Appendix B-2
Greenhouse Gas Emissions Evaluation

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Subject: The Avenue Specific Plan Greenhouse Gas Emissions Evaluation

INTRODUCTION

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the Earth with respect to temperature, precipitation, and storms. GCC is currently one of the most controversial issues in the United States, and much debate exists within the scientific community whether or not GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred in the past over the course of thousands or millions of years. These climate changes occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift presently taking place is occurring at a quicker rate and magnitude. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases (GHG) in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of GHG resulting from human activity and industrialization over the past 200 years.

Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2 (Carbon Dioxide), N_2O (Nitrous Oxide), CH_4 (Methane), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the Earth's atmosphere, but prevent radioactive heat from escaping, thus warming the Earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. According to the California Air Resources Board (CARB), the climate change that is currently in effect differs from previous climate changes in both rate and magnitude (CARB, 2004,

Technical Support document for Staff Proposal Regarding Reduction of Greenhouse Gas Emissions from Motor Vehicles).

Gases that trap heat in the atmosphere are often referred to as GHG. GHG are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural GHG effect, the Earth's average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently. The cumulative accumulation of these gases in the Earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

The purpose of this evaluation is to determine the GHG emissions associated with the development and operation of The Avenue Specific Plan, and provide mitigation and/or project design measures to reduce emissions to the extent feasible. Due to the global nature of climate change, it is unlikely that GHG emissions resulting from any single project are likely to have a significant impact on overall climate change. Instead, GHG emissions from the proposed project would combine with GHG emissions emitted across California, the United States, and the world to cumulatively contribute to GCC.

REGULATORY SETTING

GCC first became a matter of concern in the 1980s. In 1988, the United Nations created the Intergovernmental Panel on Climate Change in order to assess the potential impacts of global warming and develop strategies that could be instituted by nations in order to reduce GHG emissions.

Although GCC did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the unintended reduction of GHG emissions. In order to manage the state's energy needs and promote energy efficiency, AB 1575 created the California Energy Commission (CEC) in 1975. Additionally, Title 24 Part 6, enacted in 1978, required buildings to meet energy efficiency standards. It is estimated by the CEC that consumers have saved $15.8 billion on utility bills

since 1978 as a result of Title 24, indirectly resulting in a reduction in GHG emissions that would otherwise result from increased energy use.

Vehicle emissions of GHG were subsequently targeted in 2002, with the passage of Assembly Bill 1493 (AB 1493), which required the California Air Resources Board (CARB) to develop regulations to limit GHG emissions by cars and light duty trucks. These measures will go into effect in 2009 if the U.S. EPA grants the waiver that has been requested by California. It is estimated that vehicle emissions of GHG will be reduced by approximately 18 percent by 2020 because of the regulations initiated by AB 1493 (CARB 2004).

In 2006, the State Legislature adopted Senate Bill 1368 (SB 1368), which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission (CPUC) to adopt a GHG emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Due to the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the state. Thus, SB 1368 will lead to dramatically lower GHG emissions associated with California energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out of state producers that cannot satisfy the EPS standard required by SB 1368.

Also, in 2006, Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, was signed into law by Governor Arnold Schwarzenegger, giving CARB primary responsibility for reducing statewide GHG emissions to 1990 levels by 2020. Additionally, Governor Schwarzenegger signed into law Executive Order S-3-05, which requires the California EPA to prepare biannual reports to the Governor on progress made towards meeting the GHG emissions reduction targets.

Although the United States has pledged over $29 billion for research into GCC (U.S. Department of Energy Fact Sheet on Global Climate Change, 2007), the United States Environmental Protection Agency (EPA) does not currently regulate vehicle GHG emissions. However, the United States Supreme Court has determined that EPA does have the authority to regulate GHG emissions from vehicle exhaust under the Clean Air Act. See *Massachusetts v. EPA,* 549 U.S. 497 (2007).

The place of climate change in the California Environmental Quality Act (CEQA) process was acknowledged in August of 2007, with the approval of Senate Bill 97 (SB 97). SB 97 gives the Office of Planning and Research (OPR) the authority to draft CEQA guidelines for addressing GCC, and requires OPR to develop guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions by July 2009. These guidelines must be adopted by the Resources Agency by January 2010.

On October 17, 2007, CARB published its Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California, which outlines recommendations for discrete early action measures to reduce GHG emissions. Six new regulations are proposed to meet the definition of "discrete early action GHG reduction measures". CARB estimates that implementation of the 44 measures outlined in the report may result in a reduction in GHG emissions of approximately 42 million metric tons of carbon dioxide (CO_2) equivalent GHG.

GHG emissions resulting from the transportation sector have also been the focus of increased scrutiny. As found in the recent Ninth Circuit Court of Appeals ruling in *Center for Biological Diversity v. National Highway Transportation Safety Administration (NHTSA),* 508 F.3d 508 (9th Circuit 2007), the NHTSA violated the Energy Policy and Conservation Act by exempting sport utility vehicles (SUVs) and light trucks from fuel economy standards. Because vehicle GHG emissions are directly related to the amount of fuel consumed, it is expected that this ruling could significantly reduce GHG emissions resulting from vehicle use.

In December 2007, CARB established the 1990 statewide GHG emissions level at 427 teragrams (Tg) CO_2 equivalent GHG, which, as required under AB 32, is the GHG emissions level which shall be achieved by 2020. One Tg is equivalent to One Million Metric Ton. GHG emissions in California for 2004 were estimated at 492 Tg CO_2 equivalent (CEC 2006). According to preliminary estimates, 2020 emissions projections could reach 600 million metric tons of CO_2 equivalent GHG if no reduction measures are taken.

In January 2008, the California Air Pollution Control Officers Association (CAPCOA) published the document CEQA and Climate Change, which considers and evaluates numerous approaches to addressing GHG emissions under CEQA. However, due to pending litigation in various state and federal courts and active federal legislation, many legal and policy questions regarding global warming and GHG emissions remain unsettled; thus, the CAPCOA document is intended only to be a resource, as opposed to providing regulatory guidance.

Additionally, in June 2008, the OPR released the technical advisory CEQA and Climate Change: Addressing Climate Change Through CEQA Review. In this document, OPR provides interim guidance on how climate change should be addressed in CEQA documents until the CEQA Guidelines are amended on or before January 1, 2010 (pursuant to SB 97).

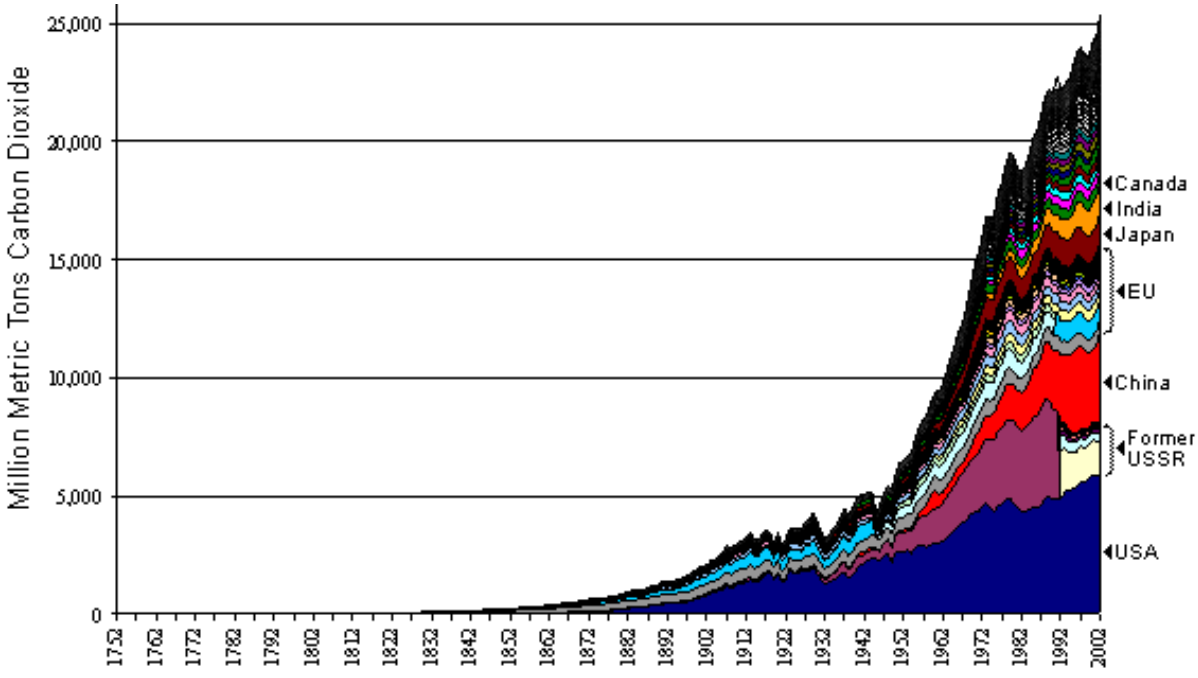
It should be noted that OPR, with the assistance of CARB's technical staff, and the SCAQMD are currently in the process of establishing CEQA GHG significance thresholds. Both agencies are in the preliminary "working group" stages of developing GHG significance thresholds and no formal guidance has been adopted. Any significance threshold formally adopted by the SCAQMD would apply to projects located within the district, while any CARB significance threshold would apply to projects located within the state. The progress of the proposed significance thresholds by OPR/CARB and the SCAQMD will be tracked for purposes of this project and if guidance becomes available the report may be updated if applicable.

GREENHOUSE GAS EMISSIONS INVENTORIES

It is estimated that the United States produces approximately 20 percent of global GHG emissions. Figure 1 presents global sources of GHG by nation.

Each year, the U.S. EPA prepares an inventory of national GHG emissions in order to track emissions trends and compare data on a global level. In the United States, the most abundant GHG emitted by human activity is carbon dioxide, comprising approximately 85 percent of total GHG emissions. Methane emissions, which are associated with livestock and waste decomposition, have steadily declined since 1990. Nitrous oxide emissions, produced by agricultural processes and motor vehicle exhaust, have decreased slightly since 1990. Overall, GHG emissions in the United States have risen by 16.3 percent between 1990 and 2005. Figure 2 presents a summary of United States GHG emissions by gas for years 1990-2005.

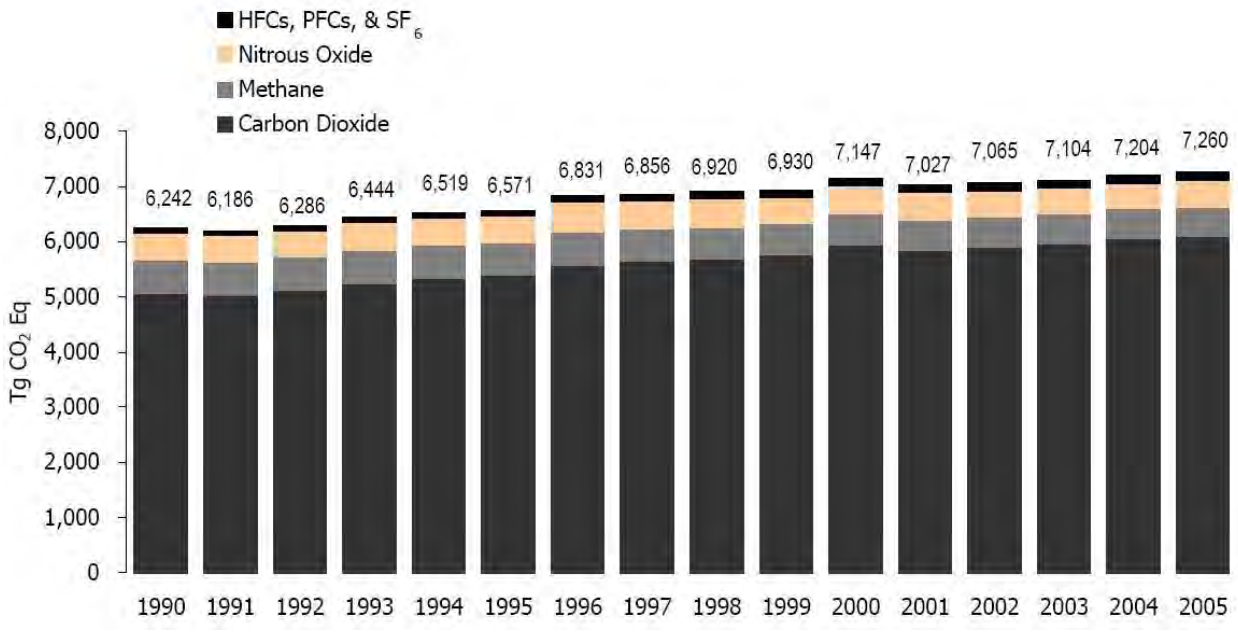
Figure 1: Global CO_2 Emissions from Fossil Fuel Burning, Cement Manufacture, and Gas Flaring: 1751-2002



Source: US EPA (http://www.epa.gov/climatechange/emissions/globalghg.html)

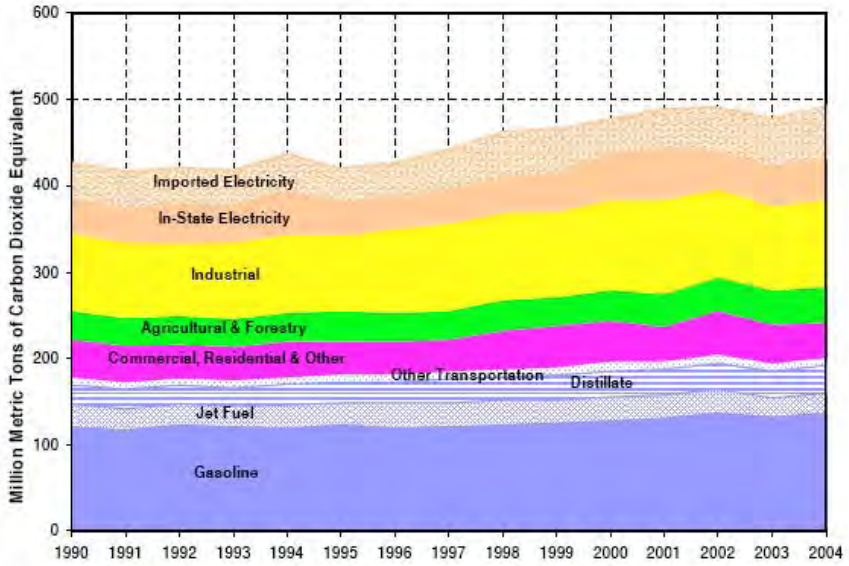
Although California's rate of growth of GHG emissions is slowing, the state is still a substantial contributor. In 2004, the state produced an estimated 492 million gross metric tons of carbon dioxide equivalent GHG emissions. It should be noted however that between the years of 1990 and 2004, California's population increased by 16 percent while the growth of GHG emissions slowed by 9.7 percent. Much of this reduction in GHG emissions can be attributed to energy conservation measures in residential and commercial buildings and appliances implemented under Title 24 of the California Building Code. Figure 3 presents California's GHG emissions from 1990 to 2004 by source; emission quantities are represented in the thickness of the bands for each source.

Figure 2: United States Greenhouse Gas Emissions by Gas, 1990-2005



Source: US EPA Inventory Of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005

Figure 3: California's Gross GHG Emissions Trends, 1990-2004



Source: California Energy Commission, Greenhouse Gas Inventory, Dec. 2006

Based on the CEC's estimates, California's residential and commercial sectors are already in compliance with the goals set by AB 32 to reduce GHG emissions to 1990 levels, as is presented in Table 1.

Table 1
California Greenhouse Gas Emissions
(Tg CO_2 Equivalents)

	1990	2004
Residential	28.97	27.86
Commercial	12.65	12.19

Source: California Energy Commission, Greenhouse Gas Inventory, Dec. 2006

Building related energy consumption was further reduced by the 2005 Building Energy Efficiency Standards, which apply to new residential and commercial construction. The CEC estimates that these new standards will reduce energy consumption for nonresidential buildings

by 8.3 percent. Compliance with these updated California Building Code Title 24 standards will not only reduce energy consumption and costs, but will further reduce emissions of GHG when compared to older construction.

Water use efficiency is another measure through which GHG emissions can be reduced. According to the California Climate Action Team Report, "19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute, and use water and wastewater. When a unit of water is saved, so too is the energy required to convey, treat, affect local delivery, perform wastewater treatment, and safely dispose of that unit of water." The reduced energy use resulting from water conservation leads to reduced GHG emissions.

GLOBAL CLIMATE CHANGE GASES

For the purposes of this analysis, emissions of carbon dioxide, methane, and nitrous oxide were evaluated. Although other substances, such as fluorinated gases, also contribute to GCC, sources of fluorinated gases are not well defined and no accepted emissions factors or methodology exist to accurately calculate these gases. The potential for fluorinated gases to result from operation of the proposed project is primarily a concern for hydrochlorofluorocarbon (HCFC) emissions associated with project air conditioning leakage.

GHG have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. Carbon dioxide is utilized as the reference gas for GWP, and thus has a GWP of 1.

The atmospheric lifetime and GWP of selected GHG are summarized in Table 2. As shown, GWP range from 1 for carbon dioxide to 23,900 for sulfur hexafluoride.

TABLE 2
Atmospheric Lifetimes and Global Warming Potentials of Select Greenhouse Gases

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CH4)	50,000	6,500
PFC: Hexafluoroethane (C2F6)	10,000	9,200
Sulfur Hexafluoride (SF6)	3,200	23,900

Source: EPA 2006 (URL: http://www.epa.gov/nonco2/econ-inv/table.html)

Water Vapor: Water vapor is the most abundant, important, and variable of the GHG in the atmosphere. Without water vapor in the atmosphere, the climate would be too unstable to support life. Evaporation from the ocean is the main source of water vapor, accounting for nearly 85% of water vapor in the atmosphere. Other sources of water vapor include evaporation from other water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves.

Carbon Dioxide: Carbon dioxide is created in the combustion of fossil fuels, forest clearing, and biomass burning. Human activity is more closely tied to carbon dioxide concentrations in the atmosphere than other GHG, and carbon dioxide is used as a reference to compare the impacts of

other GHG. Concentrations of carbon dioxide in the atmosphere have typically increased at a rate of 0.5% per year and levels today are 30% higher than those prior to industrialization in the late 18th and early 19th Centuries.

Methane: Methane is a hydrocarbon produced through production and distribution of natural gas and oil, coal production, incomplete fuel combustion, waste decomposition, and animal digestion. Methane concentrations in the atmosphere are over twice their pre-industrial levels, and increasing at a rate of 0.6% each year, although this rate is thought to be slowing. The global warming potential of methane is 21.

Nitrous Oxide: Nitrous Oxide is emitted during fossil fuel combustion, biomass burning, and certain agricultural and industrial activities. Compared to carbon dioxide, nitrous oxide is an especially harmful GHG, with a global warming potential of 310.

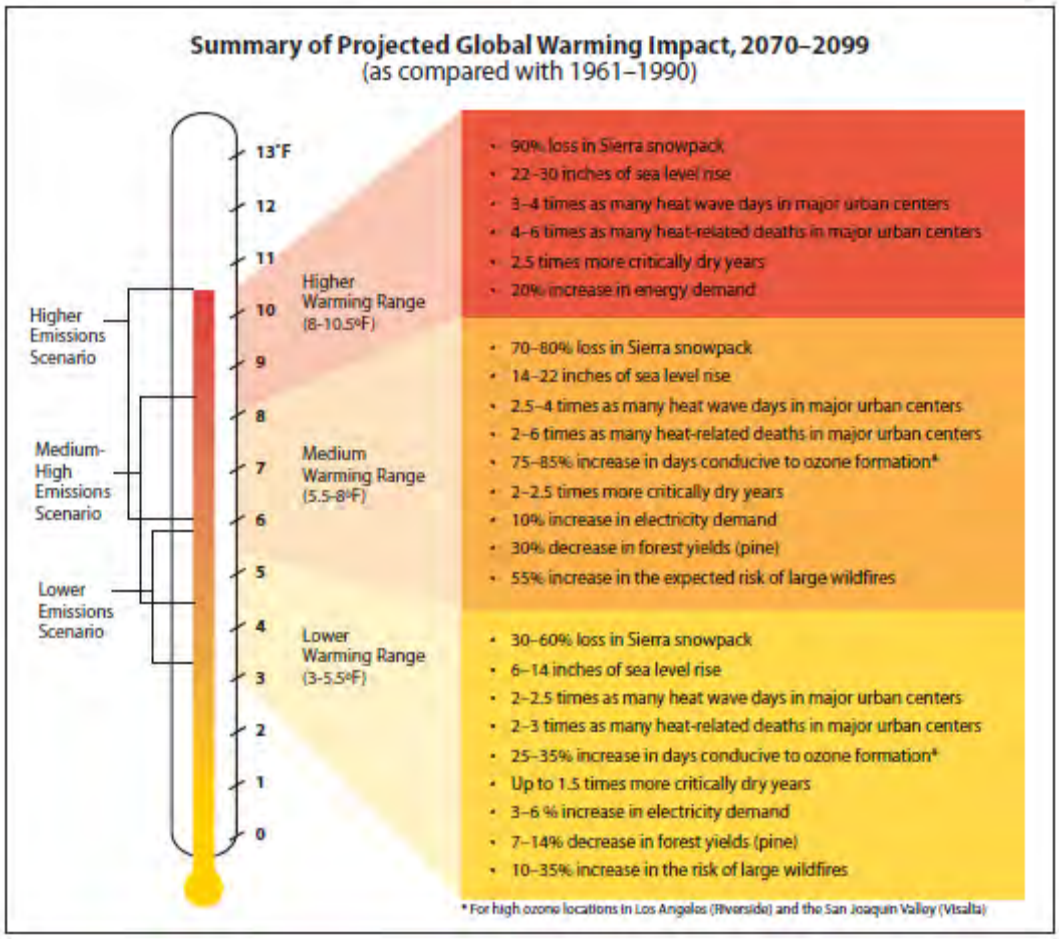
Fluorinated Gases: Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful GHG that are emitted from a variety of industrial processes. Fluorinated gases are often used as substantiates for ozone-depleting substances (i.e., chlorofluorocarbons (CFCs), HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are some of the most potent GHG, they have high global warming potential, ranging from 140 to 23,900.

Aerosols: Aerosols are suspensions of particulate matter (PM) in a gaseous state emitted into the atmosphere through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon, also known as soot, is emitted during biomass burning and incomplete combustion with fossil fuels. Regulations for PM have been reducing aerosol concentrations in the United States; however it is expected that global concentrations are likely increasing as a function of other growing nations.

HEALTH EFFECTS

The potential health effects associated directly with the emissions of carbon dioxide, methane, and nitrous oxide as they relate to development projects such as the proposed project are still being debated. Their cumulative effects to GCC have the potential to cause great harm to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also fear that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (American Lung Association, 2004). Figure 4 presents the potential impacts of global warming.

Figure 4



Source: California Energy Commission, 2006. Our Changing Climate, Assessing the Risks to California, 2006 Biennial Report.

Specific health effects associated with directly emitted GHG emissions are as follows:

Water Vapor: There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

Carbon Dioxide: According to the National Institute for Occupational Safety and Health (NIOSH), high concentrations of carbon dioxide can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of carbon dioxide are estimated to be approximately 370 parts per million (ppm). The reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (NIOSH 2005). Therefore, current concentrations of carbon dioxide are well below hazardous levels.

Methane: Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Methane is also an asphyxiant, meaning it dilutes or displaces oxygen containing atmosphere, and may lead to death by asphyxiation (OSHA 2003).

Nitrous Oxide: Nitrous Oxide is often referred to as laughing gas; it is a colorless GHG. The health effects associated with exposure to elevated concentrations of nitrous oxide include dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations, nitrous oxide can also cause brain damage (OSHA 1999).

Fluorinated Gases: High concentrations of fluorinated gases can result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality (NIOSH 1989, 1997).

Aerosols: The health effects of aerosols are similar to that of other fine particulate matter. Thus, aerosols can cause elevated respiratory and cardiovascular diseases as well as increased mortality (NASA 2002).

PROJECT DESCRIPTION

For the purposes of this analysis, two operational scenarios have been analyzed. The first, which represents the project's previously proposed total land uses, consists of 2,200 single family detached residential dwelling units, 120 condominium residential dwelling units, an 850 student elementary school, two 450 student middle schools, and 174,000 square feet of retail commercial. The second operational scenario analyzed represents the proposed increase in land uses over the first, previously proposed land uses, and includes 286 dwelling units and 76,000 square feet of commercial use. For purposes of this analysis, the project is anticipated to be fully developed in 2015. Project generated emissions, including those resulting from the vehicular traffic generated by the project, are discussed in the following sections. Trip characteristics, such as commercial trips, trip lengths, and percentage of trips, and vehicle miles traveled (VMT) were generated using the URBEMIS 2007 model.

