42,742	6,212	48,954
49	14017	American Lithographers & Business Forms	21062 Forbes Street	Hayward	94545	-	45,790	45,790
50	621	City of Santa Clara, Silicon Valley Power	560 Robert Avenue	Santa Clara	95050	-	45,288	45,288
51	1364	Cypress Amloc Land Co , Inc	1 Sand Hill Road	Colma	94014	19,074	22,738	41,812
52	11670	Gas Recovery Systems, Inc	1804 Dixon Landing Rd	San Jose	95134	36,129	4,913	41,042
53	1438	New United Motor Manufacturing, Inc	45500 Fremont Blvd	Fremont	94538	-	39,344	39,344
54	2039	Potrero Hills Landfill, Inc	3675 Potrero Hills Lane	Suisun City	94585	7,064	29,268	36,332
55	13289	Los Esteros Critical Energy Facility	800 Thomas Foon Chew Way	San Jose	95134	-	35,555	35,555
56	83	United States Pipe & Foundry Company, LLC	1295 Whipple Road	Union City	94587	-	34,560	34,560
57	173	Georgia Pacific Gypsum LLC	801 Minaker Street	Antioch	94509	-	34,348	34,348
58	3464	City of Santa Clara	5401 Lafayette	Santa Clara	95050	15,098	17,998	33,096

Table V:

2007 BAY AREA MAJOR (TOP 200) GHG EMITTING FACILITIES

No.	Plant #	Plant Name	Plant Address	City	Zipcode	CO2 Equivalent Emissions (Metric Tons per year)		
						Biogenic	Non-Biogenic	Total
59	12728	Waste Management Inc	2615 Davis Street	San Leandro	94577	14,847	17,734	32,581
60	153	PABCO Gypsum	37851 Cherry Street	Newark	94560	-	32,171	32,171
61	1201	Rolls-Royce Engine Services - Oakland, Inc	6711 Lockheed Street	Oakland	94621	-	31,795	31,795
62	15128	Cardinal Cogen Inc	Campus & Jordan Way	Palo Alto	94305	-	30,626	30,626
63	7265	San Jose State University (Cogen Plant)	San Carlos Street	San Jose	95192	-	30,390	30,390
64	706	New NGC, Inc	1040 Canal Boulevard	Richmond	94804	-	29,252	29,252
65	3011	IPT SRI Cogeneration Inc	333 Ravenswood Drive	Menlo Park	94025	-	28,540	28,540
66	13566	Norcal Waste Systems Pacheco Pass Landfill, Inc	Bloomfield Rd & Highway 152	Gilroy	95021	12,486	14,884	27,370
67	85	Hitachi Global Storage Technologies Inc	5600 Cottle Road	San Jose	95193	-	26,909	26,909
68	1257	Genentech, Inc	460 Point San Bruno Boulevard	Francisco	94080	-	26,324	26,324
69	41	Owens Corning Insulating Systems, LLC	960 Central Expressway	Santa Clara	95050	-	25,432	25,432
70	13193	Valero Benicia Asphalt Plant	3001 Park Road	Benicia	94510	-	24,851	24,851
71	11669	Gas Recovery Systems, Inc	15999 Guadalupe Mines Rd	San Jose	95120	21,411	2,912	24,323
72	11327	ConAgra Foods, Gilroy Foods	1350 Pacheco Pass Hwy	Gilroy	95020	-	23,928	23,928
73	1464	Acme Fill Corporation	950 Waterbird Way	Martinez	94553	2,953	20,968	23,920
74	1784	San Francisco International Airport	SF Int'l Airport	San Francisco	94128	321	23,490	23,811
75	698	Georgia-Pacific Gypsum LLC	1988 Marina Boulevard	San Leandro	94577	-	23,535	23,535
76	31	Dow Chemical Company	901 Loveridge Road	Pittsburg	94565	-	22,900	22,900
77	11887	Dynegy Oakland LLC	50 Martin Luthr Kng, Jr Way	Oakland	94607	-	22,764	22,764
78	3294	Guadalupe Rubbish Disposal	15999 Guadalupe Mines Rd	San Jose	95120	11,947	10,813	22,759
79	568	San Francisco South East Treatment Plant	1700 Jerrold Avenue	San Francisco	94124	13,360	9,176	22,535
80	617	Palo Alto Regional Water Quality Control Plant	2501 Embarcadero Way	Palo Alto	94303	15,163	6,407	21,570
81	3974	San Francisco General Hospital	1118	San Francisco	94110	-	21,370	21,370
82	1190	Evergreen Oil, Inc	6880 Smith Avenue	Newark	94560	-	21,055	21,055
83	13160	University of California SF	600 16th Street	San Francisco	94107	-	19,847	19,847
84	55	Lockheed Martin Corporation	1111 Lockheed Martin Way	Sunnyvale	94089	-	18,632	18,632
85	1634	Napa State Hospital	2100 Napa Vallejo Hwy	Napa	94558	-	18,048	18,048
86	11247	Clover Flat Landfill Inc	4380 Silverado Trail	Calistoga	94515	13,181	3,769	16,951
87	22	Conoco Phillips Refining Company	2101 Franklin Canyon Rd	Rodeo	94572	-	16,697	16,697