The project is within the New Model Colony (NMC). The vision of the NMC is intended to become a place of diversity that includes a mix of residential neighborhoods, high intensity regional serving centers, employment centers, and an activity core that serves as the common focal point for all NMC neighborhoods and districts. The NMC includes uses that are typically found in sustainable communities, including housing, retail, offices, entertainment, educational, medical, visitor-oriented, industrial, schools, cultural, recreational parks, government uses, and open space. These uses will be connected through a series of greenways/trails, open spaces, amenities, and infrastructure. Development will be organized around a number of amenities

including a regional-scaled public park, lake, and waterways, a golf course, and extensively landscaped parkways and trails.

EXISTING SETTING

The project site is developed with dairies, a hog farm, and associated single family residences.

PROJECT-RELATED EMISSIONS

GHG emissions associated with the development and operation of the proposed project were estimated for the following five categories: (1) increases in emissions from short-term construction activity (fossil-fuel consumption); (2) increase in emissions from electricity generation to provide power to project uses; (3) increase in emissions from natural gas use for project uses; (4) increase in emissions from water consumption for project uses; and (5) increase in emissions from vehicular-exhaust emissions from daily vehicular activity as a result of the project.

CONSTRUCTION EMISSIONS

During the construction phase of the project, GHG emissions will be released through the burning of fossil-fuel in construction equipment. Emission forecasts for carbon dioxide and methane were calculated based on CARB's OFFROAD 2007 emissions inventory model and associated South Coast Air Quality Management District (SCAQMD) methodology. Emissions of nitrous oxide resulting from construction equipment were estimated based on emission factors provided in the document General Reporting Protocol for the Voluntary Reporting Program (The Climate Registry, October 29, 2007) and CARB's OFFROAD 2007 model. Construction equipment and phasing estimates are based on discussions with the project team and are included in the report The Avenue Specific Plan Air Quality Impact Analysis (Urban Crossroads, Inc., September 8, 2008). Table 3 summarizes GHG emissions by construction

phase, and Attachment A contains the detailed OFFROAD 2007 emissions inventory outputs and associated construction emission calculations.

Recommended measures to reduce GHG emissions during project construction are presented in the Findings and Recommendations section of this report. However, the extent to which these measures will reduce GHG emissions cannot be accurately estimated at this time, thus no reduction in emissions is taken for purposes of this evaluation.

AREA SOURCE EMISSIONS

Another substantial source of GHG emissions is the combustion of fossil fuels for electricity production, cooking, and heating. While not released on-site, increased GHG emissions resulting from the added electrical demands of the project will be created, since electricity is often generated through the burning of coal, oil, or natural gas. Also, GHG will be released through project natural gas use.

TABLE 3

CONSTRUCTION GREENHOUSE GAS EMISSIONS
POUNDS PER DAY

Construction Activity	CO_2	N_2O		CH_4	
	lbs/day	lbs/day	lbs/day CO_2 EQ	lbs/day	lbs/day CO_2 EQ
Demolition					
Off-Road Equipment	15,346.11	0.40	123.99	1.83	38.48
Haul Trucks	9,431.90	4.87	1,508.51	0.36	7.65
Worker Commute	1,575.32	0.50	154.63	0.10	2.10
Grading					
Off-Road Equipment	64,930.28	1.69	524.38	7.03	147.53
Haul Trucks	13,979.88	6.77	2,098.69	0.51	10.63
Worker Commute	6,304.42	1.88	582.55	0.37	7.77
Underground Utility Construction					
Off-Road Equipment	16,581.20	0.49	152.05	2.15	45.05
Worker Commute	3,324.21	0.83	257.69	0.17	3.50
Paving					
Off-Road Equipment	32,879.90	0.97	301.20	4.04	84.85
Worker Commute	5,347.65	1.34	414.55	0.27	5.63

Building Construction / Architectural Coating					
Off-Road Equipment	4,425.94	0.13	38.97	0.51	10.80
Worker Commute	3,035.15	0.76	235.29	0.15	3.20
Total	177,161.96	20.62	6,392.51	17.49	367.20

Source: Urban Crossroads, Inc. Hand Calculations, 2008

GHG emissions resulting from project energy use were calculated based on average annual commercial energy usage rates published in the *SCAQMD CEQA Air Quality Handbook* (1993). Power generation emission factors were obtained from the U.S. EPA's eGRID2006 database for the California/Mexico subregion.

In order to forecast the GHG emissions resulting from natural gas combustion, usage estimates consistent with the URBEMIS 2007 model were used. GHG emissions from natural gas usage were calculated based on U.S. EPA emission factors (Compilation of Air Pollutant Emission Factors, Volume 1, Chapter 1, External Combustion Sources—Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion, Table 1.4-1).

Emissions of GHG will also occur as a result of project water consumption. Water use and energy consumption are closely linked, especially in Southern California, where water supplies are limited and a significant portion of the water supply must be imported. Large amounts of energy are required for the conveyance, treatment, distribution, and end use of water, as well as wastewater treatment. Water consumption estimates are based on water usage estimates from the American Water Works Association.

Table 4 (presented later in this report) summarizes GHG emissions for project operations resulting from project energy use, water use, and natural gas consumption. Attachment A contains the detailed project calculations.

MOBILE SOURCE EMISSIONS

The majority of GHG emissions associated with the daily project operations are the result of increased project-related motor vehicle activity. Emissions for carbon dioxide, methane, and nitrous oxide were calculated using trip generation rates available in the report The Avenue Specific Plan Amendment Traffic Impact Study (Urban Crossroads, Inc., August 27, 2008). Trip

characteristics, such as commercial trips, trip lengths, and percentage of trips, and VMT were generated by URBEMIS 2007. Vehicle emission factors for both starting and running emissions were obtained using the EMFAC 2007 model. Finally, hand calculations consistent with URBEMIS 2007 were applied in order to forecast GHG emissions resulting from project related trips.

In order to calculate vehicle emissions of nitrous oxide, a conversion factor based on CARB findings (Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005) was applied to emission factors for oxides of nitrogen. Cruising speeds utilized for the EMFAC 2007 model were estimated at 30 miles per hour (consistent with the URBEMIS 2007 model). Emission factors were calculated by EMFAC 2007 based on the project build out year of 2015 (consistent with the project air study). In order to obtain accurate forecasts of GHG emissions resulting from the project, emissions were calculated for both summer and winter temperatures of 80°F and 60°F, respectively, based on the URBEMIS 2007 model defaults for the project area. Table 4 summarizes GHG emissions resulting from project-related traffic. Attachment A contains the detailed calculations for mobile source GHG emissions.

TABLE 4

TOTAL GREENHOUSE GAS EMISSIONS (ANNUAL)[1]
(METRIC TONS PER YEAR)

Scenario	Source	CO_2	N_2O		CH_4	
		mtpy	mtpy	mtpy CO_2 EQ	mtpy	mtpy CO_2 EQ
Original Project	Mobile Source Emissions	54,000.23	2.49E+00	772.10	3.52E+00	73.95
	Energy Use Emissions	7,273.86	6.62E-02	20.53	2.98E-01	6.26
	Water Use Related Emissions	1,576.10	1.43E-02	4.45	6.46E-02	1.36
	Natural Gas Emissions	6,408.43	1.17E-01	36.42	1.23E-01	2.58
	Total (metric tons per year)	69,258.62	2.69	833.50	4.01	84.14
	Sub Total (Teragrams CO_2 Equivalent)	0.0702				
Incremental Increase	Mobile Source Emissions	5,499.94	2.54E-01	78.69	3.59E-01	7.53
	Energy Use Emissions	1,191.30	1.08E-02	3.36	4.88E-02	1.02
	Water Use Related Emissions	195.59	1.78E-03	0.55	8.01E-03	0.17
	Natural Gas Emissions	893.33	1.64E-02	5.08	1.71E-02	0.36

	Total (metric tons per year)	7,780.16	0.28	87.68	0.43	9.08
	Total (Teragrams CO_2 Equivalent)	0.0079				
Total (metric tons per year)		77,038.79	2.97	921.18	4.44	93.22
Grand Total (Metric Tons CO_2 Equivalent)		78,053.19				
Grand Total (Teragrams CO_2 Equivalent)		0.0781				

Source: Urban Crossroads, Inc. Greenhouse Gas Emissions Hand Calcs, 2008

[1]Annual = Average of summer and winter emissions, includes emissions from mobile and area sources.

THRESHOLD OF SIGNIFICANCE

As indicated in section 15064(b) of the State CEQA Guidelines, the determination of significance of greenhouse gases is not "ironclad;" rather, the "determination of whether a project may have a significant effect on the environment calls for a careful judgment" by the City "based to the extent possible on scientific and factual data." The City of Ontario has not yet adopted a numeric threshold of significance for emissions fo greenhouse gases. The analysis below sets out the factual bases for the City's determination regarding the effect of greenhouse gases. This analysis is specific to this project, however, and may not necessarily apply to other projects within the City of Ontario.

It should be noted that CARB and the SCAQMD are currently in the process of establishing CEQA GHG significance thresholds. Both agencies are in the preliminary "working group" stages of developing GHG significance thresholds, although no formal guidance that would be applicable to this project has been adopted. Both agencies have provided draft interim thresholds for discussion purposes. It is important to note that any significance threshold formally adopted by the SCAQMD would apply to projects located within the district, while any CARB significance threshold would apply to projects located within the state.

CARB is currently in the process of establishing a statewide CEQA Climate Change emission threshold for industrial, residential, and commercial projects. CARB's preliminary draft staff proposal was released for public review on October 24, 2008. CARB also held a public workshop

to discuss the draft proposal on October 27, 2008 and December 9, 2008. The current schedule has CARB adopting an interim threshold by January 22, 2008. A summary of CARB's proposed thresholds under consideration are summarized on Table 5.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 MT CO2eq/yr. As part of the Interim GHG Significance Threshold development process for industrial projects, the SCAQMD established a working group of stakeholders that also considered thresholds for residential/commercial projects. As discussed in the Interim GHG Significance Threshold guidance document the focus for residential/commercial projects is on performance standards and a screening level threshold. For discussion purposes the SCAQMD's working group considered a performance standards primarily focused on energy efficiency measures beyond Title 24 and a screening level of 3,000 MT CO2eq/yr based on the relative GHG emissions contribution between residential/commercial sectors and stationary source (industrial) sectors. The working group and staff ultimately decided that additional analysis was needed to further define the performance standards and to coordinate with CARB staff's interim GHG proposal. Staff, therefore, did not recommend action for adopting an interim threshold for residential/commercial projects but rather recommended bringing this item back to the Board for discussion and possible action in March 2009 if the CARB board does not take its final action by February 2009.

Table 5
Comparison of CARB's and AQMD Staff's
Interim GHG Significance Threshold Approaches

	CARB
Industrial	Project < 7,000 MTCO2eq/yr & meets construction & transportation performance standard
Residential/Commercial	Upper limit on project emissions—to be defined. Performance standards for construction, energy, water, waste and transportation. Project with mitigation may demonstrate an equivalent level of GHG emission reduction.

	Construction Performance Standards currently under consideration: • Provide alternative transportation mode options of incentives for workers to and from worksite on days that construction requires 200 or more workers; AND • Recycle and/or salvage at least 75% of non-hazardous construction and demolition debris by weight (residential) or by weight or volume (commercial); AND • Use recycled materials for at least 20% of construction materials Energy Performance Standards currently under consideration: • Meet CEC's voluntary Tier II Energy Efficiency standards in effect at time building construction begins Water Performance Standards currently under consideration: • Reduce indoor potable water use by at least 20% • Reduce outdoor potable water use for landscape irrigation by at least 50% Waste Performance Standards currently under consideration: • Design facilities and structures to encourage participation in local recycling and/or composting program; AND • Install adequate accessible recycling and composting receptacles in common or public areas; AND • Provide easy access to central recycling and composting receptacles or collection areas Transportation Performance Standards currently under consideration: <u>Residential:</u> • Demonstrate the average vehicle miles traveled per household do not exceed 14,000 VMT/hh-yr • Represents carbon-efficient, compact development with close proximity to transit and variety of services <u>Commercial:</u> Meet the following proximity and design elements: • ½ mile of residential zone or neighborhood with average density of at least 10du/net acre; AND • ½ mile of at least 10 neighborhood services; AND • Pedestrian access between project and services; AND • Institute comprehensive transportation demand management (TDM) program to reduce employee trips by at least 20%

AQMD	
Industrial	GHG emissions from industrial project is < 10,000 MTCO2eq/yr, includes construction emissions amortized over 30 years & added to operational GHG emissions
Residential/Commercial	The performance standards primarily focus on energy efficiency measures beyond Title 24 and a screening level of 3,000 MTCO2eq/yr based on the relative GHG emissions contribution between residential/commercial sectors and stationary source (industrial) sectors. Additional analysis is needed to further define the performance standards and to coordinate with CARB staff's interim GHG proposal. Staff, therefore, SCAQMD recommends bringing this item back to the Board for discussion and possible action in March 2009 if the CARB board does not take its final action by February 2009.

It is estimated that the proposed project (including the incremental increase in project land uses) would result in approximately 78,053.19 metric tons (0.0781 Tg) of CO_2 Eq. which represents approximately 0.01586 % of California's 2004 total CO_2 emissions. It should be noted that the reduction in GHG emissions resulting from implementation of the recommended emissions reduction measures and project design features is not known at this time, and thus, implementation of the recommended emissions reduction measures will likely further reduce GHG emissions beyond what is presented in Table 4.

Due to the overwhelming scope of GCC, it is not anticipated that any single development project would have a substantial effect on GCC. No single development can be deemed individually responsible for global temperature increases and rising sea levels. Instead, GHG emissions from the proposed project would combine with GHG emissions emitted across California, the United States, and the world to cumulatively contribute to GCC. Therefore, this analysis considers GCC on a cumulative basis.

Although implementation of the CAT strategies will likely reduce GHG emissions to the extent possible, it is not possible to specifically quantify the reduction in GHG that will result from implementation of CAT strategies and programs.

In addition to assessing the Project's consistency with CAT strategies and programs, a comparison

of the project's emissions to the draft interim thresholds under consideration by CARB and SCAQMD has been conducted to assist the City in determining whether the Project's greenhouse gas emissions are cumulatively considerable.

Although the SCAQMD is deferring action on the proposed 3,000 metric tons of CO_2 Eq/year until CARB establishes an interim statewide threshold, it is likely that the proposed project's emissions will exceed any proposed numerical threshold established by the SCAQMD and therefore a significant cumulative impact to climate change is expected.

Although CARB's interim draft thresholds establish a numeric value only for industrial projects and currently they do not define the "upper limit on project emissions" numerically, it is anticipated that the CARB upper limit project emissions for residential/commercial projects would fall within the general range of the proposed industrial project numerical threshold of 7,000 metric tons of CO_2 Eq/year and the CARB mandatory reporting requirement for industrial projects of 25,000 metric tons of CO_2 Eq/year. Given that the proposed project will generate approximately 78,053.19 metric tons (0.0781 Tg) of CO_2 Eq per year the determination that the project will exceed the proposed upper limit can be made and a significant cumulative impact to global climate change is expected. It should be noted however that the proposed project is consistent with some of the general performance standards as identified in Table 5 and subsequently in the project design features section.

PROJECT DESIGN FEATURES

Recommended measures to reduce GHG emissions during project construction activity are presented in Section 5.0 of the report The Avenue Specific Plan Air Quality Impact Analysis (Urban Crossroads, Inc., September 8, 2008). Although these construction mitigation measures are proven to reduce criteria pollutant emissions, their effectiveness to reduce GHG emissions is not known at this time, and mitigation measures to reduce GHG emissions resulting from construction activity are generally not available at this time. Because mitigation measures to reduce GHG emissions resulting from construction activity are not proven and remain under investigation at this

time, no reduction in construction activity GHG emissions is taken for purposes of this evaluation.

Additionally, as previously indicated, the project contains both residential and commercial/retail uses, which reduces vehicle miles traveled. Since a large proportion of greenhouse gases are generated through vehicle emissions, a reduction in vehicle miles traveled will result in a reduction in GHG emissions.

It should also be noted that The Avenue Specific Plan will provide pedestrian and bicycle facilities to interconnect with other NMC trail systems. Internal project streets will be constructed with pedestrian friendly streets to interconnect all portions of the project area and all surrounding uses. These pedestrian and bicycle facilities will also help reduce GHG emissions by reducing the number of vehicle trips and vehicle miles traveled.

It is conservatively estimated that inclusion of these design features will yield a net reduction in project GHG emissions. However, for the purposes of this evaluation, no reduction was taken.

RECOMMENDED MEASURES IDENTIFIED BY THE CALIFORNIA ATTORNEY GENERAL'S OFFICE

Additionally, the project will implement the following applicable GHG reduction measures as part of project design as recommended by the California Attorney General's Office in the document Addressing Global Warming Impacts at the Local Agency Level:

Generally Applicable Measures

Energy Efficiency

- Design buildings to be energy efficient consistent with the California Energy Commission's Tier II Energy Efficiency Goals). Measures to increase energy efficiency may include siting buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.

- Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings.

- Install light colored "cool" roofs for residential and commercial buildings, cool pavements (e.g., reflective pavement, pavements with high albedo, etc.), and strategically placed shade trees.

- Install Energy Star Rated heating and cooling systems, appliances and equipment, and control systems.

- Install light emitting diodes (LEDs) for traffic, and other outdoor lighting.

- Limit the hours of operation of outdoor lighting to that necessary for safety.

- Provide educational materials on energy efficiency at the time of purchase, work with local energy provider to distribute pamphlets and additional relevant materials.

Renewable Energy

- Install solar and tankless hot water heaters for commercial buildings, and energy-efficient (Energy Star Rated) heating ventilation and air conditioning systems.

- Offer solar energy systems, solar and tankless hot water heaters and energy-efficient (Energy Star Rated) heating ventilation and air conditioning systems as an option at purchase to residential customers. Educate consumers about existing incentives.

Water Conservation and Efficiency

- Create water-efficient landscapes, consistent with MWD's California Friendly landscaping program, that achieve a 50% reduction in outdoor potable water use.

- Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.

- Use reclaimed water for landscape irrigation in new multi-family developments and on public property. Install the infrastructure to deliver and use reclaimed water.

- Design buildings to be water-efficient to achieve a 20% reduction in indoor potable water use. Install water-efficient fixtures and appliances such as ultra-low flush toilets and high efficiency clothes washing machines.

- Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.

- Restrict in CC&R's the use of water for cleaning outdoor surfaces and vehicles.

- Implement low-impact development practices that maintain the existing hydrologic character of the site to manage storm water (i.e., by retaining storm water run-off on-site) and protect the environment.

- Provide education about water conservation and available programs and incentives.

Solid Waste Measures

- Reuse and recycle 75% of construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).

- Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.

- Provide education and publicity about reducing waste and available recycling services

Lastly, the proposed project is consistent with all applicable CAT strategies to reduce California's emissions to levels proposed in Executive Order S-3-05 and AB 32.

Table 6
Project Compliance with Applicable 2006 CAT Report Greenhouse Gas Emissions Reduction Strategies

Strategy	Project Compliance
Vehicle Climate Change Standards AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.	Compliant. Vehicles that will access the project site will be in compliance with CARB vehicle standards to the maximum extent feasible.
Other Light Duty Vehicle Technology New standards would be adopted to phase in beginning in the 2017 model	
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy-duty vehicles and an education program for the heavy-duty vehicle sector.	
Diesel Anti-Idling In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Compliant. This is a regulatory requirement. Heavy-duty diesel trucks that access the project site will be required to limit idling to no more than five minutes in any location.
Achieve 50 percent Statewide Recycling Goal Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter	Compliant. Project design will include provisions for residents to recycle.

1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	
Zero Waste - High Recycling Additional recycling beyond the State's 50 percent recycling goal.	
Urban Forestry A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	Compliant. The implementation of the proposed project will result in the planting of additional trees and vegetation at the project site.
Afforestation/Reforestation Projects Reforestation projects focus on restoring native tree cover on lands that were previously forested and are now covered with other vegetative types.	
Water Use Efficiency Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	Compliant. The project shall implement U.S. EPA Certified WaterSense labeled or equivalent faucets and high-efficiency toilets (HETs), and implement water-conserving shower heads to the extent feasible.
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services. Governor Schwarzenegger is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through state investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity, and a quality environment.	Compliant. The proposed project contains a mix of uses, and is is placing development adjacent to a transportation corridor and near homes which can limit worker commute trips.

Green Buildings Initiative Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels.	Compliant. With implementation of the project design features, the project is expected to reduce energy use. Additionally, the project will be consistent with energy standards required by Title 24 or better.
California Solar Initiative Installation of 1 million solar roofs or an equivalent 3,000 MW by 2017 on homes and businesses; increased use of solar thermal systems to offset the increasing demand for natural gas; use of advanced metering in solar applications; and creation of a funding source that can provide rebates over 10 years through a declining incentive schedule.	Compliant. Recommended project design features include a provision that buildings shall be designed to accommodate renewable energy sources, such as photovoltaic solar energy systems as is economically and physically feasible.
Water Use Efficiency Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	Compliant. Project will include low flow fixtures where possible.
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	Compliant. Project will be compliant with updated Title 24 standards for building construction.
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	Compliant. Appliances purchased for use in project will be consistent with existing energy efficiency standards.

Source: State of California, Environmental Protection Agency, Climate Action Team, 2006.

If you have any questions, please contact me directly at (949) 660-1994.

Respectfully submitted,

URBAN CROSSROADS, INC.

Aric Evatt
Principal

Haseeb Qureshi,
Senior Air Quality Specialist

AE:HQ:MT
JN: 02719-09 GCC Report

Attachments

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ATTACHMENT A

GREENHOUSE GAS EMISSIONS

CALCULATIONS

DEMOLITION ACTIVITY

2008 SCAB Fleet Average Emission Factors For Diesel Engines (Emission Factors in lbs/hr)

		CO_2	CH_4	N_2O
Equipment Type	Max Horsepower Rating	Pounds per hour		
Crushing/Processing Equip.	Composite	132.31	0.02	0.00
Rubber Tired Dozers	Composite	239.11	0.03	0.01
Tractors/Loaders/Backhoes	Composite	66.81	0.01	0.00
Off-Hwy (Water) Trucks	Composite	260.13	0.02	0.01

Grading Equipment Emissions (lbs/day)

			CO_2	CH_4	N_2O
Equipment Type	# of equipment	Hours/day	Pounds per day		
Crushing/Processing Equip.	1	8.0	1,058.48	0.17	0.03
Rubber Tired Dozers	2	8.0	3,825.69	0.53	0.10
Tractors/Loaders/Backhoes	4	8.0	2,137.80	0.35	0.06
Off-Hwy (Water) Trucks	4	8.0	8,324.13	0.79	0.22
		Subtotal:	**15,346.11**	**1.83**	**0.40**

	CO_2	CH_4	N_2O
Total:	**15,346.11**	**1.83**	**0.40**

Haul Truck Emissions[1]

Construction Vehicle (Mobile Source) Emission Factors			
	CO2	**N2O***	**CH4**
	lb/mile	lb/mile	lb/mile
Haul Truck	4.210671446	0.002172392	0.000163

Vehicle	**No. of One-Way Trips/Day**	**One WayTrip Length (miles)**
Haul Truck	56	20

Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day

	CO2	**N2O**	**CH4**
Vehicle	lb/day	lb/day	lb/day
Haul Truck	**9431.90**	**4.87**	**0.36**

[1]Emission factors and methedology obtained from SCAQMD On Road Emissions Factors (www.aqmd.gov) --Highest (Most Conservative) EMFAC 2007 Emission Factors for On-Road Heavy Heavy Duty Diesel Trucks. Analysis year 2008.

*NOX to N2O conversion ratio of 0.04873 applied based on California Air Resources Board: Estimates of Nitrous Oxide Emis Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

EMISSIONS FROM GRADING WORKER TRIPS

Construction Worker Trip Emissions	
Number of Workers	13.75
Average Trip Length One-Way (miles)	30
Average Speed (MPH)	35
Daily VMT LDA & LDT	825

	LDA (pounds/mile)	LDT (pounds/mile)
CO2	1.09953226	2.719434
N2O*	5.37435E-05	0.001155514
CH4	9.46468E-05	0.00014769

Emissions From Commuting (assumes 50% LDA and 50% LDT)

	CO2	N2O	CH4
Estimated Emissions (lbs/day) from worker trips	**1,575.32**	**0.50**	**0.10**

The number of workers is estimated as 125% of the total number of construction equipment (vehicles and machines) selected. The emission estimates assume a construction worker commute fleet mix of 50% light duty autos and 50% light duty trucks.

Emissions Factor Source: Highest (Most Conservative) EMFAC 2007 Emission Factors for On-Road Passanger Vehicles and Delivery Trucks, Analysis Year 2008. (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html)

*NOX to N2O conversion ratio of 0.04873 applied based on California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

GRADING ACTIVITY

2009 SCAB Fleet Average Emission Factors For Diesel Engines (Emission Factors in lbs/hr)

		CO_2	CH_4	N_2O
Equipment Type	Max Horsepower Rating	Pounds per hour		
Other Equipment	Composite	122.78	0.01	0.00
Rough Terrain Forklifts	Composite	70.28	0.01	0.00
Rubber Tired Dozers	Composite	239.10	0.03	0.01
Scrapers	Composite	262.50	0.03	0.01
Off-Hwy (Water) Trucks	Composite	260.12	0.02	0.01

Grading Equipment Emissions (lbs/day)

			CO_2	CH_4	N_2O
Equipment Type	# of equipment	Hours/day	Pounds per day		
Other Equipment	18	8.0	17,680.53	1.47	0.46
Rough Terrain Forklifts	4	8.0	2,248.98	0.39	0.06
Rubber Tired Dozers	6	8.0	11,476.97	1.52	0.30
Scrapers	12	8.0	25,200.07	2.90	0.66
Off-Hwy (Water) Trucks	4	8.0	8,323.72	0.75	0.22
		Subtotal:	**64,930.28**	**7.03**	**1.69**

	CO_2	CH_4	N_2O
Total:	**64,930.28**	**7.03**	**1.69**

EMISSIONS FROM GRADING WORKER TRIPS

Construction Worker Trip Emissions	
Number of Workers	55
Average Trip Length One-Way (miles)	30
Average Speed (MPH)	35
Daily VMT LDA & LDT	3300

	LDA (pounds/mile)	LDT (pounds/mile)
CO2	1.097553983	2.723304957
N2O*	4.89826E-05	0.001089913
CH4	8.7669E-05	0.000136554

Emissions From Commuting (assumes 50% LDA and 50% LDT)

	CO2	N2O	CH4
Estimated Emissions (lbs/day) from worker trips	**6,304.42**	**1.88**	**0.37**

The number of workers is estimated as 125% of the total number of construction equipment (vehicles and machines) selected. The emission estimates assume a construction worker commute fleet mix of 50% light duty autos and 50% light duty trucks.

Emissions Factor Source: Highest (Most Conservative) EMFAC 2007 Emission Factors for On-Road Passanger Vehicles and Delivery Trucks, Analysis Year 2009. (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html)

*NOX to N2O conversion ratio of 0.04873 applied based on California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

Haul Truck Emissions[1]

Construction Vehicle (Mobile Source) Emission Factors			
	CO2	**N2O***	**CH4**
	lb/mile	lb/mile	lb/mile
Haul Truck	4.210807919	0.002039151	0.000152

Vehicle	**No. of One-Way Trips/Day**	**One WayTrip Length (miles)**
Haul Truck	83	20

Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day

	CO2	**N2O**	**CH4**
Vehicle	lb/day	lb/day	lb/day
Haul Truck	**13979.88**	**6.77**	**0.51**

[1]Emission factors and methedology obtained from SCAQMD On Road Emissions Factors (www.aqmd.gov) --Highest (Most Conservative) EMFAC 2007 Emission Factors for On-Road Heavy Heavy Duty Diesel Trucks. Analysis year 2009.

*NOX to N2O conversion ratio of 0.04873 applied based on California Air Resources Board: Estimates of Nitrous Oxide Emis Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

UNDERGROUND UTILITY CONSTRUCTION

2011 SCAB Fleet Average Emission Factors For Diesel Engines (Emission Factors in lbs/hr)

		CO_2	CH_4	N_2O
Equipment Type	Max Horsepower Rating	Pounds per hour		
Concrete/Industrial Saws	Composite	58.46	0.01	0.00
Rough Terrain Forklifts	Composite	70.28	0.01	0.00
Tractors/Loaders/Backhoes	Composite	66.80	0.01	0.00
Trenchers	Composite	58.72	0.01	0.00
Off-Hwy (Water) Trucks	Composite	260.09	0.02	0.01

Underground Utility Construction Equipment Emissions (lbs/day)

			CO_2	CH_4	N_2O
Equipment Type	# of equipment	Hours/day	Pounds per day		
Concrete/Industrial Saws	4	8.0	1,870.84	0.34	0.06
Rough Terrain Forklifts	4	8.0	2,248.99	0.34	0.07
Tractors/Loaders/Backhoes	9	8.0	4,809.90	0.61	0.14
Trenchers	3	8.0	1,409.25	0.34	0.04
Off-Hwy (Water) Trucks	3	8.0	6,242.23	0.51	0.18
		Subtotal:	**16,581.20**	**2.15**	**0.49**

	CO_2	CH_4	N_2O
Total:	**16,581.20**	**2.15**	**0.49**

EMISSIONS FROM UNDERGROUND UTILITY CONSTRUCTION WORKER TRIPS

Construction Worker Trip Emissions	
Number of Workers	28.75
Average Trip Length One-Way (miles)	30
Average Speed (MPH)	35
Daily VMT LDA & LDT	1725

	LDA (pounds/mile)	LDT (pounds/mile)
CO2	1.102351544	2.751808225
N2O*	4.11576E-05	0.000922637
CH4	7.67771E-05	0.000116553

Emissions From Commuting (assumes 50% LDA and 50% LDT)

	CO2	N2O	CH4
Estimated Emissions (lbs/day) from worker trips	**3,324.21**	**0.83**	**0.17**

The number of workers is estimated as 125% of the total number of construction equipment (vehicles and machines) selected. The emission estimates assume a construction worker commute fleet mix of 50% light duty autos and 50% light duty trucks.

Emissions Factor Source: Highest (Most Conservative) EMFAC 2007 Emission Factors for On-Road Passanger Vehicles and Delivery Trucks, Analysis Year 2011. (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html)

*NOX to N2O conversion ratio of 0.04873 applied based on California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

PAVING

2011 SCAB Fleet Average Emission Factors For Diesel Engines (Emission Factors in lbs/hr)

		CO_2	CH_4	N_2O
Equipment Type	Max Horsepower Rating	Pounds per hour		
Graders	Composite	132.74	0.01	0.00
Off-Hwy Trucks	Composite	260.09	0.02	0.01
Pavers	Composite	77.93	0.02	0.00
Paving Equipment	Composite	68.94	0.01	0.00
Rollers	Composite	67.05	0.01	0.00

Paving Equipment Emissions (lbs/day)

			CO_2	CH_4	N_2O
Equipment Type	# of equipment	Hours/day	Pounds per day		
Graders	6	8.0	6,371.67	0.70	0.19
Off-Hwy Trucks	6	8.0	12,484.47	1.02	0.36
Pavers	6	8.0	3,740.87	0.73	0.11
Paving Equipment	6	8.0	3,309.35	0.55	0.10
Rollers	13	8.0	6,973.54	1.04	0.21
		Subtotal:	**32,879.90**	**4.04**	**0.97**

	CO_2	CH_4	N_2O
Total:	**32,879.90**	**4.04**	**0.97**

EMISSIONS FROM PAVING WORKER TRIPS

Construction Worker Trip Emissions	
Number of Workers	46.25
Average Trip Length One-Way (miles)	30
Average Speed (MPH)	35
Daily VMT LDA & LDT	2775

	LDA (pounds/mile)	LDT (pounds/mile)
CO2	1.102351544	2.751808225
N2O*	4.11576E-05	0.000922637
CH4	7.67771E-05	0.000116553

Emissions From Commuting (assumes 50% LDA and 50% LDT)

	CO2	N2O	CH4
Estimated Emissions (lbs/day) from worker trips	**5,347.65**	**1.34**	**0.27**

The number of workers is estimated as 125% of the total number of construction equipment (vehicles and machines) selected. The emission estimates assume a construction worker commute fleet mix of 50% light duty autos and 50% light duty trucks.

Emissions Factor Source: Highest (Most Conservative) EMFAC 2007 Emission Factors for On-Road Passanger Vehicles and Delivery Trucks, Analysis Year 2011. (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html)

*NOX to N2O conversion ratio of 0.04873 applied based on California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

BUILDING CONSTRUCTION

2011 SCAB Fleet Average Emission Factors For Diesel Engines (Emission Factors in lbs/hr)

		CO_2	CH_4	N_2O
Equipment Type	Max Horsepower Rating	Pounds per hour		
Cranes	Composite	128.65	0.01	0.00
Forklifts	Composite	54.40	0.01	0.00
Generator Sets	Composite	60.99	0.01	0.00
Tractors/Loaders/Backhoes	Composite	66.80	0.01	0.00
Welders	Composite	25.60	0.01	0.00

Building Construction Equipment Emissions (lbs/day)

			CO_2	CH_4	N_2O
Equipment Type	# of equipment	Hours/day	Pounds per day		
Cranes	1	8.0	1,029.20	0.11	0.03
Forklifts	3	8.0	1,305.50	0.14	0.04
Generator Sets	1	8.0	487.94	0.06	0.01
Tractors/Loaders/Backhoes	3	8.0	1,603.30	0.20	0.05
Welders	1	8.0	204.82	0.05	0.00
		Subtotal:	**4,425.94**	**0.51**	**0.13**

	CO_2	CH_4	N_2O
Total:	**4,425.94**	**0.51**	**0.13**

EMISSIONS FROM BUILDING CONSTRUCTION WORKER TRIPS

Construction Worker Trip Emissions	
Number of Workers	11.25
Average Trip Length One-Way (miles)	30
Average Speed (MPH)	35
Daily VMT LDA & LDT	675

	LDA (pounds/mile)	LDT (pounds/mile)
CO2	1.102351544	2.751808225
N2O*	4.11576E-05	0.000922637
CH4	7.67771E-05	0.000116553

Emissions From Commuting (assumes 50% LDA and 50% LDT)

	CO2	N2O	CH4
Estimated Emissions (lbs/day) from worker trips	**1,300.78**	**0.33**	**0.07**

The number of workers is estimated as 125% of the total number of construction equipment (vehicles and machines) selected. The emission estimates assume a construction worker commute fleet mix of 50% light duty autos and 50% light duty trucks.

Emissions Factor Source: Highest (Most Conservative) EMFAC 2007 Emission Factors for On-Road Passanger Vehicles and Delivery Trucks, Analysis Year 2011. (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html)

*NOX to N2O conversion ratio of 0.04873 applied based on California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

EMISSIONS FROM ARCHITECTURAL COATING WORKER TRIPS

Construction Worker Trip Emissions	
Number of Workers	15
Average Trip Length One-Way (miles)	30
Average Speed (MPH)	35
Daily VMT LDA & LDT	900

	LDA (pounds/mile)	LDT (pounds/mile)
CO2	1.102351544	2.751808225
N2O*	4.11576E-05	0.000922637
CH4	7.67771E-05	0.000116553

Emissions From Commuting (assumes 50% LDA and 50% LDT)

	CO2	N2O	CH4
Estimated Emissions (lbs/day) from worker trips	**1,734.37**	**0.43**	**0.09**

The number of workers is estimated as 125% of the total number of construction equipment (vehicles and machines) selected. The emission estimates assume a construction worker commute fleet mix of 50% light duty autos and 50% light duty trucks.

Emissions Factor Source: Highest (Most Conservative) EMFAC 2007 Emission Factors for On-Road Passanger Vehicles and Delivery Trucks, Analysis Year 2011. (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html)

*NOX to N2O conversion ratio of 0.04873 applied based on California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

SCAB Fleet Average Emission Factors (Diesel)

2008

Air Basin	SC

		(lb/hr)	(lb/hr)	(lb/hr)
Equipment	**MaxHP**	**CO2**	**CH4**	**N2O**
Aerial Lifts	15	8.6527	0.0010	0.0002
	25	10.9601	0.0022	0.0003
	50	19.6128	0.0075	0.0005
	120	38.0718	0.0070	0.0010
	500	212.8560	0.0155	0.0055
	750	384.7561	0.0288	0.0100
Aerial Lifts Composite		34.7217	0.0067	0.0009
Air Compressors	15	7.2231	0.0014	0.0002
	25	14.4462	0.0032	0.0004
	50	22.2713	0.0114	0.0006
	120	46.9502	0.0100	0.0012
	175	88.4831	0.0125	0.0023
	250	131.2199	0.0124	0.0034
	500	231.7415	0.0196	0.0060
	750	358.1460	0.0308	0.0093
	1000	486.3561	0.0518	0.0127
Air Compressors Composite		63.6073	0.0111	0.0017
Bore/Drill Rigs	15	10.3456	0.0011	0.0003
	25	15.9887	0.0019	0.0004
	50	31.0368	0.0073	0.0008
	120	77.1218	0.0092	0.0020
	175	141.0764	0.0108	0.0037
	250	188.1019	0.0095	0.0049
	500	311.3085	0.0141	0.0080
	750	615.0932	0.0289	0.0159
	1000	928.2825	0.0567	0.0240
Bore/Drill Rigs Composite		164.9281	0.0117	0.0043
Cement and Mortar M	15	6.3202	0.0008	0.0002
	25	17.5562	0.0036	0.0005
Cement and Mortar Mixers Compos		7.2481	0.0010	0.0002
Concrete/Industrial Sa	25	16.4777	0.0019	0.0004
	50	30.2092	0.0128	0.0008
	120	74.1497	0.0139	0.0019
	175	160.2001	0.0198	0.0042
Concrete/Industrial Saws Composite		58.4636	0.0132	0.0015
Cranes	50	23.1867	0.0132	0.0006
	120	50.1480	0.0114	0.0013
	175	80.3446	0.0121	0.0021
	250	112.1589	0.0125	0.0029
	500	180.1013	0.0181	0.0047
	750	303.0447	0.0307	0.0079
	9999	970.6056	0.1090	0.0253
Cranes Composite		128.6671	0.0160	0.0034
Crawler Tractors	50	24.8796	0.0147	0.0007
	120	65.8106	0.0157	0.0017
	175	121.1878	0.0193	0.0032
	250	166.1316	0.0204	0.0043
	500	259.2294	0.0286	0.0068
	750	464.6867	0.0515	0.0121
	1000	658.1057	0.0793	0.0172
Crawler Tractors Composite		114.0217	0.0186	0.0030
Crushing/Proc. Equip	50	44.0158	0.0227	0.0012
	120	83.1410	0.0176	0.0022
	175	167.2602	0.0234	0.0044
	250	244.5324	0.0228	0.0063
	500	373.6455	0.0310	0.0097
	750	588.8339	0.0496	0.0153
	9999	1307.7591	0.1378	0.0340
Crushing/Proc. Equipment Composi		132.3104	0.0215	0.0035
Dumpers/Tenders	25	7.6244	0.0011	0.0002
Dumpers/Tenders Composite		7.6244	0.0011	0.0002
Excavators	25	16.4401	0.0018	0.0004
	50	25.0176	0.0125	0.0007
	120	73.6231	0.0149	0.0019
	175	112.2216	0.0151	0.0029
	250	158.6828	0.0146	0.0041
	500	233.7354	0.0196	0.0061
	750	387.4145	0.0328	0.0101

Excavators Composite		119.5812	0.0153	0.0031
Forklifts	50	14.6720	0.0076	0.0004
	120	31.2249	0.0065	0.0008
	175	56.0544	0.0078	0.0015
	250	77.1218	0.0065	0.0020
	500	110.9801	0.0084	0.0029
Forklifts Composite		54.3957	0.0072	0.0014
Generator Sets	15	10.2077	0.0017	0.0003
	25	17.6314	0.0030	0.0005
	50	30.6230	0.0112	0.0008
	120	77.9494	0.0140	0.0020
	175	141.9793	0.0167	0.0037
	250	212.5050	0.0168	0.0055
	500	336.8528	0.0239	0.0087
	750	543.7901	0.0397	0.0141
	9999	1048.6053	0.1021	0.0273
Generator Sets Composite		60.9927	0.0097	0.0016
Graders	50	27.5381	0.0146	0.0007
	120	74.9649	0.0160	0.0020
	175	123.9215	0.0176	0.0032
	250	172.1131	0.0177	0.0045
	500	229.4843	0.0213	0.0060
	750	485.7416	0.0454	0.0126
Graders Composite		132.7431	0.0174	0.0035
Off-Highway Tractors	120	93.7374	0.0244	0.0025
	175	130.4173	0.0228	0.0034
	250	130.4173	0.0185	0.0034
	750	568.1306	0.0721	0.0149
	1000	814.2928	0.1101	0.0213
Off-Highway Tractors Composite		151.4609	0.0232	0.0040
Off-Highway Trucks	175	125.0877	0.0177	0.0033
	250	166.5454	0.0164	0.0043
	500	272.3339	0.0246	0.0071
	750	441.7385	0.0402	0.0115
	1000	624.7242	0.0641	0.0162
Off-Highway Trucks Composite		260.1290	0.0246	0.0068
Other Construction Ec	15	10.1073	0.0011	0.0003
	25	13.2173	0.0016	0.0003
	50	27.9896	0.0112	0.0007
	120	80.8587	0.0142	0.0021
	175	106.5158	0.0122	0.0028
	500	254.2385	0.0175	0.0066
Other Construction Equipment Com		122.7789	0.0110	0.0032
Other General Industr	15	6.3955	0.0006	0.0002
	25	15.3491	0.0017	0.0004
	50	21.7446	0.0128	0.0006
	120	62.0360	0.0145	0.0016
	175	95.9319	0.0148	0.0025
	250	135.5837	0.0140	0.0035
	500	265.4117	0.0247	0.0069
	750	437.4498	0.0410	0.0114
	1000	559.6031	0.0629	0.0146
Other General Industrial Equipmen		152.2399	0.0183	0.0040
Other Material Handli	50	30.3346	0.0177	0.0008
	120	60.6691	0.0140	0.0016
	175	122.0781	0.0187	0.0032
	250	145.0140	0.0148	0.0038
	500	191.6256	0.0176	0.0050
	9999	741.3470	0.0829	0.0193
Other Material Handling Equipment		141.1941	0.0176	0.0037
Pavers	25	18.6597	0.0030	0.0005
	50	27.9896	0.0162	0.0008
	120	69.1964	0.0164	0.0018
	175	128.2855	0.0203	0.0034
	250	194.3719	0.0243	0.0051
	500	233.2464	0.0260	0.0061
Pavers Composite		77.9358	0.0177	0.0021
Paving Equipment	25	12.6279	0.0015	0.0003
	50	23.9266	0.0137	0.0006
	120	54.4994	0.0128	0.0014
	175	101.0232	0.0158	0.0026
	250	122.2913	0.0151	0.0032
Paving Equipment Composite		68.9503	0.0133	0.0018
Plate Compactors	15	4.3138	0.0005	0.0001
Plate Compactors Composite		4.3138	0.0005	0.0001
Pressure Washers	15	4.8906	0.0008	0.0001

	25	7.1479	0.0012	0.0002
	50	14.2957	0.0042	0.0004
	120	24.0770	0.0039	0.0006
Pressure Washers Composite		9.4135	0.0020	0.0002
Pumps	15	7.4238	0.0015	0.0002
	25	19.4874	0.0044	0.0005
	50	34.3349	0.0133	0.0009
	120	77.9494	0.0145	0.0020
	175	140.1233	0.0170	0.0037
	250	201.3693	0.0164	0.0052
	500	345.2047	0.0253	0.0090
	750	570.7010	0.0429	0.0148
	9999	1354.8350	0.1341	0.0352
Pumps Composite		49.6067	0.0094	0.0013
Rollers	15	6.3202	0.0007	0.0002
	25	13.3427	0.0016	0.0003
	50	25.9831	0.0130	0.0007
	120	58.9888	0.0123	0.0015
	175	108.1461	0.0149	0.0028
	250	153.0898	0.0158	0.0040
	500	219.1011	0.0201	0.0057
Rollers Composite		67.0529	0.0120	0.0018
Rough Terrain Forklift	50	33.8583	0.0169	0.0009
	120	62.4498	0.0127	0.0016
	175	124.8996	0.0168	0.0033
	250	170.7965	0.0157	0.0044
	500	256.5710	0.0212	0.0067
Rough Terrain Forklifts Composite		70.2808	0.0132	0.0018
Rubber Tired Dozers	175	129.4768	0.0235	0.0034
	250	183.4870	0.0271	0.0048
	500	264.8725	0.0351	0.0069
	750	398.7885	0.0529	0.0104
	1000	591.8938	0.0825	0.0155
Rubber Tired Dozers Composite		239.1056	0.0329	0.0063
Rubber Tired Loaders	25	16.9292	0.0019	0.0004
	50	31.1497	0.0163	0.0008
	120	58.9135	0.0125	0.0015
	175	106.3152	0.0150	0.0028
	250	148.9767	0.0151	0.0039
	500	237.0084	0.0216	0.0062
	750	485.5285	0.0447	0.0126
	1000	593.8752	0.0621	0.0155
Rubber Tired Loaders Composite		108.6133	0.0147	0.0028
Scrapers	120	93.9005	0.0226	0.0025
	175	148.0739	0.0238	0.0039
	250	209.4702	0.0260	0.0055
	500	321.4285	0.0359	0.0084
	750	555.2767	0.0622	0.0145
Scrapers Composite		262.5025	0.0316	0.0068
Signal Boards	15	6.1697	0.0006	0.0002
	50	36.1908	0.0150	0.0010
	120	80.2066	0.0151	0.0021
	175	154.5445	0.0191	0.0040
	250	255.2919	0.0211	0.0066
Signal Boards Composite		16.6983	0.0022	0.0004
Skid Steer Loaders	25	13.7941	0.0026	0.0004
	50	25.5191	0.0091	0.0007
	120	42.7618	0.0068	0.0011
Skid Steer Loaders Composite		30.2846	0.0079	0.0008
Surfacing Equipment	50	14.1076	0.0060	0.0004
	120	63.7665	0.0123	0.0017
	175	85.7745	0.0109	0.0022
	250	134.8690	0.0128	0.0035
	500	221.2078	0.0189	0.0058
	750	347.0480	0.0301	0.0090
Surfacing Equipment Composite		166.0022	0.0158	0.0043
Sweepers/Scrubbers	15	11.9382	0.0011	0.0003
	25	19.6128	0.0022	0.0005
	50	31.5510	0.0165	0.0008
	120	75.0401	0.0159	0.0020
	175	138.9948	0.0194	0.0036
	250	162.0184	0.0136	0.0042
Sweepers/Scrubbers Composite		78.5433	0.0165	0.0021
Tractors/Loaders/Bac	25	15.8633	0.0021	0.0004
	50	30.3471	0.0139	0.0008
	120	51.7280	0.0098	0.0014

	175	101.3869	0.0127	0.0026
	250	171.7370	0.0144	0.0045
	500	344.8535	0.0261	0.0089
	750	517.2803	0.0397	0.0134
Tractors/Loaders/Backhoes Compos		66.8064	0.0109	0.0017
Trenchers	15	8.4646	0.0009	0.0002
	25	32.9178	0.0037	0.0009
	50	32.9178	0.0182	0.0009
	120	64.8952	0.0151	0.0017
	175	143.8979	0.0224	0.0038
	250	222.9008	0.0277	0.0058
	500	311.3086	0.0344	0.0081
	750	586.8779	0.0655	0.0153
Trenchers Composite		58.7213	0.0167	0.0016
Welders	15	6.2074	0.0012	0.0002
	25	11.2861	0.0025	0.0003
	50	25.9581	0.0121	0.0007
	120	39.5014	0.0080	0.0010
	175	98.1892	0.0131	0.0026
	250	119.0685	0.0107	0.0031
	500	167.5987	0.0135	0.0044
Welders Composite		25.6027	0.0080	0.0007

Emission factors sent by ARB on December 7, 2006 in grams per hour. EF converted by SCAQMD to pounds per hour.