Table V:

2007 BAY AREA MAJOR (TOP 200) GHG EMITTING FACILITIES

No.	Plant #	Plant Name	Plant Address	City	Zipcode	CO2 Equivalent Emissions (Metric Tons per year)		
						Biogenic	Non-Biogenic	Total
88	12071	Bayer Healthcare LLC	800 Dwight Way	Berkeley	94710	-	16,609	16,609
89	11668	Gas Recovery Systems, Inc	Marsh Road	Menlo Park	94025	14,574	1,982	16,556
90	3256	Turk Island Solid Waste Disposal Site	Union City Boulevard	Union City	94587	7,527	8,973	16,500
91	11671	Gas Recovery Systems, Inc	Landfill	Canyon	94558	14,231	1,935	16,167
92	94	Cargill Salt	7220 Central Ave	Newark	94560	-	16,147	16,147
93	13631	Morgan Advanced Ceramics	2425 Whipple Road	Hayward	94544	-	16,071	16,071
94	5905	City of Sunnyvale/Public Works Dept	301 Carl Road	Sunnyvale	94088	1,799	14,204	16,003
95	12967	TRC	James Donlon Blvd	Antioch	94509	7,188	8,569	15,758
96	733	City of Sunnyvale Water Pollution Control	1440 Borregas Avenue	Sunnyvale	94089	13,277	2,345	15,622
97	9029	Kie-Con	3551 Wilbur Avenue	Antioch	94509	-	15,494	15,494
98	4272	El Camino Hospital	2500 Grant Road	Mountain View	94040	-	15,403	15,403
99	2721	City of Palo Alto Landfill	Byxbee Park	Palo Alto	94301	4,722	10,665	15,387
100	9010	California Paperboard Corporation	525 Mathew Street	Santa Clara	95050	-	14,247	14,247
101	14512	Gilroy Energy Center, LLC for Riverview Energy Ctr	801 Minaker Road	Antioch	94509	-	14,035	14,035
102	1403	City of Santa Rosa Wastewater Treatment	4300 Llano Road	Santa Rosa	95407	6,302	7,534	13,836
103	3590	City of Berkeley/Engr Div/Public Works	Cesar Chavez Prk	Berkeley	94704	6,195	7,385	13,581
104	7264	California Pacific Medical Center	3700 California Street	San Francisco	94118	-	13,399	13,399
105	11661	Rhodia Inc	100 Mococo Road	Martinez	94553	-	13,294	13,294
106	227	Criterion Catalysts Company LP	2840 Willow Pass Road	Pittsburg	94565	-	12,953	12,953
107	79	Morton International Inc	7380 Morton Avenue	Newark	94560	-	12,135	12,135
108	1371	TP	7399 Johnson Drive	Pleasanton	94588	5,959.6	5,830.9	11,790.5
109	18198	New WinCup Holdings, Inc	195 Tamal Vista Boulevard	Corte Madera	94925	-	11,563	11,563
110	1579	Granite Rock Company	1321 Lowrie Avenue	Francisco	94080	-	11,397	11,397
111	5081	ALZA Corporation	1015 Joaquin Road	Mountain View	94043	9,680	1,549	11,229
112	475	Santa Clara Valley Health & Hospital System	751 So Bascom Avenue	San Jose	95128	-	10,969	10,969
113	11374	WD Media, Inc	1710 Automation Pkwy	San Jose	95131	-	10,965	10,965
114	1605	Services	2003 Diamond Blvd	Concord	94520	-	10,920	10,920
115	632	Intel Corporation	2150 Mission College Blvd	Santa Clara	95054	-	10,759	10,759
116	14511	Gilroy Energy Center, LLC (Wolfskill Energy Ctr)	2425 Cordelia Road	Fairfield	94534	-	10,660	10,660