SCAB Fleet Average Emission Factors (Diesel)

2009

Air Basin	SC

		(lb/hr)	(lb/hr)	(lb/hr)
Equipment	**MaxHP**	**CO2**	**CH4**	**N2O**
Aerial Lifts	15	8.7	0.0010	0.0002
	25	11.0	0.0021	0.0003
	50	19.6	0.0072	0.0005
	120	38.1	0.0067	0.0010
	500	212.9	0.0146	0.0055
	750	384.8	0.0271	0.0100
Aerial Lifts Composite		34.7	0.0064	0.0009
Air Compressors	15	7.2	0.0014	0.0002
	25	14.4	0.0031	0.0004
	50	22.3	0.0110	0.0006
	120	47.0	0.0096	0.0012
	175	88.5	0.0120	0.0023
	250	131.2	0.0118	0.0034
	500	231.7	0.0186	0.0060
	750	358.1	0.0292	0.0093
	1000	486.4	0.0495	0.0127
Air Compressors Composite		63.6	0.0106	0.0017
Bore/Drill Rigs	15	10.3	0.0011	0.0003
	25	16.0	0.0018	0.0004
	50	31.0	0.0060	0.0008
	120	77.1	0.0077	0.0020
	175	141.1	0.0095	0.0037
	250	188.1	0.0090	0.0049
	500	311.3	0.0137	0.0080
	750	615.1	0.0278	0.0159
	1000	928.3	0.0519	0.0240
Bore/Drill Rigs Composite		164.9	0.0105	0.0043
Cement and Mortar M	15	6.3	0.0007	0.0002
	25	17.6	0.0034	0.0005
Cement and Mortar Mixers Composi		7.2	0.0010	0.0002
Concrete/Industrial Sa	25	16.5	0.0018	0.0004
	50	30.2	0.0119	0.0008
	120	74.1	0.0130	0.0019
	175	160.2	0.0185	0.0042
Concrete/Industrial Saws Composite		58.5	0.0123	0.0015
Cranes	50	23.2	0.0124	0.0006
	120	50.1	0.0107	0.0013
	175	80.3	0.0115	0.0021
	250	112.2	0.0118	0.0029
	500	180.1	0.0172	0.0047
	750	303.0	0.0292	0.0079
	9999	970.6	0.1035	0.0253
Cranes Composite		128.7	0.0152	0.0034
Crawler Tractors	50	24.9	0.0139	0.0007
	120	65.8	0.0148	0.0017

	175	121.2	0.0184	0.0032
	250	166.1	0.0194	0.0043
	500	259.2	0.0274	0.0068
	750	464.7	0.0493	0.0121
	1000	658.1	0.0755	0.0172
Crawler Tractors Composite		114.0	0.0177	0.0030
Crushing/Proc. Equip	50	44.0	0.0217	0.0012
	120	83.1	0.0168	0.0022
	175	167.3	0.0224	0.0044
	250	244.5	0.0215	0.0063
	500	373.6	0.0295	0.0097
	750	588.8	0.0472	0.0153
	9999	1,307.8	0.1314	0.0340
Crushing/Proc. Equipment Composi		132.3	0.0205	0.0035
Dumpers/Tenders	25	7.6	0.0010	0.0002
Dumpers/Tenders Composite		7.6	0.0010	0.0002
Excavators	25	16.4	0.0018	0.0004
	50	25.0	0.0113	0.0007
	120	73.6	0.0137	0.0019
	175	112.2	0.0141	0.0029
	250	158.7	0.0138	0.0041
	500	233.7	0.0187	0.0061
	750	387.4	0.0312	0.0100
Excavators Composite		119.6	0.0143	0.0031
Forklifts	50	14.7	0.0068	0.0004
	120	31.2	0.0060	0.0008
	175	56.1	0.0072	0.0015
	250	77.1	0.0061	0.0020
	500	111.0	0.0081	0.0029
Forklifts Composite		54.4	0.0067	0.0014
Generator Sets	15	10.2	0.0016	0.0003
	25	17.6	0.0028	0.0005
	50	30.6	0.0107	0.0008
	120	77.9	0.0133	0.0020
	175	142.0	0.0159	0.0037
	250	212.5	0.0157	0.0055
	500	336.9	0.0224	0.0087
	750	543.8	0.0372	0.0141
	9999	1,048.6	0.0967	0.0273
Generator Sets Composite		61.0	0.0092	0.0016
Graders	50	27.5	0.0136	0.0007
	120	75.0	0.0150	0.0020
	175	123.9	0.0166	0.0032
	250	172.1	0.0167	0.0045
	500	229.5	0.0203	0.0060
	750	485.7	0.0432	0.0126
Graders Composite		132.7	0.0165	0.0035
Off-Highway Tractors	120	93.7	0.0232	0.0025
	175	130.4	0.0219	0.0034
	250	130.4	0.0177	0.0034
	750	568.1	0.0693	0.0149
	1000	814.3	0.1054	0.0213
Off-Highway Tractors Composite		151.5	0.0223	0.0040

Off-Highway Trucks	175	125.1	0.0166	0.0033
	250	166.5	0.0155	0.0043
	500	272.3	0.0235	0.0071
	750	441.7	0.0383	0.0115
	1000	624.7	0.0609	0.0162
Off-Highway Trucks Composite		260.1	0.0234	0.0068
Other Construction E	15	10.1	0.0011	0.0003
	25	13.2	0.0015	0.0003
	50	28.0	0.0102	0.0007
	120	80.9	0.0130	0.0021
	175	106.5	0.0113	0.0028
	500	254.2	0.0164	0.0066
Other Construction Equipment Com		122.8	0.0102	0.0032
Other General Industr	15	6.4	0.0006	0.0002
	25	15.3	0.0017	0.0004
	50	21.7	0.0122	0.0006
	120	62.0	0.0139	0.0016
	175	95.9	0.0143	0.0025
	250	135.6	0.0133	0.0035
	500	265.4	0.0237	0.0069
	750	437.4	0.0393	0.0114
	1000	559.6	0.0603	0.0146
Other General Industrial Equipmen		152.2	0.0175	0.0040
Other Material Handli	50	30.3	0.0169	0.0008
	120	60.7	0.0135	0.0016
	175	122.1	0.0180	0.0032
	250	145.0	0.0141	0.0038
	500	191.6	0.0169	0.0050
	9999	741.3	0.0795	0.0193
Other Material Handling Equipment		141.2	0.0168	0.0037
Pavers	25	18.7	0.0026	0.0005
	50	28.0	0.0154	0.0008
	120	69.2	0.0156	0.0018
	175	128.3	0.0194	0.0034
	250	194.4	0.0230	0.0051
	500	233.2	0.0247	0.0061
Pavers Composite		77.9	0.0168	0.0020
Paving Equipment	25	12.6	0.0014	0.0003
	50	23.9	0.0131	0.0006
	120	54.5	0.0122	0.0014
	175	101.0	0.0151	0.0026
	250	122.3	0.0143	0.0032
Paving Equipment Composite		68.9	0.0127	0.0018
Plate Compactors	15	4.3	0.0005	0.0001
Plate Compactors Composite		4.3	0.0005	0.0001
Pressure Washers	15	4.9	0.0008	0.0001
	25	7.1	0.0012	0.0002
	50	14.3	0.0040	0.0004
	120	24.1	0.0037	0.0006
Pressure Washers Composite		9.4	0.0019	0.0002
Pumps	15	7.4	0.0014	0.0002
	25	19.5	0.0042	0.0005
	50	34.3	0.0127	0.0009

	120	77.9	0.0138	0.0020
	175	140.1	0.0162	0.0037
	250	201.4	0.0154	0.0052
	500	345.2	0.0237	0.0090
	750	570.7	0.0403	0.0148
	9999	1,354.8	0.1272	0.0352
Pumps Composite		49.6	0.0089	0.0013
Rollers	15	6.3	0.0007	0.0002
	25	13.3	0.0015	0.0003
	50	26.0	0.0122	0.0007
	120	59.0	0.0115	0.0015
	175	108.1	0.0141	0.0028
	250	153.1	0.0148	0.0040
	500	219.1	0.0190	0.0057
Rollers Composite		67.1	0.0113	0.0018
Rough Terrain Forklift	50	33.9	0.0156	0.0009
	120	62.4	0.0118	0.0016
	175	124.9	0.0157	0.0033
	250	170.8	0.0147	0.0044
	500	256.6	0.0200	0.0067
Rough Terrain Forklifts Composite		70.3	0.0123	0.0018
Rubber Tired Dozers	175	129.5	0.0225	0.0034
	250	183.5	0.0261	0.0048
	500	264.9	0.0338	0.0070
	750	398.8	0.0510	0.0105
	1000	591.9	0.0793	0.0155
Rubber Tired Dozers Composite		239.1	0.0316	0.0063
Rubber Tired Loaders	25	16.9	0.0019	0.0004
	50	31.1	0.0152	0.0008
	120	58.9	0.0117	0.0015
	175	106.3	0.0141	0.0028
	250	149.0	0.0142	0.0039
	500	237.0	0.0205	0.0061
	750	485.5	0.0424	0.0126
	1000	593.9	0.0587	0.0154
Rubber Tired Loaders Composite		108.6	0.0138	0.0028
Scrapers	120	93.9	0.0213	0.0025
	175	148.1	0.0226	0.0039
	250	209.5	0.0248	0.0055
	500	321.4	0.0343	0.0084
	750	555.3	0.0595	0.0145
Scrapers Composite		262.5	0.0302	0.0068
Signal Boards	15	6.2	0.0006	0.0002
	50	36.2	0.0143	0.0010
	120	80.2	0.0143	0.0021
	175	154.5	0.0182	0.0040
	250	255.3	0.0198	0.0066
Signal Boards Composite		16.7	0.0021	0.0004
Skid Steer Loaders	25	13.8	0.0024	0.0004
	50	25.5	0.0081	0.0007
	120	42.8	0.0061	0.0011
Skid Steer Loaders Composite		30.3	0.0071	0.0008
Surfacing Equipment	50	14.1	0.0057	0.0004

	120	63.8	0.0115	0.0017
	175	85.8	0.0102	0.0022
	250	134.9	0.0120	0.0035
	500	221.2	0.0177	0.0058
	750	347.0	0.0283	0.0090
Surfacing Equipment Composite		166.0	0.0148	0.0043
Sweepers/Scrubbers	15	11.9	0.0011	0.0003
	25	19.6	0.0022	0.0005
	50	31.6	0.0151	0.0008
	120	75.0	0.0146	0.0020
	175	139.0	0.0181	0.0036
	250	162.0	0.0128	0.0042
Sweepers/Scrubbers Composite		78.5	0.0152	0.0021
Tractors/Loaders/Bac	25	15.9	0.0020	0.0004
	50	30.3	0.0126	0.0008
	120	51.7	0.0090	0.0014
	175	101.4	0.0118	0.0026
	250	171.7	0.0135	0.0045
	500	344.9	0.0248	0.0089
	750	517.3	0.0376	0.0134
Tractors/Loaders/Backhoes Compos		66.8	0.0100	0.0017
Trenchers	15	8.5	0.0009	0.0002
	25	32.9	0.0036	0.0009
	50	32.9	0.0174	0.0009
	120	64.9	0.0143	0.0017
	175	143.9	0.0213	0.0038
	250	222.9	0.0263	0.0058
	500	311.3	0.0328	0.0081
	750	586.9	0.0623	0.0153
Trenchers Composite		58.7	0.0159	0.0016
Welders	15	6.2	0.0012	0.0002
	25	11.3	0.0024	0.0003
	50	26.0	0.0116	0.0007
	120	39.5	0.0077	0.0010
	175	98.2	0.0126	0.0026
	250	119.1	0.0101	0.0031
	500	167.6	0.0127	0.0043
Welders Composite		25.6	0.0076	0.0007

Emission factors sent by ARB on December 7, 2006 in grams per hour. EF converted by SCAQMD to pounds per hour.

SCAB Fleet Average Emission Factors (Diesel)

2011

Air Basin	SC

		(lb/hr)	(lb/hr)	(lb/hr)
Equipment	**MaxHP**	**CO2**	**CH4**	**N2O**
Aerial Lifts	15	8.7	0.0009	0.0003
	25	11.0	0.0017	0.0003
	50	19.6	0.0064	0.0006
	120	38.1	0.0059	0.0011
	500	212.9	0.0124	0.0063
	750	384.8	0.0232	0.0114
Aerial Lifts Composite		34.7	0.0056	0.0010
Air Compressors	15	7.2	0.0012	0.0001
	25	14.4	0.0028	0.0003
	50	22.3	0.0099	0.0005
	120	47.0	0.0086	0.0010
	175	88.5	0.0109	0.0018
	250	131.2	0.0103	0.0026
	500	231.7	0.0163	0.0047
	750	358.1	0.0257	0.0072
	1000	486.4	0.0440	0.0098
Air Compressors Composite		63.6	0.0095	0.0013
Bore/Drill Rigs	15	10.3	0.0011	0.0003
	25	16.0	0.0018	0.0005
	50	31.0	0.0039	0.0009
	120	77.1	0.0055	0.0023
	175	141.1	0.0075	0.0042
	250	188.1	0.0081	0.0056
	500	311.3	0.0128	0.0092
	750	615.1	0.0255	0.0183
	1000	928.3	0.0440	0.0187
Bore/Drill Rigs Composite		165.0	0.0085	0.0046
Cement and Mortar M	15	6.3	0.0007	0.0002
	25	17.6	0.0029	0.0005
Cement and Mortar Mixers Composi		7.2	0.0009	0.0002
Concrete/Industrial Sa	25	16.5	0.0018	0.0005
	50	30.2	0.0103	0.0009
	120	74.1	0.0113	0.0022
	175	160.2	0.0163	0.0048
Concrete/Industrial Saws Composite		58.5	0.0106	0.0018
Cranes	50	23.2	0.0108	0.0007
	120	50.1	0.0095	0.0015
	175	80.3	0.0104	0.0024
	250	112.2	0.0106	0.0033
	500	180.1	0.0156	0.0054
	750	303.0	0.0263	0.0090
	9999	970.6	0.0936	0.0196
Cranes Composite		128.7	0.0136	0.0036
Crawler Tractors	50	24.9	0.0122	0.0008
	120	65.8	0.0132	0.0020

	175	121.2	0.0167	0.0036
	250	166.1	0.0176	0.0050
	500	259.2	0.0251	0.0077
	750	464.7	0.0452	0.0139
	1000	658.1	0.0685	0.0133
Crawler Tractors Composite		114.0	0.0159	0.0034
Crushing/Proc. Equip	50	44.0	0.0190	0.0014
	120	83.1	0.0149	0.0025
	175	167.3	0.0202	0.0050
	250	244.5	0.0188	0.0073
	500	373.6	0.0261	0.0111
	750	588.8	0.0417	0.0175
	9999	1,307.8	0.1172	0.0390
Crushing/Proc. Equipment Composi		132.3	0.0182	0.0040
Dumpers/Tenders	25	7.6	0.0009	0.0002
Dumpers/Tenders Composite		7.6	0.0009	0.0002
Excavators	25	16.4	0.0018	0.0005
	50	25.0	0.0092	0.0008
	120	73.6	0.0116	0.0022
	175	112.2	0.0124	0.0034
	250	158.7	0.0124	0.0047
	500	233.7	0.0170	0.0070
	750	387.4	0.0285	0.0115
Excavators Composite		119.6	0.0125	0.0036
Forklifts	50	14.7	0.0053	0.0004
	120	31.2	0.0049	0.0009
	175	56.1	0.0061	0.0017
	250	77.1	0.0056	0.0023
	500	111.0	0.0075	0.0033
Forklifts Composite		54.4	0.0057	0.0016
Generator Sets	15	10.2	0.0015	0.0002
	25	17.6	0.0026	0.0004
	50	30.6	0.0094	0.0006
	120	77.9	0.0118	0.0016
	175	142.0	0.0142	0.0029
	250	212.5	0.0134	0.0043
	500	336.9	0.0190	0.0068
	750	543.8	0.0317	0.0110
	9999	1,048.6	0.0848	0.0212
Generator Sets Composite		61.0	0.0081	0.0012
Graders	50	27.5	0.0116	0.0008
	120	75.0	0.0131	0.0023
	175	123.9	0.0149	0.0037
	250	172.1	0.0150	0.0051
	500	229.5	0.0185	0.0068
	750	485.7	0.0393	0.0145
Graders Composite		132.7	0.0147	0.0040
Off-Highway Tractors	120	93.7	0.0211	0.0028
	175	130.4	0.0201	0.0039
	250	130.4	0.0162	0.0039
	750	568.1	0.0641	0.0170
	1000	814.3	0.0966	0.0165
Off-Highway Tractors Composite		151.4	0.0205	0.0045

Off-Highway Trucks	175	125.1	0.0147	0.0038
	250	166.5	0.0140	0.0050
	500	272.3	0.0214	0.0081
	750	441.7	0.0349	0.0131
	1000	624.7	0.0551	0.0126
Off-Highway Trucks Composite		260.1	0.0212	0.0075
Other Construction E	15	10.1	0.0011	0.0003
	25	13.2	0.0015	0.0004
	50	28.0	0.0084	0.0009
	120	80.9	0.0109	0.0024
	175	106.5	0.0098	0.0032
	500	254.2	0.0144	0.0076
Other Construction Equipment Com		122.7	0.0089	0.0037
Other General Industr	15	6.4	0.0006	0.0002
	25	15.3	0.0017	0.0005
	50	21.7	0.0107	0.0007
	120	62.0	0.0124	0.0019
	175	95.9	0.0130	0.0029
	250	135.6	0.0118	0.0040
	500	265.4	0.0212	0.0079
	750	437.4	0.0352	0.0130
	1000	559.6	0.0542	0.0113
Other General Industrial Equipmen		152.2	0.0157	0.0044
Other Material Handli	50	30.3	0.0149	0.0009
	120	60.7	0.0120	0.0018
	175	122.1	0.0164	0.0037
	250	145.0	0.0125	0.0043
	500	191.6	0.0151	0.0057
	9999	741.3	0.0716	0.0221
Other Material Handling Equipment		141.2	0.0150	0.0042
Pavers	25	18.7	0.0024	0.0006
	50	28.0	0.0139	0.0009
	120	69.2	0.0140	0.0021
	175	128.3	0.0176	0.0039
	250	194.4	0.0208	0.0058
	500	233.2	0.0225	0.0070
Pavers Composite		77.9	0.0152	0.0023
Paving Equipment	25	12.6	0.0014	0.0004
	50	23.9	0.0118	0.0007
	120	54.5	0.0110	0.0016
	175	101.0	0.0138	0.0030
	250	122.3	0.0129	0.0036
Paving Equipment Composite		68.9	0.0114	0.0021
Plate Compactors	15	4.3	0.0005	0.0001
Plate Compactors Composite		4.3	0.0005	0.0001
Pressure Washers	15	4.9	0.0007	0.0001
	25	7.1	0.0011	0.0001
	50	14.3	0.0035	0.0003
	120	24.1	0.0033	0.0005
Pressure Washers Composite		9.4	0.0017	0.0002
Pumps	15	7.4	0.0013	0.0002
	25	19.5	0.0037	0.0004
	50	34.3	0.0113	0.0007

	120	77.9	0.0122	0.0016
	175	140.1	0.0145	0.0028
	250	201.4	0.0132	0.0041
	500	345.2	0.0203	0.0070
	750	570.7	0.0346	0.0115
	9999	1,354.8	0.1118	0.0274
Pumps Composite		49.6	0.0079	0.0010
Rollers	15	6.3	0.0007	0.0002
	25	13.3	0.0015	0.0004
	50	26.0	0.0107	0.0008
	120	59.0	0.0102	0.0018
	175	108.1	0.0126	0.0032
	250	153.1	0.0130	0.0046
	500	219.1	0.0168	0.0065
Rollers Composite		67.1	0.0100	0.0020
Rough Terrain Forklift	50	33.9	0.0131	0.0010
	120	62.4	0.0101	0.0019
	175	124.9	0.0139	0.0037
	250	170.8	0.0129	0.0051
	500	256.6	0.0178	0.0076
Rough Terrain Forklifts Composite		70.3	0.0107	0.0021
Rubber Tired Dozers	175	129.5	0.0208	0.0039
	250	183.5	0.0240	0.0055
	500	264.9	0.0314	0.0079
	750	398.8	0.0473	0.0120
	1000	591.9	0.0733	0.0120
Rubber Tired Dozers Composite		239.1	0.0293	0.0071
Rubber Tired Loaders	25	16.9	0.0019	0.0005
	50	31.1	0.0130	0.0010
	120	58.9	0.0101	0.0018
	175	106.3	0.0126	0.0032
	250	149.0	0.0127	0.0044
	500	237.0	0.0186	0.0071
	750	485.5	0.0384	0.0145
	1000	593.9	0.0523	0.0120
Rubber Tired Loaders Composite		108.6	0.0122	0.0032
Scrapers	120	93.9	0.0190	0.0028
	175	148.1	0.0206	0.0044
	250	209.5	0.0225	0.0063
	500	321.4	0.0315	0.0096
	750	555.3	0.0546	0.0166
Scrapers Composite		262.5	0.0276	0.0078
Signal Boards	15	6.2	0.0006	0.0002
	50	36.2	0.0125	0.0011
	120	80.2	0.0126	0.0024
	175	154.5	0.0161	0.0046
	250	255.3	0.0170	0.0076
Signal Boards Composite		16.7	0.0019	0.0005
Skid Steer Loaders	25	13.8	0.0021	0.0004
	50	25.5	0.0062	0.0008
	120	42.8	0.0049	0.0013
Skid Steer Loaders Composite		30.3	0.0055	0.0009
Surfacing Equipment	50	14.1	0.0050	0.0004

	120	63.8	0.0101	0.0019
	175	85.8	0.0091	0.0026
	250	134.9	0.0106	0.0040
	500	221.2	0.0157	0.0066
	750	347.0	0.0250	0.0103
Surfacing Equipment Composite		166.0	0.0131	0.0049
Sweepers/Scrubbers	15	11.9	0.0011	0.0004
	25	19.6	0.0021	0.0006
	50	31.6	0.0121	0.0010
	120	75.0	0.0123	0.0023
	175	139.0	0.0155	0.0042
	250	162.0	0.0115	0.0048
Sweepers/Scrubbers Composite		78.5	0.0127	0.0024
Tractors/Loaders/Bac	25	15.9	0.0019	0.0005
	50	30.3	0.0102	0.0009
	120	51.7	0.0075	0.0016
	175	101.4	0.0102	0.0030
	250	171.7	0.0121	0.0051
	500	344.9	0.0226	0.0103
	750	517.3	0.0342	0.0154
Tractors/Loaders/Backhoes Compos		66.8	0.0085	0.0020
Trenchers	15	8.5	0.0009	0.0003
	25	32.9	0.0036	0.0010
	50	32.9	0.0158	0.0010
	120	64.9	0.0129	0.0020
	175	143.9	0.0194	0.0043
	250	222.9	0.0237	0.0067
	500	311.3	0.0297	0.0093
	750	586.9	0.0565	0.0175
Trenchers Composite		58.7	0.0143	0.0018
Welders	15	6.2	0.0011	0.0001
	25	11.3	0.0022	0.0002
	50	26.0	0.0104	0.0005
	120	39.5	0.0069	0.0008
	175	98.2	0.0114	0.0020
	250	119.1	0.0088	0.0024
	500	167.6	0.0111	0.0034
Welders Composite		25.6	0.0068	0.0005

Emission factors sent by ARB on December 7, 2006 in grams per hour. EF converted by SCAQMD to pounds per hour.