Table V:

2007 BAY AREA MAJOR (TOP 200) GHG EMITTING FACILITIES

No.	Plant #	Plant Name	Plant Address	City	Zipcode	CO2 Equivalent Emissions (Metric Tons per year)		
						Biogenic	Non-Biogenic	Total
117	1004	SFSU Housing Facilities (Cogeneration Plant)	1600 Holloway Avenue	San Francisco	94132	-	10,192	10,192
118	2025	University of San Francisco	2130 Fulton Street	San Francisco	94117	-	10,070	10,070
119	450	Veterans Administration Medical Center	3801 Miranda Avenue	Palo Alto	94304	-	9,783	9,783
120	3312	Zanker Road Resource Management, Ltd	705 Los Esteros Road	San Jose	95134	1,250	8,243	9,493
121	550	NASA-AMES Research Center	Moffett Field NS	Mountain View	94035	-	9,347	9,347
122	3273	Pacific Union College	1 Angwin Avenue	Angwin	94508	-	9,217	9,217
123	1209	Union Sanitary District	5072 Benson Road	Union City	94587	8,069	889	8,958
124	10271	Darling International	429 Amador Street	San Francisco	94124	-	8,883.9	8,883.9
125	541	Pacific Gas & Electric Co	4690 Evora Road	Concord	94520	-	8,828	8,828
126	927	California Oils Corporation	1145 Harbour Way, South	Richmond	94804	-	8,797	8,797
127	10583	Monterey Mushrooms Inc	642 Hale Avenue	Morgan Hill	95038	-	8,482	8,482
128	705	Vulcan Materials Company Western Division	52 El Charro Road	Pleasanton	94566	-	8,215	8,215
129	12870	Shell Chemical LP	10 Mococo Road	Martinez	94553	-	8,092	8,092
130	9455	American Licorice Company	2477 Liston Way	Union City	94587	-	8,061	8,061
131	9573	Diageo North America, Inc	151 Commonwealth Drive	Menlo Park	94025	-	7,987	7,987
132	1995	Solano County Facilities Operations	501 Delaware Street	Fairfield	94533	-	7,864	7,864
133	459	Veterans Administration Medical Center	4150 Clement Street	San Francisco	94121	-	7,847	7,847
134	8025	Novartis Vaccines and Diagn	4560 Horton Street	Emeryville	94608	-	7,821	7,821
135	12557	AMCAN Beverages, Inc	1201 Commerce Boulevard	Canyon	94503	-	7,715	7,715
136	14415	Center	5975 Lambie Road	Suisun City	94585	-	7,695	7,695
137	10437	Byron Power Company, c/o Ridgewood Power Mgmt	4901 Bruns Road	Byron	94514	-	7,650	7,650
138	3194	City of Alameda, Maint Serv Center	Doolittle Drive	Alameda	94501	3,413	4,068	7,481
139	17559	Pacific Atlantic Terminals LLC	2801 Waterfront Road	Martinez	94553	-	7,467	7,467
140	10861	Northrop Grumman Systems Corporation	401 E Hendy Ave, 62/1	Sunnyvale	94088	-	7,351	7,351
141	14416	Goose Haven Energy Center	3853 Goose Haven Road	Suisun City	94585	-	7,146	7,146
142	13683	Dey L P	2751 Napa Valley Corp Dr	Napa	94558	-	7,002	7,002
143	4175	City of San Jose (Singleton Road Landfill)	885 Singleton Road	San Jose	95111	3,187	3,799	6,986
144	14414	Creed Energy Center LLC	6150 Creed Road	Suisun City	94585	-	6,867	6,867
145	17925	Transamerica Pyramid Properties, LLC	600 Montgomery Street	San Francisco	94111	-	6,860	6,860