Carbon Dioxide Calculation
Based on URBEMIS 2007 Assumptions and EMFAC 2007 Emission Factors

Minutes since engine shutoff	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
Home-Work	0.7%	1.0%	1.4%	2.2%	2.6%	2.8%	2.2%	2.6%	6.2%	8.9%	8.6%	8.6%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	100.0%
Home-Shop	3.3%	9.5%	14.4%	18.3%	12.2%	7.5%	4.2%	3.6%	3.7%	2.1%	2.6%	2.6%	2.6%	2.6%	2.7%	2.7%	2.7%	2.7%	100.0%
Home-Other	6.1%	7.6%	7.8%	7.2%	7.0%	7.9%	6.2%	6.6%	7.2%	4.9%	4.0%	4.0%	4.0%	3.9%	3.9%	3.9%	3.9%	3.9%	100.0%
Commercial Commute	2.6%	5.0%	3.7%	4.2%	4.7%	3.7%	3.0%	3.3%	8.5%	10.8%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.4%	100.0%
Commercial Non-Commute	5.8%	11.3%	7.3%	7.4%	7.7%	5.5%	4.4%	4.4%	12.1%	13.9%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.7%	100.0%
Commercial Customer	9.3%	14.7%	13.2%	14.0%	6.7%	7.1%	5.1%	4.5%	8.8%	6.4%	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	100.0%

Residential Trips	Home-Work %	Home-Shop %	Home-Other %
18,711.30	33%	18%	49%
624.95			

Commercial Trips	Commute	Non-Work	Customer
919.06	20.0%	10.0%	70.0%
1,222.07	20.0%	10.0%	70.0%
10,398.62	2.0%	1.0%	97.0%

Trips	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
Home-Work	44.53	63.62	89.06	139.96	165.40	178.13	139.96	165.40	394.42	566.18	547.10	547.10	553.46	553.46	553.46	553.46	553.46	553.46	6,361.63
Home-Shop	114.86	330.65	501.20	636.94	424.62	261.04	146.18	125.30	128.78	73.09	90.49	90.49	90.49	90.49	93.97	93.97	93.97	93.97	3,480.53
Home-Other	579.14	721.55	740.54	683.58	664.59	750.03	588.63	626.61	683.58	465.21	379.76	379.76	379.76	370.27	370.27	370.27	370.27	370.27	9,494.10
Commercial Commute	16.54	31.81	23.54	26.72	29.90	23.54	19.09	20.99	54.08	68.71	40.08	40.08	40.08	40.08	40.08	40.08	40.08	40.72	636.20
Commercial Non-Commute	18.45	35.95	23.22	23.54	24.49	17.50	14.00	14.00	38.49	44.22	7.95	7.95	7.95	7.95	7.95	7.95	7.95	8.59	318.10
Commercial Customer	1,077.45	1,703.06	1,529.28	1,621.96	776.23	822.57	590.86	521.35	1,019.52	741.47	139.03	139.03	150.61	150.61	150.61	150.61	150.61	150.61	11,585.45
Total	1,850.97	2,886.63	2,906.84	3,132.69	2,085.23	2,052.80	1,498.71	1,473.65	2,318.86	1,958.88	1,204.42	1,204.42	1,222.36	1,212.87	1,216.35	1,216.35	1,216.35	1,217.62	31,876.00

User Input from URBEMIS

Trip Distribution

Trips	Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
1850.97	5	1.7028894	849.7418	0	1.850967	177.6928	5.5529	1.943515	386.7595	0	1.915751	210.9454	0	0	31.48494	7.385357	0	7.398314	5.558453	0
2886.63	10	2.6557035	1325.196	0	2.886634	277.1169	8.659903	3.030966	603.1622	0	2.987666	328.9753	0	0	49.10165	11.51767	0	11.53788	8.668563	0
2906.84	20	2.6742913	1334.471	0	2.906838	279.0565	8.720515	3.05218	607.3839	0	3.008578	331.2778	0	0	49.44532	11.59829	0	11.61863	8.729236	0
3132.69	30	2.8820748	1438.155	0	3.13269	300.7382	9.39807	3.289324	654.5756	0	3.242334	357.017	0	0	53.28706	12.49943	0	12.52136	9.407468	0
2085.23	40	1.9184148	957.289	0	2.085234	200.1824	6.255701	2.189495	435.7095	0	2.158217	237.6436	0	0	35.46982	8.320082	0	8.334678	6.261956	0
2052.80	50	1.8885766	942.3997	0	2.052801	197.0689	6.158402	2.155441	428.9327	0	2.124649	233.9474	0	0	34.91814	8.190675	0	8.205044	6.16456	0
1498.71	60	1.3788154	688.0289	0	1.498712	143.8764	4.496137	1.573648	313.1559	0	1.551167	170.8008	0	0	25.4931	5.979862	0	5.990353	4.500633	0
1473.65	120	1.3557561	676.5223	0	1.473648	141.4702	4.420944	1.54733	307.9187	0	1.525226	167.9443	0	0	25.06675	5.879855	0	5.890171	4.425365	0
2318.86	180	2.1333531	1064.543	0	2.318862	222.6108	6.956586	2.434805	484.5262	0	2.400022	264.2691	0	0	39.44384	9.25226	0	9.268492	6.963543	0
1958.88	240	1.8021703	899.283	0	1.958881	188.0526	5.876642	2.056825	409.3081	0	2.027442	223.2438	0	0	33.32056	7.815934	0	7.829646	5.882519	0
1204.42	300	1.1080626	552.9232	0	1.204416	115.6239	3.613248	1.264637	251.6627	0	1.24657	137.2613	0	0	20.48711	4.805619	0	4.81405	3.616861	0
1204.42	360	1.1080626	552.9232	0	1.204416	115.6239	3.613248	1.264637	251.6627	0	1.24657	137.2613	0	0	20.48711	4.805619	0	4.81405	3.616861	0
1222.36	420	1.1245739	561.1624	0	1.222363	117.3468	3.667089	1.283481	255.4127	0	1.265146	139.3066	0	0	20.79239	4.877228	0	4.885785	3.670756	0
1212.87	480	1.1158393	556.8038	0	1.212869	116.4354	3.638607	1.273512	253.4289	0	1.255319	138.2246	0	0	20.6309	4.839347	0	4.847837	3.642245	0
1216.35	540	1.1190414	558.4017	0	1.216349	116.7695	3.649048	1.277167	254.1562	0	1.258922	138.6213	0	0	20.6901	4.853234	0	4.861748	3.652697	0
1216.35	600	1.1190414	558.4017	0	1.216349	116.7695	3.649048	1.277167	254.1562	0	1.258922	138.6213	0	0	20.6901	4.853234	0	4.861748	3.652697	0
1216.35	660	1.1190414	558.4017	0	1.216349	116.7695	3.649048	1.277167	254.1562	0	1.258922	138.6213	0	0	20.6901	4.853234	0	4.861748	3.652697	0
1217.62	720	1.120212	558.9858	0	1.217622	116.8917	3.652865	1.278503	254.4221	0	1.260239	138.7663	0	0	20.71175	4.858311	0	4.866834	3.656518	0
31876		29	14634	0	32	3060	96	33	6660	0	33	3633	0	0	542	127	0	127	96	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
3.701933	14.80773	0	0	33.3174	0	0	1.850967	0	0	0	38.84069	40.75088	0	0	0	1.850967	0	24.07367	1.839861
5.773269	23.09307	0	0	51.95942	0	0	2.886634	0	0	0	60.57313	63.55214	0	0	0	2.886634	0	37.54357	2.869314
5.813677	23.25471	0	0	52.32309	0	0	2.906838	0	0	0	60.9971	63.99695	0	0	0	2.906838	0	37.80634	2.889397
6.26538	25.06152	0	0	56.38842	0	0	3.13269	0	0	0	65.73637	68.9693	0	0	0	3.13269	0	40.74377	3.113894
4.170467	16.68187	0	0	37.5342	0	0	2.085234	0	0	0	43.75654	45.9085	0	0	0	2.085234	0	27.12055	2.072722
4.105601	16.42241	0	0	36.95041	0	0	2.052801	0	0	0	43.07597	45.19446	0	0	0	2.052801	0	26.69872	2.040484
2.997425	11.9897	0	0	26.97682	0	0	1.498712	0	0	0	31.44898	32.99565	0	0	0	1.498712	0	19.49225	1.48972
2.947296	11.78918	0	0	26.52566	0	0	1.473648	0	0	0	30.92303	32.44383	0	0	0	1.473648	0	19.16627	1.464806
4.637724	18.5509	0	0	41.73952	0	0	2.318862	0	0	0	48.659	51.05207	0	0	0	2.318862	0	30.15912	2.304949
3.917762	15.67105	0	0	35.25985	0	0	1.958881	0	0	0	41.10515	43.12672	0	0	0	1.958881	0	25.4772	1.947127
2.408832	9.635327	0	0	21.67949	0	0	1.204416	0	0	0	25.27346	26.51642	0	0	0	1.204416	0	15.66463	1.197189
2.408832	9.635327	0	0	21.67949	0	0	1.204416	0	0	0	25.27346	26.51642	0	0	0	1.204416	0	15.66463	1.197189
2.444726	9.778904	0	0	22.00253	0	0	1.222363	0	0	0	25.65006	26.91154	0	0	0	1.222363	0	15.89805	1.215029
2.425738	9.702951	0	0	21.83164	0	0	1.212869	0	0	0	25.45084	26.70252	0	0	0	1.212869	0	15.77457	1.205592
2.432699	9.730795	0	0	21.89429	0	0	1.216349	0	0	0	25.52388	26.77915	0	0	0	1.216349	0	15.81984	1.209051
2.432699	9.730795	0	0	21.89429	0	0	1.216349	0	0	0	25.52388	26.77915	0	0	0	1.216349	0	15.81984	1.209051
2.432699	9.730795	0	0	21.89429	0	0	1.216349	0	0	0	25.52388	26.77915	0	0	0	1.216349	0	15.81984	1.209051
2.435244	9.740974	0	0	21.91719	0	0	1.217622	0	0	0	25.55058	26.80716	0	0	0	1.217622	0	15.83639	1.210316
64	255	0	0	574	0	0	32	0	0	0	669	702	0	0	0	32	0	415	32

Temperature: 80F

Pollutant Name: Carbon Dioxide Relative Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	111.902	11.431	0	112.19	14.176	0	112.288	14.273	0	141.795	19.37	0	170.667	22.627	0	170.667	21.598	0	170.667
10	121.432	13.227	0	121.744	16.482	0	121.851	16.583	0	153.87	22.571	0	185.2	27.148	0	185.2	26.511	0	185.2
20	139.927	17.26	0	140.287	21.638	0	140.41	21.751	0	177.306	29.712	0	213.408	37.003	0	213.408	37.071	0	213.408
30	157.671	21.884	0	158.076	27.518	0	158.215	27.649	0	199.79	37.838	0	240.47	47.939	0	240.47	48.611	0	240.47
40	174.663	27.097	0	175.112	34.122	0	175.266	34.277	0	221.321	46.95	0	266.386	59.958	0	266.386	61.132	0	266.386
50	190.904	32.9	0	191.394	41.45	0	191.562	41.636	0	241.9	57.047	0	291.155	73.058	0	291.155	74.633	0	291.155
60	206.393	39.292	0	206.923	49.502	0	207.105	49.725	0	261.526	68.128	0	314.778	87.241	0	314.778	89.114	0	314.778
120	279.289	88.25	0	280.007	110.585	0	280.253	111.17	0	353.896	151.82	0	425.955	188.621	0	425.955	188.643	0	425.955
180	279.509	100.586	0	280.227	126.121	0	280.473	126.776	0	354.174	173.198	0	426.29	215.939	0	426.29	216.508	0	426.29
240	279.728	112.81	0	280.447	141.498	0	280.694	142.226	0	354.452	194.347	0	426.625	242.8	0	426.625	243.793	0	426.625
300	279.948	124.92	0	280.667	156.716	0	280.914	157.518	0	354.731	215.266	0	426.96	269.205	0	426.96	270.498	0	426.96
360	280.167	136.918	0	280.887	171.775	0	281.134	172.653	0	355.009	235.956	0	427.294	295.153	0	427.294	296.623	0	427.294
420	280.387	148.803	0	281.107	186.675	0	281.354	187.63	0	355.287	256.416	0	427.629	320.645	0	427.629	322.169	0	427.629
480	280.606	160.575	0	281.327	201.416	0	281.575	202.451	0	355.565	276.647	0	427.964	345.68	0	427.964	347.135	0	427.964
540	280.826	172.234	0	281.548	215.998	0	281.795	217.114	0	355.843	296.649	0	428.299	370.258	0	428.299	371.521	0	428.299
600	281.045	183.78	0	281.768	230.421	0	282.015	231.62	0	356.121	316.422	0	428.633	394.38	0	428.633	395.327	0	428.633
660	281.265	195.213	0	281.988	244.685	0	282.235	245.969	0	356.399	335.965	0	428.968	418.045	0	428.968	418.554	0	428.968
720	281.484	206.534	0	282.208	258.79	0	282.456	260.161	0	356.677	355.279	0	429.303	441.254	0	429.303	441.201	0	429.303

Pollutant Name: Carbon Dioxide Emissions **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	190.55673	9713.399	0	207.66	2518.973	0	218.2334	5520.218	0	271.6438	4086.013	0	0	712.4098	0	0	159.7888	0	0
10	322.48739	17528.37	0	351.4304	4567.441	0	369.3262	10002.24	0	459.7122	7425.301	0	0	1333.012	0	0	305.8807	0	0
20	374.20556	23032.98	0	407.7916	6038.224	0	428.5566	13211.21	0	533.4389	9842.927	0	0	1829.625	0	0	430.7143	0	0
30	454.41961	31472.59	0	495.2031	8275.715	0	520.4205	18098.36	0	647.7859	13508.81	0	0	2554.528	0	0	608.6759	0	0
40	335.07609	25939.66	0	365.1494	6830.624	0	383.7441	14934.82	0	477.6587	11157.37	0	0	2126.7	0	0	509.5156	0	0
50	360.53682	31004.95	0	392.8937	8168.504	0	412.9005	17859.04	0	513.9525	13346	0	0	2551.049	0	0	612.3671	0	0
60	284.57784	27034.03	0	310.1181	7122.169	0	325.9104	15571.68	0	405.6706	11636.31	0	0	2224.043	0	0	533.8243	0	0
120	378.64777	59703.09	0	412.6317	15644.48	0	433.644	34231.33	0	539.7713	25497.3	0	0	4728.116	0	0	1111.14	0	0
180	596.29139	107078.1	0	649.8078	28075.89	0	682.8971	61426.3	0	850.0255	45770.88	0	0	8517.464	0	0	2006.703	0	0
240	504.1175	101448.1	0	549.3622	26609.06	0	577.3384	58214.26	0	718.6307	43386.77	0	0	8090.232	0	0	1908.813	0	0
300	310.19991	69071.17	0	338.0398	18120.12	0	355.2541	39641.4	0	442.1972	29547.68	0	0	5515.233	0	0	1302.191	0	0
360	310.44257	75705.14	0	338.3048	19861.3	0	355.5324	43450.32	0	442.5437	32387.62	0	0	6046.833	0	0	1427.958	0	0
420	315.3159	83502.65	0	343.6148	21905.72	0	361.1125	47923.09	0	449.4898	35720.44	0	0	6666.977	0	0	1574.048	0	0
480	313.11121	89408.77	0	341.2128	23451.95	0	358.5892	51306.94	0	446.3476	38239.42	0	0	7131.689	0	0	1682.854	0	0
540	314.25593	96175.75	0	342.4607	25221.99	0	359.8992	55180.87	0	447.9784	41121.86	0	0	7660.676	0	0	1806.242	0	0
600	314.501	102623.1	0	342.7283	26906.15	0	360.1802	58867.66	0	448.3284	43862.82	0	0	8159.763	0	0	1921.98	0	0
660	314.74719	109007.3	0	342.9959	28571.75	0	360.4612	62514.55	0	448.6784	46571.89	0	0	8649.394	0	0	2034.904	0	0
720	315.32176	115449.6	0	343.6226	30250.4	0	361.1208	66190.7	0	449.4981	49300.74	0	0	9139.141	0	0	2147.252	0	0
Total (grams/day):	6308.8122	1174899	0	6875.028	308140.5	0	7225.121	674145	0	8993.352	502410.1	0	0	93636.89	0	0	22084.85	0	0
Total (lbs/day):	13.90855	2590.208	0	15.15684	679.3335	0	15.92866	1486.235	0	19.82695	1107.625	0	0	206.434	0	0	48.68876	0	0

Grand Total (lbs/day): 6526.5496

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
9.546	0	170.667	9.546	0	170.667	9.546	0	170.667	9.546	0	35.404	1.776	0	170.667	9.546	0	170.667	9.546	0
19.039	0	185.2	19.039	0	185.2	19.039	0	185.2	19.039	0	38.42	3.543	0	185.2	19.039	0	185.2	19.039	0
37.866	0	213.408	37.866	0	213.408	37.866	0	213.408	37.866	0	44.271	7.047	0	213.408	37.866	0	213.408	37.866	0
56.482	0	240.47	56.482	0	240.47	56.482	0	240.47	56.482	0	49.885	10.511	0	240.47	56.482	0	240.47	56.482	0
74.887	0	266.386	74.887	0	266.386	74.887	0	266.386	74.887	0	55.261	13.936	0	266.386	74.887	0	266.386	74.887	0
93.081	0	291.155	93.081	0	291.155	93.081	0	291.155	93.081	0	60.4	17.322	0	291.155	93.081	0	291.155	93.081	0
111.063	0	314.778	111.063	0	314.778	111.063	0	314.778	111.063	0	65.3	20.668	0	314.778	111.063	0	314.778	111.063	0
188.899	0	425.955	188.899	0	425.955	188.899	0	425.955	188.899	0	88.364	35.153	0	425.955	188.899	0	425.955	188.899	0
223.17	0	426.29	223.17	0	426.29	223.17	0	426.29	223.17	0	88.433	41.53	0	426.29	223.17	0	426.29	223.17	0
255.419	0	426.625	255.419	0	426.625	255.419	0	426.625	255.419	0	88.503	47.531	0	426.625	255.419	0	426.625	255.418	0
285.644	0	426.96	285.644	0	426.96	285.644	0	426.96	285.644	0	88.572	53.156	0	426.96	285.644	0	426.96	285.644	0
313.847	0	427.294	313.847	0	427.295	313.847	0	427.294	313.847	0	88.642	58.404	0	427.294	313.847	0	427.294	313.847	0
340.027	0	427.629	340.027	0	427.629	340.027	0	427.629	340.027	0	88.711	63.276	0	427.629	340.027	0	427.629	340.027	0
364.184	0	427.964	364.184	0	427.964	364.184	0	427.964	364.184	0	88.78	67.772	0	427.964	364.184	0	427.964	364.184	0
386.319	0	428.299	386.319	0	428.299	386.319	0	428.299	386.319	0	88.85	71.891	0	428.299	386.319	0	428.299	386.319	0
406.43	0	428.633	406.43	0	428.633	406.43	0	428.633	406.43	0	88.919	75.633	0	428.633	406.43	0	428.633	406.43	0
424.519	0	428.968	424.519	0	428.968	424.519	0	428.968	424.519	0	88.989	78.999	0	428.968	424.519	0	428.968	424.519	0
440.585	0	429.303	440.585	0	429.303	440.585	0	429.303	440.585	0	89.058	81.989	0	429.303	440.586	0	429.303	440.586	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
35.33866	0	0	0	0	0	0	0	0	0	0	1375.116	72.37357	0	0	0	0	0	229.8073	0
109.9173	0	0	0	0	0	0	0	0	0	0	2327.22	225.1652	0	0	0	0	0	714.7919	0
220.1407	0	0	0	0	0	0	0	0	0	0	2700.402	450.9865	0	0	0	0	0	1431.575	0
353.8812	0	0	0	0	0	0	0	0	0	0	3279.259	724.9363	0	0	0	0	0	2301.289	0
312.3138	0	0	0	0	0	0	0	0	0	0	2418.03	639.7809	0	0	0	0	0	2030.976	0
382.1535	0	0	0	0	0	0	0	0	0	0	2601.788	782.8584	0	0	0	0	0	2485.144	0
332.903	0	0	0	0	0	0	0	0	0	0	2053.618	681.9541	0	0	0	0	0	2164.868	0
556.7413	0	0	0	0	0	0	0	0	0	0	2732.483	1140.498	0	0	0	0	0	3620.488	0
1035.001	0	0	0	0	0	0	0	0	0	0	4303.061	2120.192	0	0	0	0	0	6730.611	0
1000.671	0	0	0	0	0	0	0	0	0	0	3637.929	2049.856	0	0	0	0	0	6507.336	0
688.0683	0	0	0	0	0	0	0	0	0	0	2238.521	1409.507	0	0	0	0	0	4474.508	0
756.0046	0	0	0	0	0	0	0	0	0	0	2240.29	1548.665	0	0	0	0	0	4916.298	0
831.2728	0	0	0	0	0	0	0	0	0	0	2275.443	1702.855	0	0	0	0	0	5405.767	0
883.4149	0	0	0	0	0	0	0	0	0	0	2259.526	1809.683	0	0	0	0	0	5744.847	0
939.7977	0	0	0	0	0	0	0	0	0	0	2267.796	1925.18	0	0	0	0	0	6111.505	0
988.7217	0	0	0	0	0	0	0	0	0	0	2269.557	2025.387	0	0	0	0	0	6429.658	0
1032.727	0	0	0	0	0	0	0	0	0	0	2271.344	2115.526	0	0	0	0	0	6715.823	0
1072.932	0	0	0	0	0	0	0	0	0	0	2275.483	2197.892	0	0	0	0	0	6977.291	0
11532	0	0	0	0	0	0	0	0	0	0	45526.87	23623.3	0	0	0	0	0	74992.58	0
25.42371	0	0	0	0	0	0	0	0	0	0	100.3696	52.08045	0	0	0	0	0	165.3303	0

Previous Summer

Temperature: 80F

Pollutant Name: Methane Relative Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.205	0.001	0	0.213	0.001	0	0.204	0.002	0	0.254	0.002	0	0.311	0.006	0	0.311	0.007	0	0.466
10	0.203	0.002	0	0.211	0.003	0	0.202	0.003	0	0.252	0.004	0	0.308	0.012	0	0.308	0.013	0	0.462
20	0.205	0.005	0	0.213	0.005	0	0.204	0.006	0	0.254	0.008	0	0.311	0.023	0	0.311	0.025	0	0.467
30	0.215	0.006	0	0.223	0.008	0	0.213	0.009	0	0.265	0.012	0	0.325	0.034	0	0.325	0.035	0	0.488
40	0.231	0.008	0	0.24	0.01	0	0.23	0.012	0	0.286	0.015	0	0.35	0.043	0	0.35	0.045	0	0.525
50	0.255	0.01	0	0.265	0.012	0	0.253	0.014	0	0.315	0.018	0	0.386	0.051	0	0.386	0.053	0	0.579
60	0.265	0.011	0	0.275	0.013	0	0.263	0.016	0	0.328	0.021	0	0.402	0.058	0	0.402	0.061	0	0.602
120	0.295	0.016	0	0.307	0.019	0	0.293	0.023	0	0.365	0.03	0	0.447	0.083	0	0.447	0.085	0	0.671
180	0.321	0.018	0	0.334	0.021	0	0.319	0.026	0	0.397	0.034	0	0.487	0.089	0	0.487	0.09	0	0.73
240	0.347	0.019	0	0.361	0.023	0	0.345	0.027	0	0.43	0.036	0	0.527	0.094	0	0.527	0.096	0	0.79
300	0.374	0.02	0	0.388	0.024	0	0.371	0.029	0	0.462	0.038	0	0.566	0.099	0	0.566	0.101	0	0.849
360	0.4	0.021	0	0.415	0.025	0	0.397	0.03	0	0.494	0.04	0	0.606	0.104	0	0.606	0.106	0	0.909
420	0.426	0.022	0	0.442	0.026	0	0.423	0.032	0	0.527	0.042	0	0.645	0.109	0	0.645	0.111	0	0.968
480	0.452	0.023	0	0.469	0.027	0	0.449	0.033	0	0.559	0.044	0	0.685	0.114	0	0.685	0.116	0	1.027
540	0.478	0.024	0	0.497	0.029	0	0.475	0.035	0	0.591	0.046	0	0.725	0.119	0	0.725	0.121	0	1.087
600	0.504	0.025	0	0.524	0.03	0	0.501	0.036	0	0.624	0.048	0	0.764	0.124	0	0.764	0.126	0	1.146
660	0.53	0.026	0	0.551	0.031	0	0.527	0.038	0	0.656	0.05	0	0.804	0.129	0	0.804	0.13	0	1.206
720	0.557	0.027	0	0.578	0.032	0	0.553	0.039	0	0.688	0.051	0	0.843	0.133	0	0.843	0.135	0	1.265