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2007 BAY AREA MAJOR (TOP 200) GHG EMITTING FACILITIES

No.	Plant #	Plant Name	Plant Address	City	Zipcode	CO2 Equivalent Emissions (Metric Tons per year)		
						Biogenic	Non-Biogenic	Total
146	148	Ball Metal Beverage Container Corp	2400 Huntington Drive	Fairfield	94533	-	6,795	6,795
147	2531	Santa Rosa Memorial Hospital	1165 Montgomery Drive	Santa Rosa	95402	-	6,772	6,772
148	16855	Kaiser Antioch Deer Valley	4501 Sand Creek Rd	Antioch	94509	-	6,594	6,594
149	4446	Veterans' Home of California	100 California Dr, Administration	Yountville	94599	-	6,483	6,483
150	3024	Isola USA Corp	401 Whitney Place	Fremont	94539	-	6,362	6,362
151	556	Stanford Linear Accelerator	2575 Sand Hill Road	Menlo Park	94025	-	6,274.2	6,274.2
152	3613	St Mary's Medical Center	450 Stanyan Street	San Francisco	94117	-	6,228	6,228
153	255	Lawrence Livermore National Laboratory	7000 East Avenue	Livermore	94550	-	6,218	6,218
154	4116	San Francisco, City & County, PUC	3500 Great Highway	San Francisco	94132	2,780	3,428	6,208
155	849	Roche Palo Alto LLC	3431 Hillview Avenue	Palo Alto	94304	-	5,885	5,885
156	110	Burke Industries, Inc	2250 So 10th Street	San Jose	95112	-	5,849	5,849
157	12965	John Zink Company	2150 Kruse Drive	San Jose	95131	-	5,777	5,777
158	11924	California Pacific Medical Center	Castro & Duboce Street	San Francisco	94114	-	5,767	5,767
159	15816	Cal-Pox, Inc	103 Shoreline Parkway	San Rafael	94901	786	4,926	5,713
160	2035	PEPSICO Beverages and Foods	1175 57th Avenue	Oakland	94621	-	5,700	5,700
161	167	Maxwell House, Div of Kraft Foods	100 Halcyon Drive	San Leandro	94578	-	5,609	5,609
162	9339	San Jose State University	One Washington Square	San Jose	95192	-	5,540	5,540
163	1067	Oro Loma Sanitary District	2600 Grant Avenue	San Lorenzo	94580	4,315	1,203	5,519
164	16930	San Mateo County Youth Services Center	70 Loop Road	San Mateo	94402	-	5,369	5,369
165	8287	Coca-Cola	5800 3rd Street	San Francisco	94124	-	5,263	5,263
166	15117	Bay Sheets	6791 Alexander St	Gilroy	95020	-	5,204	5,204
167	1472	Unimin Corporation	Camino Diablo Rd	Byron	94514	-	5,093	5,093
168	16023	Georgia-Pacific Corrugated LLC	2800 Alvarado Street	San Leandro	94577	-	5,014	5,014
169	18447	PPF OFF One Market Plaza LLC	Tow	San Francisco	94105	-	4,979	4,979
170	2168	Jelly Belly Candy Company	One Jelly Belly Lane	Fairfield	94533	-	4,858	4,858
171	17315	C & H Sugar Company, Inc	830 Loring Avenue	Crockett	94525	-	4,817	4,817
172	10408	County Asphalt	5501 Imhoff Drive	Martinez	94553	-	4,807	4,807
173	2561	Shoreline Amphitheatre	One Amphitheatre Parkway	Mountain View	94043	2,171	2,592	4,763
174	1860	Laguna Honda Hospital	375 Laguna Honda Boulevard	San Francisco	94116	-	4,686	4,686

Table V:

2007 BAY AREA MAJOR (TOP 200) GHG EMITTING FACILITIES

No.	Plant #	Plant Name	Plant Address	City	Zipcode	CO2 Equivalent Emissions (Metric Tons per year)		
						Biogenic	Non-Biogenic	Total
175	14327	Silgan Containers Mfg Corp	2200 Wilbur Avenue	Antioch	94509	-	4,632	4,632
176	2451	Pleasanton Garbage Service, Inc	2512 Vineyard Avenue	Pleasanton	94566	1,301	3,298	4,599
177	17560	Mission Foods	23423 Cabot Blvd	Hayward	94545	-	4,594	4,594
178	1700	California Pacific Med Ctr, Pacific Campus	2333 Buchanan Street	San Francisco	94115	-	4,593	4,593
179	15501	Spansion LLC	915 De Guigne Drive	Sunnyvale	94086	-	4,557	4,557
180	3919	Kaiser Permanente San Jose Medical Center	250 Hospital Parkway	San Jose	95119	-	4,546	4,546
181	3885	Highland General Hospital	1411 E 31st Street	Oakland	94602	-	4,517	4,517
182	1258	Delta Diablo Sanitation District	2500 Pittsburg & Antioch Hwy	Antioch	94509	2,049	2,400	4,449
183	653	Central Marin Sanitation Agency	Andersen Drive, East end	San Rafael	94901	1,776	2,542	4,318
184	73	Gallagher & Burk, Inc	344 High Street	Oakland	94601	-	4,301.4	4,301.4
185	128	Syar Industries, Inc	Lake Herman Road	Vallejo	94591	-	4,182	4,182
186	1351	City of Burlingame, Waste Water Treatment Plant	1103 Airport Boulevard	Burlingame	94010	1,937	2,220	4,157
187	1009	Hayward Waste Water Treatment Plant	3700 Enterprise Ave	Hayward	94545	3,563	491	4,053
188	453	Good Samaritan Hospital	2425 Samaritan Drive	San Jose	95124	-	4,034	4,034
189	460	Alta Bates Hospital	2450 Ashby Avenue	Berkeley	94705	-	4,004	4,004
190	12001	Quikrete Northern California	6950 Stevenson Blvd	Fremont	94538	-	3,866	3,866
191	16888	Ingersoll-Rand Energy Systems	5858 Horton Street	Emeryville	94608	-	3,864	3,864
192	92	Antioch Building Materials Company	1375 California Ave	Pittsburg	94565	-	3,839	3,839
193	1404	Fairfield-Suisun Sewer District	1010 Chadbourne Road	Fairfield	94534	1,775	2,061	3,836
194	13617	Delta Air Lines Inc	SJ Int'l Airport	San Jose	95120	-	3,805.7	3,805.7
195	5691	Sunquest Properties Inc	Landfill, Brisbane	Brisbane	94005	1,711	2,040	3,750
196	2957	Super Store Industries/Fairfield Dairy Division	199 Red Top Road	Fairfield	94533	-	3,689	3,689
197	10162	EXAR Corporation	48760 Kato Road	Fremont	94538	-	3,688	3,688
198	1534	South Bayside System Authority	Radio Road, End of	Redwood City	94065	3,356	233	3,589
199	232	Onizuka Air Force Base	1080 Innovation Way	Sunnyvale	94089	-	3,568	3,568
200	3893	Sonoma Valley Hospital District	347 Andrieux Street	Sonoma	95476	-	3,550	3,550
Total (Metric Tons per year)						1,183,471	28,052,724	29,236,195