Pollutant Name: Methane Emissions **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.3490923	0.849742	0	0.394256	0.177693	0	0.396477	0.773519	0	0.486601	0.421891	0	0	0.18891	0	0	0.051788	0	0
10	0.5391078	2.650392	0	0.60908	0.831351	0	0.612255	1.809487	0	0.752892	1.315901	0	0	0.58922	0	0	0.149992	0	0
20	0.5482297	6.672357	0	0.619157	1.395282	0	0.622645	3.644303	0	0.764179	2.650223	0	0	1.137242	0	0	0.290466	0	0
30	0.6196461	8.628932	0	0.69859	2.405906	0	0.700626	5.89118	0	0.859219	4.284204	0	0	1.81176	0	0	0.438248	0	0
40	0.4431538	7.658312	0	0.500456	2.001824	0	0.503584	5.228515	0	0.61725	3.564655	0	0	1.525202	0	0	0.375061	0	0
50	0.481587	9.423997	0	0.543992	2.364826	0	0.545326	6.005058	0	0.669264	4.211054	0	0	1.780825	0	0	0.434867	0	0
60	0.3653861	7.568317	0	0.412146	1.870393	0	0.413869	5.010495	0	0.508783	3.586816	0	0	1.4786	0	0	0.365412	0	0
120	0.3999481	10.82436	0	0.45241	2.687934	0	0.453368	7.082131	0	0.556707	5.038329	0	0	2.08054	0	0	0.500665	0	0
180	0.6848063	19.16178	0	0.7745	4.674826	0	0.776703	12.59768	0	0.952809	8.98515	0	0	3.510502	0	0	0.834164	0	0
240	0.6253531	17.08638	0	0.707156	4.325209	0	0.709605	11.05132	0	0.8718	8.036778	0	0	3.132133	0	0	0.751646	0	0
300	0.4144154	11.05846	0	0.467313	2.774974	0	0.46918	7.298218	0	0.575916	5.215928	0	0	2.028224	0	0	0.486219	0	0
360	0.443225	11.61139	0	0.499833	2.890598	0	0.502061	7.549881	0	0.615806	5.49045	0	0	2.13066	0	0	0.510289	0	0
420	0.4790685	12.34557	0	0.540284	3.051018	0	0.542913	8.173208	0	0.666732	5.850877	0	0	2.266371	0	0	0.542322	0	0
480	0.5043594	12.80649	0	0.568835	3.143756	0	0.571807	8.363155	0	0.701723	6.081882	0	0	2.351922	0	0	0.562349	0	0
540	0.5349018	13.40164	0	0.604526	3.386317	0	0.606654	8.895467	0	0.744023	6.376578	0	0	2.462122	0	0	0.588272	0	0
600	0.5639969	13.96004	0	0.637367	3.503086	0	0.639861	9.149623	0	0.785567	6.65382	0	0	2.565573	0	0	0.61258	0	0
660	0.593092	14.51844	0	0.670209	3.619856	0	0.673067	9.657936	0	0.825853	6.931063	0	0	2.669023	0	0	0.632027	0	0
720	0.6239581	15.09262	0	0.703785	3.740534	0	0.707012	9.922461	0	0.867044	7.077079	0	0	2.754662	0	0	0.657023	0	0
Total (grams/day):	9.2133274	195.3192	0	10.40389	48.84538	0	10.44701	128.1036	0	12.82217	91.77268	0	0	36.46349	0	0	8.78339	0	0
Total (lbs/day):	0.0203119	0.430605	0	0.022937	0.107686	0	0.023032	0.28242	0	0.028268	0.202324	0	0	0.080388	0	0	0.019364	0	0

Grand Total (lbs/day): 1.7011109

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.014	0	0.947	0.058	0	0.466	0.024	0	0.593	0.029	0	0.092	0.013	0	0.466	0.025	0	0.466	0.011	0
0.027	0	0.939	0.114	0	0.462	0.046	0	0.588	0.056	0	0.091	0.025	0	0.462	0.049	0	0.462	0.021	0
0.052	0	0.948	0.216	0	0.467	0.088	0	0.594	0.106	0	0.092	0.047	0	0.467	0.094	0	0.467	0.04	0
0.073	0	0.991	0.306	0	0.488	0.124	0	0.62	0.151	0	0.096	0.066	0	0.488	0.133	0	0.488	0.057	0
0.092	0	1.067	0.385	0	0.525	0.156	0	0.668	0.189	0	0.103	0.083	0	0.525	0.167	0	0.525	0.071	0
0.108	0	1.177	0.451	0	0.579	0.183	0	0.737	0.222	0	0.114	0.098	0	0.579	0.195	0	0.579	0.084	0
0.121	0	1.223	0.506	0	0.602	0.205	0	0.766	0.249	0	0.118	0.109	0	0.602	0.219	0	0.602	0.094	0
0.147	0	1.363	0.615	0	0.671	0.249	0	0.854	0.302	0	0.132	0.133	0	0.671	0.266	0	0.671	0.114	0
0.156	0	1.483	0.652	0	0.73	0.265	0	0.929	0.321	0	0.144	0.141	0	0.73	0.282	0	0.73	0.121	0
0.164	0	1.604	0.689	0	0.79	0.279	0	1.005	0.338	0	0.155	0.149	0	0.79	0.298	0	0.79	0.128	0
0.173	0	1.725	0.724	0	0.849	0.294	0	1.08	0.356	0	0.167	0.157	0	0.849	0.313	0	0.849	0.134	0
0.181	0	1.845	0.758	0	0.909	0.307	0	1.156	0.372	0	0.179	0.164	0	0.909	0.328	0	0.909	0.141	0
0.188	0	1.966	0.791	0	0.968	0.321	0	1.231	0.388	0	0.19	0.171	0	0.968	0.342	0	0.968	0.147	0
0.196	0	2.087	0.822	0	1.027	0.334	0	1.307	0.404	0	0.202	0.178	0	1.027	0.356	0	1.027	0.153	0
0.203	0	2.207	0.853	0	1.087	0.346	0	1.383	0.419	0	0.214	0.184	0	1.087	0.369	0	1.087	0.158	0
0.21	0	2.328	0.882	0	1.146	0.358	0	1.458	0.433	0	0.225	0.191	0	1.146	0.382	0	1.146	0.164	0
0.217	0	2.449	0.91	0	1.206	0.369	0	1.534	0.447	0	0.237	0.197	0	1.206	0.394	0	1.206	0.169	0
0.223	0	2.569	0.937	0	1.265	0.38	0	1.609	0.46	0	0.249	0.203	0	1.265	0.405	0	1.265	0.174	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.051827	0	0	0	0	0	0	0	0	0	0	3.573343	0.529761	0	0	0	0	0	0.26481	0
0.155878	0	0	0	0	0	0	0	0	0	0	5.512155	1.588804	0	0	0	0	0	0.788415	0
0.302311	0	0	0	0	0	0	0	0	0	0	5.611733	3.007857	0	0	0	0	0	1.512254	0
0.457373	0	0	0	0	0	0	0	0	0	0	6.310691	4.551974	0	0	0	0	0	2.322395	0
0.383683	0	0	0	0	0	0	0	0	0	0	4.506924	3.810406	0	0	0	0	0	1.925559	0
0.443405	0	0	0	0	0	0	0	0	0	0	4.91066	4.429057	0	0	0	0	0	2.242693	0
0.362688	0	0	0	0	0	0	0	0	0	0	3.71098	3.596526	0	0	0	0	0	1.832272	0
0.433253	0	0	0	0	0	0	0	0	0	0	4.08184	4.31503	0	0	0	0	0	2.184954	0
0.723485	0	0	0	0	0	0	0	0	0	0	7.006896	7.198341	0	0	0	0	0	3.649253	0
0.642513	0	0	0	0	0	0	0	0	0	0	6.371299	6.425881	0	0	0	0	0	3.261082	0
0.416728	0	0	0	0	0	0	0	0	0	0	4.220668	4.163078	0	0	0	0	0	2.099061	0
0.435999	0	0	0	0	0	0	0	0	0	0	4.52395	4.348693	0	0	0	0	0	2.208713	0
0.459608	0	0	0	0	0	0	0	0	0	0	4.873512	4.601874	0	0	0	0	0	2.337014	0
0.475445	0	0	0	0	0	0	0	0	0	0	5.14107	4.753049	0	0	0	0	0	2.41351	0
0.493838	0	0	0	0	0	0	0	0	0	0	5.462109	4.927363	0	0	0	0	0	2.499535	0
0.510867	0	0	0	0	0	0	0	0	0	0	5.742872	5.114817	0	0	0	0	0	2.594454	0
0.527896	0	0	0	0	0	0	0	0	0	0	6.049158	5.275492	0	0	0	0	0	2.673553	0
0.543059	0	0	0	0	0	0	0	0	0	0	6.362093	5.441854	0	0	0	0	0	2.755532	0
7.819855	0	0	0	0	0	0	0	0	0	0	93.97195	78.07986	0	0	0	0	0	39.56506	0
0.01724	0	0	0	0	0	0	0	0	0	0	0.207173	0.172137	0	0	0	0	0	0.087226	0

Previous Summer

Temperature: 80F

Pollutant Name: Oxides of Nitrogen Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	1.045	0.136	0	1.042	0.163	0	1.032	0.278	0	1.736	0.331	0	0.498	1.332	0	0.498	1.306	0	0.747
10	1.136	0.151	0	1.133	0.181	0	1.122	0.309	0	1.887	0.366	0	0.541	1.49	0	0.541	1.499	0	0.812
20	1.301	0.178	0	1.298	0.214	0	1.285	0.363	0	2.161	0.427	0	0.62	1.77	0	0.62	1.84	0	0.93
30	1.444	0.201	0	1.441	0.242	0	1.427	0.408	0	2.399	0.478	0	0.688	2.003	0	0.688	2.123	0	1.033
40	1.566	0.219	0	1.562	0.264	0	1.546	0.445	0	2.601	0.519	0	0.746	2.19	0	0.746	2.347	0	1.119
50	1.665	0.233	0	1.66	0.28	0	1.644	0.472	0	2.765	0.55	0	0.793	2.33	0	0.793	2.513	0	1.19
60	1.742	0.242	0	1.737	0.291	0	1.72	0.491	0	2.893	0.571	0	0.83	2.424	0	0.83	2.621	0	1.245
120	1.745	0.257	0	1.741	0.309	0	1.724	0.522	0	2.899	0.608	0	0.832	2.569	0	0.832	2.754	0	1.248
180	1.704	0.257	0	1.699	0.308	0	1.683	0.521	0	2.83	0.607	0	0.812	2.562	0	0.812	2.746	0	1.218
240	1.649	0.255	0	1.644	0.306	0	1.628	0.517	0	2.738	0.603	0	0.786	2.544	0	0.786	2.728	0	1.179
300	1.58	0.252	0	1.576	0.303	0	1.56	0.511	0	2.624	0.596	0	0.753	2.516	0	0.753	2.699	0	1.13
360	1.498	0.248	0	1.494	0.298	0	1.479	0.503	0	2.488	0.587	0	0.714	2.478	0	0.714	2.66	0	1.071
420	1.402	0.243	0	1.398	0.292	0	1.385	0.493	0	2.329	0.575	0	0.668	2.43	0	0.668	2.612	0	1.002
480	1.293	0.237	0	1.289	0.285	0	1.277	0.481	0	2.147	0.561	0	0.616	2.371	0	0.616	2.553	0	0.924
540	1.17	0.231	0	1.167	0.277	0	1.156	0.467	0	1.944	0.544	0	0.558	2.303	0	0.558	2.485	0	0.837
600	1.034	0.223	0	1.031	0.267	0	1.021	0.451	0	1.717	0.524	0	0.493	2.225	0	0.493	2.406	0	0.739
660	0.884	0.214	0	0.882	0.257	0	0.873	0.432	0	1.469	0.503	0	0.421	2.136	0	0.421	2.318	0	0.632
720	0.721	0.204	0	0.719	0.245	0	0.712	0.412	0	1.198	0.478	0	0.344	2.037	0	0.344	2.219	0	0.515

Pollutant Name: Nitrous Oxide **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.0867164	5.631504	0	0.093986	1.411419	0	0.097739	5.239433	0	0.162064	3.402488	0	0	2.043646	0	0	0.470841	0	0
10	0.1470132	9.751144	0	0.159375	2.444219	0	0.165719	9.082201	0	0.274728	5.867361	0	0	3.565175	0	0	0.842803	0	0
20	0.1695448	11.57518	0	0.183863	2.910076	0	0.191122	10.74406	0	0.316821	6.893166	0	0	4.264783	0	0	1.041769	0	0
30	0.2028014	14.08641	0	0.219978	3.546521	0	0.228733	13.01423	0	0.379041	8.316016	0	0	5.201171	0	0	1.295389	0	0
40	0.1463972	10.21611	0	0.158721	2.575303	0	0.16495	9.448341	0	0.273548	6.010243	0	0	3.785311	0	0	0.953236	0	0
50	0.1532312	10.70014	0	0.166056	2.688899	0	0.172678	9.865739	0	0.286273	6.270172	0	0	3.964656	0	0	1.004782	0	0
60	0.117045	8.113729	0	0.126858	2.040239	0	0.131897	7.49274	0	0.218678	4.752525	0	0	3.011298	0	0	0.7651	0	0
120	0.1152857	8.472542	0	0.125023	2.130208	0	0.129993	7.832585	0	0.215467	4.97585	0	0	3.138056	0	0	0.790479	0	0
180	0.1771458	13.33199	0	0.191985	3.341145	0	0.199686	12.30137	0	0.330979	7.816882	0	0	4.92444	0	0	1.240247	0	0
240	0.1448155	11.17468	0	0.156931	2.804136	0	0.163174	10.31192	0	0.270508	6.559871	0	0	4.13074	0	0	1.040842	0	0
300	0.0853139	6.789908	0	0.092498	1.707217	0	0.096137	6.26669	0	0.159397	3.986509	0	0	2.511828	0	0	0.633158	0	0
360	0.0808862	6.682131	0	0.087685	1.679045	0	0.091145	6.168582	0	0.151135	3.92631	0	0	2.473891	0	0	0.624009	0	0
420	0.0768306	6.644974	0	0.083273	1.669755	0	0.086624	6.136037	0	0.143585	3.903355	0	0	2.46212	0	0	0.621879	0	0
480	0.070307	6.430564	0	0.076184	1.617069	0	0.079249	5.940182	0	0.131336	3.778737	0	0	2.383681	0	0	0.603111	0	0
540	0.0638014	6.285751	0	0.069172	1.576187	0	0.071946	5.783837	0	0.11926	3.674745	0	0	2.321962	0	0	0.588732	0	0
600	0.0563852	6.068063	0	0.06111	1.519285	0	0.063544	5.585676	0	0.105334	3.539644	0	0	2.24332	0	0	0.570015	0	0
660	0.0482055	5.823163	0	0.052279	1.462383	0	0.054333	5.350359	0	0.09012	3.397788	0	0	2.153587	0	0	0.549167	0	0
720	0.0393581	5.55686	0	0.042662	1.395559	0	0.044359	5.107995	0	0.073571	3.23229	0	0	2.05592	0	0	0.526262	0	0
Total (grams/day):	1.9810843	153.3348	0	2.147639	38.51867	0	2.233025	141.672	0	3.701845	90.30395	0	0	56.63558	0	0	14.16182	0	0
Total (lbs/day):	0.0043675	0.338045	0	0.004735	0.084919	0	0.004923	0.312333	0	0.008161	0.199086	0	0	0.12486	0	0	0.031221	0	0

Grand Total (lbs/day): 1.2841092

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.949	0	3.656	3.727	0	0.747	1.791	0	0.991	2.358	0	0.26	0.086	0	0.747	1.487	0	0.747	0.667	0
1.43	0	3.974	5.615	0	0.812	2.699	0	1.077	3.553	0	0.283	0.129	0	0.812	2.24	0	0.812	1.004	0
2.274	0	4.553	8.931	0	0.93	4.293	0	1.234	5.652	0	0.324	0.206	0	0.93	3.564	0	0.93	1.598	0
2.962	0	5.054	11.633	0	1.033	5.592	0	1.369	7.362	0	0.36	0.268	0	1.033	4.642	0	1.033	2.081	0
3.494	0	5.478	13.722	0	1.119	6.596	0	1.484	8.683	0	0.39	0.316	0	1.119	5.475	0	1.119	2.455	0
3.869	0	5.825	15.196	0	1.19	7.305	0	1.578	9.616	0	0.415	0.35	0	1.19	6.064	0	1.19	2.719	0
4.088	0	6.094	16.056	0	1.245	7.718	0	1.651	10.16	0	0.434	0.37	0	1.245	6.407	0	1.245	2.872	0
4.106	0	6.107	16.127	0	1.248	7.752	0	1.655	10.205	0	0.435	0.371	0	1.248	6.435	0	1.248	2.885	0
4.091	0	5.961	16.068	0	1.218	7.724	0	1.615	10.168	0	0.425	0.37	0	1.218	6.411	0	1.218	2.874	0
4.068	0	5.768	15.977	0	1.179	7.68	0	1.563	10.11	0	0.411	0.368	0	1.179	6.375	0	1.179	2.858	0
4.037	0	5.528	15.855	0	1.13	7.622	0	1.498	10.033	0	0.394	0.365	0	1.13	6.326	0	1.13	2.836	0
3.998	0	5.24	15.702	0	1.071	7.548	0	1.42	9.937	0	0.373	0.361	0	1.071	6.265	0	1.071	2.809	0
3.951	0	4.905	15.518	0	1.002	7.46	0	1.329	9.82	0	0.349	0.357	0	1.002	6.192	0	1.002	2.776	0
3.896	0	4.523	15.302	0	0.924	7.356	0	1.226	9.683	0	0.322	0.352	0	0.924	6.106	0	0.924	2.737	0
3.833	0	4.094	15.055	0	0.837	7.237	0	1.109	9.527	0	0.292	0.346	0	0.837	6.007	0	0.837	2.693	0
3.762	0	3.617	14.777	0	0.739	7.103	0	0.98	9.351	0	0.258	0.34	0	0.739	5.896	0	0.739	2.643	0
3.684	0	3.094	14.467	0	0.632	6.955	0	0.838	9.155	0	0.22	0.333	0	0.632	5.772	0	0.632	2.588	0
3.597	0	2.523	14.126	0	0.515	6.791	0	0.684	8.939	0	0.18	0.325	0	0.515	5.636	0	0.515	2.527	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.171196	0	0	0	0	0	0	0	0	0	0	0.492106	0.170779	0	0	0	0	0	0.782468	0
0.402306	0	0	0	0	0	0	0	0	0	0	0.835343	0.399501	0	0	0	0	0	1.836825	0
0.644228	0	0	0	0	0	0	0	0	0	0	0.963058	0.642429	0	0	0	0	0	2.944014	0
0.904338	0	0	0	0	0	0	0	0	0	0	1.153205	0.900719	0	0	0	0	0	4.131728	0
0.710078	0	0	0	0	0	0	0	0	0	0	0.831584	0.706934	0	0	0	0	0	3.244505	0
0.774059	0	0	0	0	0	0	0	0	0	0	0.871127	0.770818	0	0	0	0	0	3.537514	0
0.597115	0	0	0	0	0	0	0	0	0	0	0.665112	0.594918	0	0	0	0	0	2.728004	0
0.589714	0	0	0	0	0	0	0	0	0	0	0.655496	0.586549	0	0	0	0	0	2.694522	0
0.924555	0	0	0	0	0	0	0	0	0	0	1.007745	0.920478	0	0	0	0	0	4.223805	0
0.776636	0	0	0	0	0	0	0	0	0	0	0.823259	0.77338	0	0	0	0	0	3.548236	0
0.473875	0	0	0	0	0	0	0	0	0	0	0.485243	0.471635	0	0	0	0	0	2.164836	0
0.469297	0	0	0	0	0	0	0	0	0	0	0.45938	0.466467	0	0	0	0	0	2.144225	0
0.470691	0	0	0	0	0	0	0	0	0	0	0.436227	0.468172	0	0	0	0	0	2.150611	0
0.460534	0	0	0	0	0	0	0	0	0	0	0.399353	0.458029	0	0	0	0	0	2.103928	0
0.454387	0	0	0	0	0	0	0	0	0	0	0.363185	0.451514	0	0	0	0	0	2.076046	0
0.44597	0	0	0	0	0	0	0	0	0	0	0.320896	0.443684	0	0	0	0	0	2.037501	0
0.436723	0	0	0	0	0	0	0	0	0	0	0.273633	0.43455	0	0	0	0	0	1.995101	0
0.426856	0	0	0	0	0	0	0	0	0	0	0.224115	0.424554	0	0	0	0	0	1.950113	0
10.13256	0	0	0	0	0	0	0	0	0	0	11.26007	10.08511	0	0	0	0	0	46.29398	0
0.022338	0	0	0	0	0	0	0	0	0	0	0.024824	0.022234	0	0	0	0	0	0.102061	0

Previous Summer

Pollutant Name: Carbon Dioxide Temperature: 80F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4776.899	4776.899
5	1390.875	1106.483	357.05	1106.313	1355.893	1379.009	346.547	1351.663	1357.102	1389.994	350.624	1389.005	1715.729	1897.84	346.656	1894.099	2513.51	2513.51
10	1041.217	823.535	357.05	823.475	1019.694	1026.975	346.547	1008.991	1020.575	1035.092	350.624	1034.451	1289.594	1413.211	346.656	1410.642	1672.267	1672.267
15	816.573	640.995	357.05	641.006	799.717	799.58	346.547	787.63	800.408	805.875	350.624	805.455	1011.388	1100.237	346.656	1098.419	1175.484	1175.484
20	666.307	520.411	357.05	520.467	651.784	649.232	346.547	641.259	652.351	654.335	350.624	654.057	824.417	893.338	346.656	892.008	873	873
25	564.821	440.072	357.05	440.156	551.611	548.987	346.547	543.659	552.096	553.304	350.624	553.119	697.848	755.407	346.656	754.398	685.012	685.012
30	497.077	387.224	357.05	387.326	484.596	482.995	346.547	479.404	485.028	486.8	350.624	486.674	613.198	664.618	346.656	663.817	567.895	567.895
35	453.981	354.239	357.05	354.352	441.831	441.764	346.547	439.253	442.23	445.254	350.624	445.164	559.199	607.905	346.656	607.232	497.421	497.421
40	430.147	336.602	357.05	336.719	418.015	419.675	346.547	417.738	418.396	422.999	350.624	422.927	529.152	577.532	346.656	576.924	460.326	460.326
45	422.711	331.826	357.05	331.943	410.324	413.635	346.547	411.849	410.7	416.92	350.624	416.851	519.486	569.243	346.656	568.649	450.085	450.085
50	430.735	338.892	357.05	339.005	417.834	422.388	346.547	420.365	418.219	425.748	350.624	425.669	529.037	581.303	346.656	580.678	464.953	464.953
55	455.019	358.021	357.05	358.128	441.343	446.23	346.547	443.577	441.75	449.78	350.624	449.678	558.811	614.118	346.656	613.415	507.469	507.469
60	498.236	390.743	357.05	390.84	483.518	487.101	346.547	483.376	483.963	490.965	350.624	490.828	612.172	670.346	346.656	669.517	585.19	585.19
65	565.463	440.286	357.05	440.371	549.416	549.072	346.547	543.731	549.916	553.405	350.624	553.217	695.502	755.58	346.656	754.565	712.968	712.968

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
4098	4631.367	4776.899	4776.9	4098	4463.379	4776.9	4776.901	4098	4205.719	0	0	6617.133	6526.543	4776.9	4776.901	4098	4384.923	0
519.721	2086.113	2513.51	2513.51	523.528	1594.521	2513.51	2513.51	1505	1665.018	2513.51	2513.51	3845.36	3827.127	2513.51	2513.51	1505	1931.226	2513.51
519.721	1425.202	1672.268	1672.267	523.528	1141.77	1672.267	1672.267	1505	1531.54	1672.267	1672.267	3165.446	3145.004	1672.267	1672.267	1505	1575.692	1672.267
519.721	1034.912	1175.485	1175.484	523.528	874.406	1175.485	1175.484	1505	1452.716	1175.484	1175.484	2595.958	2576.511	1175.484	1175.484	1505	1365.737	1175.484
519.721	797.27	873	873	523.528	711.611	873	873	1505	1404.722	873	873	2183.16	2165.223	873	873	1505	1237.898	873
519.721	649.579	685.012	685.012	523.528	610.437	685.012	685.012	1505	1374.894	685.012	685.012	2042.684	2024.097	685.012	685.011	1505	1158.449	685.012
519.721	557.568	567.895	567.895	523.528	547.406	567.895	567.895	1505	1356.311	567.895	567.895	1924.234	1905.665	567.895	567.894	1505	1108.952	567.895
519.721	502.201	497.421	497.421	523.528	509.477	497.421	497.421	1505	1345.129	497.421	497.421	1827.808	1809.595	497.421	497.421	1505	1079.167	497.421
519.721	473.058	460.327	460.326	523.528	489.513	460.326	460.326	1505	1339.244	460.326	460.326	1753.407	1735.704	460.326	460.326	1505	1063.49	460.326
519.721	465.012	450.085	450.085	523.528	484.001	450.085	450.085	1505	1337.619	450.085	450.085	1701.03	1683.905	450.085	450.085	1505	1059.162	450.085
519.721	476.693	464.953	464.953	523.528	492.003	464.953	464.953	1505	1339.978	464.953	464.953	1670.679	1654.172	464.953	464.953	1505	1065.446	464.953
519.721	510.096	507.469	507.469	523.528	514.885	507.469	507.469	1505	1346.724	507.469	507.469	1662.352	1646.541	507.469	507.469	1505	1083.414	507.469
519.721	571.156	585.19	585.19	523.528	556.714	585.19	585.19	1505	1359.056	585.19	585.19	1676.05	1661.115	585.19	585.19	1505	1116.261	585.19
519.721	671.542	712.968	712.968	523.528	625.483	712.968	712.968	1505	1379.33	712.968	712.968	1711.772	1698.098	712.968	712.968	1505	1170.264	712.968

Previous Summer

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	4776.9	4776.899	4098.001	4153.271	0	0	0	0	44.012	135.533	5820.026	743.399
2513.51	2545.789	2526.19	230.45	279.459	0	258.098	2513.51	2513.51	1505	1587.104	2513.51	2513.51	1505	2406.219	555.181	1339.589	3142.764	1527.651
1672.267	2545.789	2015.396	197.158	230.874	0	216.179	1672.267	1672.267	1505	1518.618	1672.267	1672.267	1505	1654.472	431.605	990.676	2634.886	1163.143
1175.484	2545.789	1713.754	171.303	197.497	0	186.08	1175.484	1175.484	1505	1478.174	1175.484	1175.484	1505	1210.54	348.863	767.006	2209.494	918.769
873	2545.789	1530.089	151.155	174.913	0	164.558	873	873	1505	1453.548	873	873	1505	940.236	291.705	620.065	1901.145	755.118
685.012	2545.789	1415.944	135.454	160.389	0	149.521	685.012	685.011	1505	1438.244	685.012	685.012	1505	772.247	251.743	522.598	1796.214	657.214
567.895	2545.789	1344.832	123.274	152.295	0	139.646	567.895	567.894	1505	1428.709	567.895	567.895	1505	667.59	223.906	458.695	1707.734	590.908
497.421	2545.789	1302.041	113.935	149.792	0	134.164	497.421	497.421	1505	1422.971	497.421	497.421	1505	604.613	205.054	418.898	1635.707	547.792
460.326	2545.789	1279.518	106.944	152.669	0	132.74	460.327	460.326	1505	1419.952	460.326	460.326	1505	571.465	193.272	397.647	1580.131	522.927
450.085	2545.789	1273.299	101.945	161.315	0	135.439	450.085	450.085	1505	1419.118	450.085	450.085	1505	562.313	187.481	391.913	1541.007	513.619
464.953	2545.789	1282.327	98.692	176.796	0	142.755	464.953	464.953	1505	1420.328	464.953	464.953	1505	575.599	187.236	400.496	1518.336	518.801
507.469	2545.789	1308.142	97.031	201.074	0	155.728	507.469	507.469	1505	1423.79	507.469	507.469	1505	613.593	192.663	423.757	1512.116	538.794
585.19	2545.789	1355.333	96.883	237.42	0	176.168	585.19	585.19	1505	1430.117	585.19	585.19	1505	683.045	204.493	463.721	1522.347	575.398
712.968	2545.789	1432.919	98.242	291.148	0	207.071	712.968	712.968	1505	1440.519	712.968	712.968	1505	797.229	224.225	524.607	1549.031	632.364

Previous Summer

Pollutant Name: Methane Temperature: 80F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.917	0.957
5	0.851	0.051	0.019	0.052	0.876	0.059	0.009	0.062	0.852	0.072	0.013	0.074	1.041	0.081	0.009	0.084	0.75	0.063
10	0.638	0.039	0.015	0.04	0.656	0.046	0.007	0.048	0.639	0.057	0.011	0.057	0.774	0.065	0.007	0.066	0.53	0.045
15	0.504	0.03	0.012	0.031	0.517	0.037	0.006	0.038	0.504	0.044	0.008	0.044	0.605	0.052	0.005	0.053	0.397	0.033
20	0.417	0.025	0.01	0.025	0.427	0.03	0.005	0.032	0.417	0.035	0.007	0.035	0.496	0.042	0.004	0.043	0.314	0.025
25	0.361	0.02	0.008	0.02	0.369	0.025	0.004	0.026	0.361	0.029	0.006	0.03	0.425	0.035	0.004	0.036	0.261	0.02
30	0.324	0.017	0.007	0.017	0.331	0.021	0.003	0.022	0.324	0.025	0.005	0.025	0.379	0.03	0.003	0.031	0.226	0.017
35	0.301	0.015	0.006	0.015	0.307	0.019	0.003	0.02	0.301	0.022	0.004	0.022	0.35	0.027	0.003	0.027	0.202	0.014
40	0.288	0.013	0.005	0.014	0.294	0.017	0.003	0.018	0.288	0.02	0.004	0.02	0.334	0.025	0.002	0.026	0.186	0.013
45	0.285	0.013	0.005	0.013	0.29	0.017	0.002	0.017	0.284	0.019	0.004	0.019	0.329	0.024	0.002	0.025	0.176	0.012
50	0.289	0.012	0.005	0.013	0.295	0.016	0.002	0.017	0.289	0.019	0.003	0.019	0.335	0.024	0.002	0.024	0.169	0.011
55	0.302	0.013	0.005	0.013	0.308	0.017	0.002	0.018	0.302	0.019	0.003	0.02	0.351	0.024	0.002	0.025	0.166	0.011
60	0.325	0.014	0.004	0.014	0.332	0.018	0.002	0.019	0.325	0.021	0.003	0.021	0.38	0.026	0.002	0.027	0.165	0.011
65	0.363	0.016	0.004	0.016	0.371	0.02	0.002	0.021	0.363	0.023	0.003	0.024	0.427	0.028	0.002	0.029	0.168	0.011

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
0.147	0.783	0.917	0.962	0.147	0.586	0.917	0.961	0.147	0.276	0	0	0.46	0.454	0.917	0.929	0.147	0.478	0
0.017	0.054	0.75	0.057	0.021	0.041	1.07	0.087	0.02	0.031	3.426	0.469	0.302	0.304	1.07	0.194	0.017	0.093	1.33
0.013	0.038	0.53	0.041	0.016	0.03	0.739	0.063	0.015	0.024	2.284	0.343	0.166	0.169	0.739	0.15	0.013	0.072	0.91
0.011	0.028	0.397	0.03	0.013	0.022	0.54	0.047	0.012	0.018	1.596	0.266	0.079	0.082	0.54	0.122	0.011	0.058	0.657
0.009	0.022	0.314	0.023	0.011	0.017	0.417	0.038	0.01	0.015	1.168	0.216	0.043	0.046	0.417	0.103	0.009	0.049	0.5
0.007	0.017	0.261	0.018	0.009	0.014	0.337	0.031	0.009	0.012	0.896	0.183	0.036	0.038	0.337	0.091	0.007	0.043	0.399
0.006	0.015	0.226	0.015	0.008	0.012	0.286	0.027	0.007	0.011	0.718	0.16	0.029	0.031	0.286	0.082	0.006	0.039	0.334
0.005	0.013	0.202	0.013	0.007	0.01	0.251	0.024	0.006	0.009	0.601	0.143	0.025	0.026	0.251	0.076	0.005	0.035	0.29
0.005	0.011	0.186	0.012	0.006	0.009	0.228	0.022	0.006	0.008	0.523	0.131	0.021	0.023	0.228	0.071	0.005	0.033	0.261
0.004	0.01	0.176	0.011	0.006	0.008	0.213	0.02	0.005	0.008	0.472	0.123	0.02	0.021	0.213	0.067	0.004	0.031	0.242
0.004	0.01	0.169	0.01	0.005	0.008	0.203	0.02	0.005	0.007	0.44	0.117	0.019	0.021	0.203	0.065	0.004	0.03	0.23
0.004	0.009	0.166	0.01	0.005	0.008	0.198	0.019	0.005	0.007	0.424	0.114	0.02	0.022	0.198	0.064	0.004	0.03	0.224
0.004	0.009	0.165	0.01	0.005	0.008	0.198	0.019	0.005	0.007	0.422	0.114	0.023	0.024	0.198	0.064	0.004	0.029	0.223
0.004	0.01	0.168	0.01	0.005	0.008	0.201	0.019	0.005	0.007	0.433	0.116	0.027	0.028	0.201	0.064	0.004	0.03	0.227

Previous Summer

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	0.917	0.936	0.147	0.211	0	0	0	0	0.008	0.027	0.375	0.064
0.241	0.067	0.172	0.313	0.275	0	0.292	1.07	0.373	0.045	0.081	1.07	0.101	0.011	0.099	0.465	0.064	0.23	0.084
0.169	0.048	0.122	0.27	0.231	0	0.248	0.739	0.269	0.035	0.06	0.739	0.074	0.008	0.073	0.373	0.049	0.128	0.06
0.124	0.036	0.089	0.242	0.202	0	0.22	0.54	0.205	0.028	0.047	0.54	0.058	0.007	0.056	0.315	0.038	0.062	0.043
0.095	0.028	0.069	0.223	0.184	0	0.201	0.417	0.164	0.023	0.038	0.417	0.047	0.005	0.046	0.277	0.031	0.035	0.033
0.075	0.023	0.055	0.212	0.173	0	0.19	0.337	0.138	0.019	0.032	0.337	0.04	0.005	0.038	0.253	0.026	0.029	0.028
0.062	0.019	0.045	0.206	0.166	0	0.184	0.286	0.12	0.017	0.027	0.286	0.035	0.004	0.033	0.239	0.022	0.024	0.024
0.053	0.016	0.039	0.205	0.163	0	0.182	0.251	0.108	0.015	0.024	0.251	0.031	0.003	0.03	0.232	0.02	0.02	0.021
0.047	0.015	0.034	0.209	0.164	0	0.184	0.228	0.099	0.013	0.022	0.228	0.028	0.003	0.027	0.231	0.018	0.017	0.019
0.043	0.014	0.032	0.218	0.168	0	0.19	0.213	0.093	0.012	0.02	0.213	0.026	0.003	0.025	0.236	0.017	0.016	0.018
0.041	0.013	0.03	0.233	0.177	0	0.201	0.203	0.09	0.011	0.019	0.203	0.025	0.003	0.024	0.249	0.017	0.016	0.018
0.04	0.013	0.029	0.257	0.191	0	0.22	0.198	0.088	0.011	0.018	0.198	0.024	0.003	0.023	0.27	0.018	0.016	0.019
0.04	0.013	0.029	0.294	0.212	0	0.248	0.198	0.087	0.01	0.018	0.198	0.024	0.002	0.023	0.303	0.019	0.018	0.021
0.04	0.014	0.03	0.35	0.246	0	0.291	0.201	0.089	0.01	0.018	0.201	0.024	0.002	0.023	0.354	0.021	0.021	0.023

Pollutant Name: Oxides of Nitrogen Temperature: 80F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.35	1.431
5	2.363	0.144	1.747	0.148	2.294	0.225	1.793	0.277	2.27	0.327	1.746	0.331	3.811	0.38	1.802	0.391	1.103	0.205
10	2.484	0.125	1.45	0.129	2.412	0.193	1.487	0.238	2.387	0.281	1.449	0.285	4.008	0.326	1.495	0.337	1.158	0.216
15	2.609	0.11	1.246	0.114	2.533	0.17	1.278	0.21	2.506	0.247	1.246	0.251	4.208	0.286	1.285	0.298	1.214	0.226
20	2.736	0.1	1.11	0.103	2.656	0.152	1.139	0.19	2.628	0.221	1.109	0.225	4.413	0.257	1.145	0.269	1.27	0.237
25	2.865	0.091	1.024	0.095	2.782	0.14	1.051	0.176	2.752	0.202	1.024	0.207	4.621	0.235	1.057	0.248	1.326	0.247
30	2.996	0.085	0.98	0.089	2.909	0.131	1.005	0.167	2.879	0.189	0.979	0.193	4.833	0.22	1.01	0.233	1.382	0.257
35	3.129	0.081	0.971	0.085	3.039	0.125	0.996	0.162	3.006	0.179	0.97	0.184	5.048	0.209	1.001	0.223	1.438	0.268
40	3.264	0.079	0.996	0.083	3.169	0.122	1.022	0.16	3.136	0.174	0.996	0.179	5.265	0.203	1.028	0.217	1.494	0.278
45	3.4	0.078	1.06	0.082	3.301	0.121	1.087	0.162	3.266	0.172	1.059	0.178	5.484	0.202	1.093	0.216	1.55	0.289
50	3.536	0.078	1.168	0.083	3.434	0.123	1.198	0.167	3.397	0.174	1.167	0.18	5.705	0.204	1.205	0.219	1.606	0.299
55	3.673	0.08	1.334	0.085	3.567	0.128	1.368	0.177	3.529	0.179	1.333	0.185	5.926	0.21	1.376	0.226	1.662	0.309
60	3.811	0.083	1.578	0.089	3.7	0.135	1.619	0.191	3.661	0.189	1.577	0.195	6.147	0.221	1.628	0.239	1.717	0.32
65	3.948	0.089	1.935	0.094	3.834	0.147	1.985	0.213	3.793	0.203	1.934	0.21	6.369	0.238	1.996	0.257	1.773	0.33

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
75.051	17.212	1.35	1.441	75.051	35.434	1.35	1.44	75.051	63.371	0	0	117.359	115.753	1.35	1.375	75.051	43.913	0
3.664	0.948	1.103	0.205	4.248	2.072	1.654	0.469	5.489	4.694	12	3.84	17.81	17.619	1.654	1.68	4.82	3.493	2.193
3.04	0.822	1.158	0.215	3.524	1.744	1.738	0.493	4.554	3.911	12.608	4.035	12.536	12.42	1.738	1.765	3.999	3.055	2.304
2.613	0.739	1.214	0.226	3.029	1.521	1.822	0.517	3.915	3.377	13.217	4.229	9.176	9.109	1.822	1.851	3.437	2.767	2.415
2.328	0.686	1.27	0.236	2.698	1.374	1.905	0.541	3.487	3.021	13.825	4.424	7.728	7.683	1.905	1.936	3.062	2.586	2.527
2.148	0.655	1.326	0.246	2.49	1.283	1.989	0.565	3.218	2.798	14.433	4.619	7.262	7.226	1.989	2.021	2.826	2.485	2.638
2.054	0.644	1.382	0.257	2.381	1.239	2.073	0.588	3.077	2.684	15.042	4.813	6.882	6.854	2.073	2.106	2.702	2.45	2.749
2.035	0.648	1.438	0.267	2.359	1.234	2.157	0.612	3.049	2.664	15.65	5.008	6.587	6.566	2.157	2.191	2.677	2.472	2.86
2.089	0.668	1.494	0.278	2.422	1.269	2.241	0.636	3.13	2.736	16.258	5.203	6.378	6.363	2.241	2.276	2.748	2.549	2.971
2.222	0.704	1.55	0.288	2.576	1.346	2.325	0.66	3.329	2.907	16.866	5.397	6.255	6.244	2.325	2.362	2.923	2.686	3.082
2.449	0.761	1.606	0.298	2.839	1.473	2.408	0.684	3.669	3.197	17.475	5.592	6.218	6.21	2.408	2.447	3.222	2.894	3.194
2.797	0.844	1.662	0.309	3.243	1.664	2.492	0.707	4.19	3.639	18.083	5.786	6.266	6.26	2.492	2.532	3.679	3.194	3.305
3.31	0.962	1.717	0.319	3.837	1.944	2.576	0.731	4.958	4.289	18.691	5.981	6.4	6.395	2.576	2.617	4.353	3.62	3.416
4.058	1.131	1.773	0.33	4.704	2.35	2.66	0.755	6.078	5.235	19.3	6.176	6.62	6.614	2.66	2.702	5.337	4.224	3.527

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	1.35	1.389	75.051	69.054	0	0	0	0	0.012	0.041	103.729	11.139
1.857	20.246	9.08	0.716	0.884	0	0.811	1.654	1.576	16.437	15.228	1.654	0.475	7.908	1.275	1.183	0.239	14.636	1.786
1.951	15.486	7.268	0.75	0.817	0	0.788	1.738	1.656	13.637	12.663	1.738	0.499	6.561	1.154	1.242	0.209	10.465	1.313
2.045	12.453	6.134	0.785	0.768	0	0.775	1.822	1.736	11.723	10.911	1.822	0.523	5.64	1.078	1.302	0.187	7.798	1.009
2.139	10.527	5.434	0.821	0.732	0	0.771	1.905	1.816	10.441	9.74	1.905	0.547	5.024	1.034	1.364	0.171	6.611	0.867
2.234	9.355	5.031	0.857	0.708	0	0.773	1.989	1.896	9.636	9.007	1.989	0.571	4.636	1.015	1.426	0.159	6.197	0.813
2.328	8.74	4.847	0.894	0.694	0	0.781	2.073	1.975	9.215	8.626	2.073	0.595	4.433	1.015	1.489	0.15	5.879	0.772
2.422	8.585	4.843	0.931	0.691	0	0.795	2.157	2.055	9.13	8.555	2.157	0.619	4.392	1.033	1.553	0.145	5.652	0.743
2.516	8.864	5.009	0.968	0.696	0	0.814	2.241	2.135	9.373	8.785	2.241	0.643	4.509	1.067	1.618	0.142	5.515	0.727
2.61	9.621	5.364	1.005	0.71	0	0.838	2.325	2.215	9.97	9.34	2.325	0.668	4.796	1.12	1.683	0.142	5.472	0.722
2.704	10.979	5.955	1.042	0.734	0	0.868	2.408	2.295	10.988	10.282	2.408	0.692	5.286	1.194	1.748	0.144	5.527	0.73
2.798	13.17	6.873	1.079	0.768	0	0.903	2.492	2.375	12.548	11.721	2.492	0.716	6.037	1.296	1.813	0.148	5.69	0.752
2.892	16.609	8.281	1.116	0.814	0	0.945	2.576	2.455	14.847	13.839	2.576	0.74	7.143	1.435	1.878	0.156	5.978	0.79
2.987	22.02	10.463	1.153	0.874	0	0.995	2.66	2.535	18.202	16.928	2.66	0.764	8.757	1.629	1.943	0.166	6.419	0.846

Previous Summer

Vehicle Miles Traveled: 309,276

VEHICLE PERCENTAGES

Vehicle Type	Percent	Non-catalyst	Catalyst	Diesel
Light Auto	46.0%	0.2%	99.8%	0.0%
Light Truck < 3,750 lbs	10.0%	1.0%	96.0%	3.0%
Light Truck 3,751-5,750	21.0%	0.5%	99.5%	0.0%
Medium Truck 5,751-8,500	11.5%	0.9%	99.1%	0.0%
Lite-Heavy 8,501-10,000	2.1%	0.0%	81.0%	19.0%
Lite-Heavy 10,001-14,000	0.7%	0.0%	57.1%	42.9%
Med-Heavy 14,001-33,000	1.0%	0.0%	20.0%	80.0%
Heavy-Heavy 33,001-60,000	1.8%	0.0%	0.0%	100.0%
Line Haul > 60,000 lbs	0.1%	0.0%	0.0%	100.0%
Urban Bus	0.0%	0.0%	0.0%	0.0%
Motorcycle	4.3%	48.8%	51.2%	0.0%
School Bus	0.1%	0.0%	0.0%	100.0%
Motorhome	1.4%	0.0%	92.9%	7.1%

CO2 EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	497.077	387.224	357.05
Light Truck < 3,750 lbs	LDT1	484.596	482.995	346.547
Light Truck 3,751-5,750	LDT2	485.028	486.8	350.624
Medium Truck 5,751-8,500	MDV	613.198	664.618	346.656
Lite-Heavy 8,501-10,000	LHDT1	567.895	567.895	519.721
Lite-Heavy 10,001-14,000	LHDT2	567.895	567.895	523.528
Med-Heavy 14,001-33,000	MHDT	567.895	567.895	1505
Heavy-Heavy 33,001-60,000	HHDT	567.895	567.895	1924.234
Line Haul > 60,000 lbs	LHV	567.895	567.894	1505
Urban Bus	UB	567.895	567.895	2545.789
Motorcycle	MCY	123.274	152.295	0
School Bus	SBUS	567.895	567.894	1505
Motorhome	MH	567.895	567.895	1505

METHANE EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	0.324	0.017	0.007
Light Truck < 3,750 lbs	LDT1	0.331	0.021	0.003
Light Truck 3,751-5,750	LDT2	0.324	0.025	0.005
Medium Truck 5,751-8,500	MDV	0.379	0.03	0.003
Lite-Heavy 8,501-10,000	LHDT1	0.226	0.017	0.006
Lite-Heavy 10,001-14,000	LHDT2	0.226	0.015	0.008
Med-Heavy 14,001-33,000	MHDT	0.286	0.027	0.007
Heavy-Heavy 33,001-60,000	HHDT	0.718	0.16	0.029
Line Haul > 60,000 lbs	LHV	0.286	0.082	0.006
Urban Bus	UB	0.334	0.062	0.019
Motorcycle	MCY	0.206	0.166	0
School Bus	SBUS	0.286	0.12	0.017
Motorhome	MH	0.286	0.035	0.004

NOx EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	2.996	0.085	0.98
Light Truck < 3,750 lbs	LDT1	2.909	0.131	1.005
Light Truck 3,751-5,750	LDT2	2.879	0.189	0.979
Medium Truck 5,751-8,500	MDV	4.833	0.22	1.01
Lite-Heavy 8,501-10,000	LHDT1	1.382	0.257	2.054
Lite-Heavy 10,001-14,000	LHDT2	1.382	0.257	2.381
Med-Heavy 14,001-33,000	MHDT	2.073	0.588	3.077
Heavy-Heavy 33,001-60,000	HHDT	15.042	4.813	6.882
Line Haul > 60,000 lbs	LHV	2.073	2.106	2.702
Urban Bus	UB	2.749	2.328	8.74
Motorcycle	MCY	0.894	0.694	0
School Bus	SBUS	2.073	1.975	9.215
Motorhome	MH	2.073	0.595	4.433

CO2 EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	141,435.34	54,979,031.40	0.00
Light Truck < 3,750 lbs	149,873.99	14,340,368.53	321,536.18
Light Truck 3,751-5,750	157,507.98	31,458,599.87	0.00
Medium Truck 5,751-8,500	196,285.19	23,425,563.06	0.00
Lite-Heavy 8,501-10,000	0.00	2,987,574.91	3,375,483.62
Lite-Heavy 10,001-14,000	0.00	702,018.63	486,229.93
Med-Heavy 14,001-33,000	0.00	351,272.77	3,723,684.97
Heavy-Heavy 33,001-60,000	0.00	0.00	10,712,154.64
Line Haul > 60,000 lbs	0.00	0.00	465,460.62
Urban Bus	0.00	0.00	0.00
Motorcycle	800,029.88	1,036,980.30	0.00
School Bus	0.00	0.00	465,460.62
Motorhome	0.00	2,284,326.82	462,667.86
Total (grams)	1,445,132.38	131,565,736.29	20,012,678.44
Total (pounds)	3,185.97	290,052.80	44,120.40

Total CO2 Running Emissions (pounds): 337,359.17

METHANE EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	92.19	2,413.70	0.00
Light Truck < 3,750 lbs	102.37	623.50	2.78
Light Truck 3,751-5,750	105.22	1,615.58	0.00
Medium Truck 5,751-8,500	121.32	1,057.40	0.00
Lite-Heavy 8,501-10,000	0.00	89.43	7.40
Lite-Heavy 10,001-14,000	0.00	18.54	7.43
Med-Heavy 14,001-33,000	0.00	16.70	17.32
Heavy-Heavy 33,001-60,000	0.00	0.00	161.44
Line Haul > 60,000 lbs	0.00	0.00	1.86
Urban Bus	0.00	0.00	0.00
Motorcycle	1,336.91	1,130.30	0.00
School Bus	0.00	0.00	5.26
Motorhome	0.00	140.79	1.23
Total (grams)	1,758.00	7,105.94	204.72
Total (pounds)	3.88	15.67	0.45

Total Methane Running Emissions (pounds): 19.99

N2O EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	41.54	588.10	0.00
Light Truck < 3,750 lbs	43.84	189.53	45.44
Light Truck 3,751-5,750	45.56	595.18	0.00
Medium Truck 5,751-8,500	75.39	377.87	0.00
Lite-Heavy 8,501-10,000	0.00	65.88	123.51
Lite-Heavy 10,001-14,000	0.00	15.48	107.76
Med-Heavy 14,001-33,000	0.00	17.72	370.99
Heavy-Heavy 33,001-60,000	0.00	0.00	1,866.95
Line Haul > 60,000 lbs	0.00	0.00	40.72
Urban Bus	0.00	0.00	0.00
Motorcycle	282.73	230.27	0.00
School Bus	0.00	0.00	138.88
Motorhome	0.00	116.63	66.41
Total (grams)	489.06	2,196.67	2,760.66
Total (pounds)	1.08	4.84	6.09

Total N2O Running Emissions (pounds): 12.01

N_2O/NOx Ratio		
N_2O (mg km^{-1})	NOx (mg km^{-1})	N_2O/NOx Ratio
20	700	0.029
30	650	0.046
12	340	0.035
13	250	0.052
12	260	0.046
13	215	0.060
9	140	0.064
15	160	0.094
0.5	35	0.014
2	35	0.057
23	1300	0.018
22	800	0.028
40	1700	0.024
35	950	0.037
80	1700	0.047
120	1200	0.100
35	1400	0.025
43	1000	0.043
18	600	0.030
20	420	0.048
25	550	0.045
25	500	0.050
12	150	0.080
15	150	0.100
4	110	0.036
5	85	0.059
	Average	0.04873

Source: California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

Carbon Dioxide Calculation
Based on URBEMIS 2007 Assumptions and EMFAC 2007 Emission Factors

Minutes since engine shutoff	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
Home-Work	0.7%	1.0%	1.4%	2.2%	2.6%	2.8%	2.2%	2.6%	6.2%	8.9%	8.6%	8.6%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	100.0%
Home-Shop	3.3%	9.5%	14.4%	18.3%	12.2%	7.5%	4.2%	3.6%	3.7%	2.1%	2.6%	2.6%	2.6%	2.6%	2.7%	2.7%	2.7%	2.7%	100.0%
Home-Other	6.1%	7.6%	7.8%	7.2%	7.0%	7.9%	6.2%	6.6%	7.2%	4.9%	4.0%	4.0%	4.0%	3.9%	3.9%	3.9%	3.9%	3.9%	100.0%
Commercial Commute	2.6%	5.0%	3.7%	4.2%	4.7%	3.7%	3.0%	3.3%	8.5%	10.8%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.4%	100.0%
Commercial Non-Commute	5.8%	11.3%	7.3%	7.4%	7.7%	5.5%	4.4%	4.4%	12.1%	13.9%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.7%	100.0%
Commercial Customer	9.3%	14.7%	13.2%	14.0%	6.7%	7.1%	5.1%	4.5%	8.8%	6.4%	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	100.0%

Residential Trips	Home-Work %	Home-Shop %	Home-Other %
18,711.30	33%	18%	49%
624.95			

Commercial Trips	Commute	Non-Work	Customer
919.06	20.0%	10.0%	70.0%
1,222.07	20.0%	10.0%	70.0%
10,398.62	2.0%	1.0%	97.0%

Trips	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
Home-Work	44.53	63.62	89.06	139.96	165.40	178.13	139.96	165.40	394.42	566.18	547.10	547.10	553.46	553.46	553.46	553.46	553.46	553.46	6,361.63
Home-Shop	114.86	330.65	501.20	636.94	424.62	261.04	146.18	125.30	128.78	73.09	90.49	90.49	90.49	90.49	93.97	93.97	93.97	93.97	3,480.53
Home-Other	579.14	721.55	740.54	683.58	664.59	750.03	588.63	626.61	683.58	465.21	379.76	379.76	379.76	370.27	370.27	370.27	370.27	370.27	9,494.10
Commercial Commute	16.54	31.81	23.54	26.72	29.90	23.54	19.09	20.99	54.08	68.71	40.08	40.08	40.08	40.08	40.08	40.08	40.08	40.72	636.20
Commercial Non-Commute	18.45	35.95	23.22	23.54	24.49	17.50	14.00	14.00	38.49	44.22	7.95	7.95	7.95	7.95	7.95	7.95	7.95	8.59	318.10
Commercial Customer	1,077.45	1,703.06	1,529.28	1,621.96	776.23	822.57	590.86	521.35	1,019.52	741.47	139.03	139.03	150.61	150.61	150.61	150.61	150.61	150.61	11,585.45
Total	1,850.97	2,886.63	2,906.84	3,132.69	2,085.23	2,052.80	1,498.71	1,473.65	2,318.86	1,958.88	1,204.42	1,204.42	1,222.36	1,212.87	1,216.35	1,216.35	1,216.35	1,217.62	31,876.00

User Input from URBEMIS

Trip Distribution

Trips	Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
1850.97	5	1.7028894	849.7418	0	1.850967	177.6928	5.5529	1.943515	386.7595	0	1.915751	210.9454	0	0	31.48494	7.385357	0	7.398314	5.558453	0
2886.63	10	2.6557035	1325.196	0	2.886634	277.1169	8.659903	3.030966	603.1622	0	2.987666	328.9753	0	0	49.10165	11.51767	0	11.53788	8.668563	0
2906.84	20	2.6742913	1334.471	0	2.906838	279.0565	8.720515	3.05218	607.3839	0	3.008578	331.2778	0	0	49.44532	11.59829	0	11.61863	8.729236	0
3132.69	30	2.8820748	1438.155	0	3.13269	300.7382	9.39807	3.289324	654.5756	0	3.242334	357.017	0	0	53.28706	12.49943	0	12.52136	9.407468	0
2085.23	40	1.9184148	957.289	0	2.085234	200.1824	6.255701	2.189495	435.7095	0	2.158217	237.6436	0	0	35.46982	8.320082	0	8.334678	6.261956	0
2052.80	50	1.8885766	942.3997	0	2.052801	197.0689	6.158402	2.155441	428.9327	0	2.124649	233.9474	0	0	34.91814	8.190675	0	8.205044	6.16456	0
1498.71	60	1.3788154	688.0289	0	1.498712	143.8764	4.496137	1.573648	313.1559	0	1.551167	170.8008	0	0	25.4931	5.979862	0	5.990353	4.500633	0
1473.65	120	1.3557561	676.5223	0	1.473648	141.4702	4.420944	1.54733	307.9187	0	1.525226	167.9443	0	0	25.06675	5.879855	0	5.890171	4.425365	0
2318.86	180	2.1333531	1064.543	0	2.318862	222.6108	6.956586	2.434805	484.5262	0	2.400022	264.2691	0	0	39.44384	9.25226	0	9.268492	6.963543	0
1958.88	240	1.8021703	899.283	0	1.958881	188.0526	5.876642	2.056825	409.3081	0	2.027442	223.2438	0	0	33.32056	7.815934	0	7.829646	5.882519	0
1204.42	300	1.1080626	552.9232	0	1.204416	115.6239	3.613248	1.264637	251.6627	0	1.24657	137.2613	0	0	20.48711	4.805619	0	4.81405	3.616861	0
1204.42	360	1.1080626	552.9232	0	1.204416	115.6239	3.613248	1.264637	251.6627	0	1.24657	137.2613	0	0	20.48711	4.805619	0	4.81405	3.616861	0
1222.36	420	1.1245739	561.1624	0	1.222363	117.3468	3.667089	1.283481	255.4127	0	1.265146	139.3066	0	0	20.79239	4.877228	0	4.885785	3.670756	0
1212.87	480	1.1158393	556.8038	0	1.212869	116.4354	3.638607	1.273512	253.4289	0	1.255319	138.2246	0	0	20.6309	4.839347	0	4.847837	3.642245	0
1216.35	540	1.1190414	558.4017	0	1.216349	116.7695	3.649048	1.277167	254.1562	0	1.258922	138.6213	0	0	20.6901	4.853234	0	4.861748	3.652697	0
1216.35	600	1.1190414	558.4017	0	1.216349	116.7695	3.649048	1.277167	254.1562	0	1.258922	138.6213	0	0	20.6901	4.853234	0	4.861748	3.652697	0
1216.35	660	1.1190414	558.4017	0	1.216349	116.7695	3.649048	1.277167	254.1562	0	1.258922	138.6213	0	0	20.6901	4.853234	0	4.861748	3.652697	0
1217.62	720	1.120212	558.9858	0	1.217622	116.8917	3.652865	1.278503	254.4221	0	1.260239	138.7663	0	0	20.71175	4.858311	0	4.866834	3.656518	0
31876		29	14634	0	32	3060	96	33	6660	0	33	3633	0	0	542	127	0	127	96	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
3.701933	14.80773	0	0	33.3174	0	0	1.850967	0	0	0	38.84069	40.75088	0	0	0	1.850967	0	24.07367	1.839861
5.773269	23.09307	0	0	51.95942	0	0	2.886634	0	0	0	60.57313	63.55214	0	0	0	2.886634	0	37.54357	2.869314
5.813677	23.25471	0	0	52.32309	0	0	2.906838	0	0	0	60.9971	63.99695	0	0	0	2.906838	0	37.80634	2.889397
6.26538	25.06152	0	0	56.38842	0	0	3.13269	0	0	0	65.73637	68.9693	0	0	0	3.13269	0	40.74377	3.113894
4.170467	16.68187	0	0	37.5342	0	0	2.085234	0	0	0	43.75654	45.9085	0	0	0	2.085234	0	27.12055	2.072722
4.105601	16.42241	0	0	36.95041	0	0	2.052801	0	0	0	43.07597	45.19446	0	0	0	2.052801	0	26.69872	2.040484
2.997425	11.9897	0	0	26.97682	0	0	1.498712	0	0	0	31.44898	32.99565	0	0	0	1.498712	0	19.49225	1.48972
2.947296	11.78918	0	0	26.52566	0	0	1.473648	0	0	0	30.92303	32.44383	0	0	0	1.473648	0	19.16627	1.464806
4.637724	18.5509	0	0	41.73952	0	0	2.318862	0	0	0	48.659	51.05207	0	0	0	2.318862	0	30.15912	2.304949
3.917762	15.67105	0	0	35.25985	0	0	1.958881	0	0	0	41.10515	43.12672	0	0	0	1.958881	0	25.4772	1.947127
2.408832	9.635327	0	0	21.67949	0	0	1.204416	0	0	0	25.27346	26.51642	0	0	0	1.204416	0	15.66463	1.197189
2.408832	9.635327	0	0	21.67949	0	0	1.204416	0	0	0	25.27346	26.51642	0	0	0	1.204416	0	15.66463	1.197189
2.444726	9.778904	0	0	22.00253	0	0	1.222363	0	0	0	25.65006	26.91154	0	0	0	1.222363	0	15.89805	1.215029
2.425738	9.702951	0	0	21.83164	0	0	1.212869	0	0	0	25.45084	26.70252	0	0	0	1.212869	0	15.77457	1.205592
2.432699	9.730795	0	0	21.89429	0	0	1.216349	0	0	0	25.52388	26.77915	0	0	0	1.216349	0	15.81984	1.209051
2.432699	9.730795	0	0	21.89429	0	0	1.216349	0	0	0	25.52388	26.77915	0	0	0	1.216349	0	15.81984	1.209051
2.432699	9.730795	0	0	21.89429	0	0	1.216349	0	0	0	25.52388	26.77915	0	0	0	1.216349	0	15.81984	1.209051
2.435244	9.740974	0	0	21.91719	0	0	1.217622	0	0	0	25.55058	26.80716	0	0	0	1.217622	0	15.83639	1.210316
64	255	0	0	574	0	0	32	0	0	0	669	702	0	0	0	32	0	415	32

Temperature: 60F

Pollutant Name: Carbon Dioxide Relative Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	111.902	11.431	0	112.19	14.176	0	112.288	14.273	0	141.795	19.37	0	170.667	22.627	0	170.667	21.598	0	170.667
10	121.432	13.227	0	121.744	16.482	0	121.851	16.583	0	153.87	22.571	0	185.2	27.148	0	185.2	26.511	0	185.2
20	139.927	17.26	0	140.287	21.638	0	140.41	21.751	0	177.306	29.712	0	213.408	37.003	0	213.408	37.071	0	213.408
30	157.671	21.884	0	158.076	27.518	0	158.215	27.649	0	199.79	37.838	0	240.47	47.939	0	240.47	48.611	0	240.47
40	174.663	27.097	0	175.112	34.122	0	175.266	34.277	0	221.321	46.95	0	266.386	59.958	0	266.386	61.132	0	266.386
50	190.904	32.9	0	191.394	41.45	0	191.562	41.636	0	241.9	57.047	0	291.155	73.058	0	291.155	74.633	0	291.155
60	206.393	39.292	0	206.923	49.502	0	207.105	49.725	0	261.526	68.128	0	314.778	87.241	0	314.778	89.114	0	314.778
120	279.289	88.25	0	280.007	110.585	0	280.253	111.17	0	353.896	151.82	0	425.955	188.621	0	425.955	188.643	0	425.955
180	279.509	100.586	0	280.227	126.121	0	280.473	126.776	0	354.174	173.198	0	426.29	215.939	0	426.29	216.508	0	426.29
240	279.728	112.81	0	280.447	141.498	0	280.694	142.226	0	354.452	194.347	0	426.625	242.8	0	426.625	243.793	0	426.625
300	279.948	124.92	0	280.667	156.716	0	280.914	157.518	0	354.731	215.266	0	426.96	269.205	0	426.96	270.498	0	426.96
360	280.167	136.918	0	280.887	171.775	0	281.134	172.653	0	355.009	235.956	0	427.294	295.153	0	427.294	296.623	0	427.294
420	280.387	148.803	0	281.107	186.675	0	281.354	187.63	0	355.287	256.416	0	427.629	320.645	0	427.629	322.169	0	427.629
480	280.606	160.575	0	281.327	201.416	0	281.575	202.451	0	355.565	276.647	0	427.964	345.68	0	427.964	347.135	0	427.964
540	280.826	172.234	0	281.548	215.998	0	281.795	217.114	0	355.843	296.649	0	428.299	370.258	0	428.299	371.521	0	428.299
600	281.045	183.78	0	281.768	230.421	0	282.015	231.62	0	356.121	316.422	0	428.633	394.38	0	428.633	395.327	0	428.633
660	281.265	195.213	0	281.988	244.685	0	282.235	245.969	0	356.399	335.965	0	428.968	418.045	0	428.968	418.554	0	428.968
720	281.484	206.534	0	282.208	258.79	0	282.456	260.161	0	356.677	355.279	0	429.303	441.254	0	429.303	441.201	0	429.303

Pollutant Name: Carbon Dioxide Emissions **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	190.55673	9713.399	0	207.66	2518.973	0	218.2334	5520.218	0	271.6438	4086.013	0	0	712.4098	0	0	159.7888	0	0
10	322.48739	17528.37	0	351.4304	4567.441	0	369.3262	10002.24	0	459.7122	7425.301	0	0	1333.012	0	0	305.8807	0	0
20	374.20556	23032.98	0	407.7916	6038.224	0	428.5566	13211.21	0	533.4389	9842.927	0	0	1829.625	0	0	430.7143	0	0
30	454.41961	31472.59	0	495.2031	8275.715	0	520.4205	18098.36	0	647.7859	13508.81	0	0	2554.528	0	0	608.6759	0	0
40	335.07609	25939.66	0	365.1494	6830.624	0	383.7441	14934.82	0	477.6587	11157.37	0	0	2126.7	0	0	509.5156	0	0
50	360.53682	31004.95	0	392.8937	8168.504	0	412.9005	17859.04	0	513.9525	13346	0	0	2551.049	0	0	612.3671	0	0
60	284.57784	27034.03	0	310.1181	7122.169	0	325.9104	15571.68	0	405.6706	11636.31	0	0	2224.043	0	0	533.8243	0	0
120	378.64777	59703.09	0	412.6317	15644.48	0	433.644	34231.33	0	539.7713	25497.3	0	0	4728.116	0	0	1111.14	0	0
180	596.29139	107078.1	0	649.8078	28075.89	0	682.8971	61426.3	0	850.0255	45770.88	0	0	8517.464	0	0	2006.703	0	0
240	504.1175	101448.1	0	549.3622	26609.06	0	577.3384	58214.26	0	718.6307	43386.77	0	0	8090.232	0	0	1908.813	0	0
300	310.19991	69071.17	0	338.0398	18120.12	0	355.2541	39641.4	0	442.1972	29547.68	0	0	5515.233	0	0	1302.191	0	0
360	310.44257	75705.14	0	338.3048	19861.3	0	355.5324	43450.32	0	442.5437	32387.62	0	0	6046.833	0	0	1427.958	0	0
420	315.3159	83502.65	0	343.6148	21905.72	0	361.1125	47923.09	0	449.4898	35720.44	0	0	6666.977	0	0	1574.048	0	0
480	313.11121	89408.77	0	341.2128	23451.95	0	358.5892	51306.94	0	446.3476	38239.42	0	0	7131.689	0	0	1682.854	0	0
540	314.25593	96175.75	0	342.4607	25221.99	0	359.8992	55180.87	0	447.9784	41121.86	0	0	7660.676	0	0	1806.242	0	0
600	314.501	102623.1	0	342.7283	26906.15	0	360.1802	58867.66	0	448.3284	43862.82	0	0	8159.763	0	0	1921.98	0	0
660	314.74719	109007.3	0	342.9959	28571.75	0	360.4612	62514.55	0	448.6784	46571.89	0	0	8649.394	0	0	2034.904	0	0
720	315.32176	115449.6	0	343.6226	30250.4	0	361.1208	66190.7	0	449.4981	49300.74	0	0	9139.141	0	0	2147.252	0	0
Total (grams/day):	6308.8122	1174899	0	6875.028	308140.5	0	7225.121	674145	0	8993.352	502410.1	0	0	93636.89	0	0	22084.85	0	0
Total (lbs/day):	13.90855	2590.208	0	15.15684	679.3335	0	15.92866	1486.235	0	19.82695	1107.625	0	0	206.434	0	0	48.68876	0	0

Grand Total (lbs/day): 6526.5496

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
9.546	0	170.667	9.546	0	170.667	9.546	0	170.667	9.546	0	35.404	1.776	0	170.667	9.546	0	170.667	9.546	0
19.039	0	185.2	19.039	0	185.2	19.039	0	185.2	19.039	0	38.42	3.543	0	185.2	19.039	0	185.2	19.039	0
37.866	0	213.408	37.866	0	213.408	37.866	0	213.408	37.866	0	44.271	7.047	0	213.408	37.866	0	213.408	37.866	0
56.482	0	240.47	56.482	0	240.47	56.482	0	240.47	56.482	0	49.885	10.511	0	240.47	56.482	0	240.47	56.482	0
74.887	0	266.386	74.887	0	266.386	74.887	0	266.386	74.887	0	55.261	13.936	0	266.386	74.887	0	266.386	74.887	0
93.081	0	291.155	93.081	0	291.155	93.081	0	291.155	93.081	0	60.4	17.322	0	291.155	93.081	0	291.155	93.081	0
111.063	0	314.778	111.063	0	314.778	111.063	0	314.778	111.063	0	65.3	20.668	0	314.778	111.063	0	314.778	111.063	0
188.899	0	425.955	188.899	0	425.955	188.899	0	425.955	188.899	0	88.364	35.153	0	425.955	188.899	0	425.955	188.899	0
223.17	0	426.29	223.17	0	426.29	223.17	0	426.29	223.17	0	88.433	41.53	0	426.29	223.17	0	426.29	223.17	0
255.419	0	426.625	255.419	0	426.625	255.419	0	426.625	255.419	0	88.503	47.531	0	426.625	255.419	0	426.625	255.418	0
285.644	0	426.96	285.644	0	426.96	285.644	0	426.96	285.644	0	88.572	53.156	0	426.96	285.644	0	426.96	285.644	0
313.847	0	427.294	313.847	0	427.295	313.847	0	427.294	313.847	0	88.642	58.404	0	427.294	313.847	0	427.294	313.847	0
340.027	0	427.629	340.027	0	427.629	340.027	0	427.629	340.027	0	88.711	63.276	0	427.629	340.027	0	427.629	340.027	0
364.184	0	427.964	364.184	0	427.964	364.184	0	427.964	364.184	0	88.78	67.772	0	427.964	364.184	0	427.964	364.184	0
386.319	0	428.299	386.319	0	428.299	386.319	0	428.299	386.319	0	88.85	71.891	0	428.299	386.319	0	428.299	386.319	0
406.43	0	428.633	406.43	0	428.633	406.43	0	428.633	406.43	0	88.919	75.633	0	428.633	406.43	0	428.633	406.43	0
424.519	0	428.968	424.519	0	428.968	424.519	0	428.968	424.519	0	88.989	78.999	0	428.968	424.519	0	428.968	424.519	0
440.585	0	429.303	440.585	0	429.303	440.585	0	429.303	440.585	0	89.058	81.989	0	429.303	440.586	0	429.303	440.586	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
35.33866	0	0	0	0	0	0	0	0	0	0	1375.116	72.37357	0	0	0	0	0	229.8073	0
109.9173	0	0	0	0	0	0	0	0	0	0	2327.22	225.1652	0	0	0	0	0	714.7919	0
220.1407	0	0	0	0	0	0	0	0	0	0	2700.402	450.9865	0	0	0	0	0	1431.575	0
353.8812	0	0	0	0	0	0	0	0	0	0	3279.259	724.9363	0	0	0	0	0	2301.289	0
312.3138	0	0	0	0	0	0	0	0	0	0	2418.03	639.7809	0	0	0	0	0	2030.976	0
382.1535	0	0	0	0	0	0	0	0	0	0	2601.788	782.8584	0	0	0	0	0	2485.144	0
332.903	0	0	0	0	0	0	0	0	0	0	2053.618	681.9541	0	0	0	0	0	2164.868	0
556.7413	0	0	0	0	0	0	0	0	0	0	2732.483	1140.498	0	0	0	0	0	3620.488	0
1035.001	0	0	0	0	0	0	0	0	0	0	4303.061	2120.192	0	0	0	0	0	6730.611	0
1000.671	0	0	0	0	0	0	0	0	0	0	3637.929	2049.856	0	0	0	0	0	6507.336	0
688.0683	0	0	0	0	0	0	0	0	0	0	2238.521	1409.507	0	0	0	0	0	4474.508	0
756.0046	0	0	0	0	0	0	0	0	0	0	2240.29	1548.665	0	0	0	0	0	4916.298	0
831.2728	0	0	0	0	0	0	0	0	0	0	2275.443	1702.855	0	0	0	0	0	5405.767	0
883.4149	0	0	0	0	0	0	0	0	0	0	2259.526	1809.683	0	0	0	0	0	5744.847	0
939.7977	0	0	0	0	0	0	0	0	0	0	2267.796	1925.18	0	0	0	0	0	6111.505	0
988.7217	0	0	0	0	0	0	0	0	0	0	2269.557	2025.387	0	0	0	0	0	6429.658	0
1032.727	0	0	0	0	0	0	0	0	0	0	2271.344	2115.526	0	0	0	0	0	6715.823	0
1072.932	0	0	0	0	0	0	0	0	0	0	2275.483	2197.892	0	0	0	0	0	6977.291	0
11532	0	0	0	0	0	0	0	0	0	0	45526.87	23623.3	0	0	0	0	0	74992.58	0
25.42371	0	0	0	0	0	0	0	0	0	0	100.3696	52.08045	0	0	0	0	0	165.3303	0

Temperature: 60F

Pollutant Name: Methane Relative Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.314	0.002	0	0.326	0.002	0	0.312	0.003	0	0.388	0.003	0	0.475	0.008	0	0.475	0.009	0	0.713
10	0.311	0.004	0	0.323	0.005	0	0.309	0.005	0	0.385	0.007	0	0.471	0.017	0	0.471	0.017	0	0.707
20	0.314	0.007	0	0.326	0.009	0	0.312	0.01	0	0.388	0.013	0	0.476	0.032	0	0.476	0.033	0	0.714
30	0.328	0.01	0	0.341	0.013	0	0.326	0.015	0	0.406	0.019	0	0.497	0.046	0	0.497	0.047	0	0.746
40	0.353	0.013	0	0.367	0.016	0	0.351	0.019	0	0.437	0.024	0	0.535	0.058	0	0.535	0.06	0	0.803
50	0.39	0.016	0	0.405	0.019	0	0.387	0.023	0	0.482	0.029	0	0.591	0.07	0	0.591	0.071	0	0.886
60	0.405	0.018	0	0.421	0.022	0	0.403	0.026	0	0.501	0.033	0	0.614	0.079	0	0.614	0.081	0	0.921
120	0.326	0.024	0	0.338	0.027	0	0.324	0.034	0	0.403	0.045	0	0.493	0.097	0	0.493	0.098	0	0.74
180	0.354	0.019	0	0.368	0.022	0	0.352	0.027	0	0.438	0.036	0	0.537	0.092	0	0.537	0.094	0	0.806
240	0.383	0.02	0	0.398	0.024	0	0.381	0.029	0	0.474	0.038	0	0.581	0.097	0	0.581	0.099	0	0.871
300	0.412	0.021	0	0.428	0.025	0	0.41	0.03	0	0.51	0.04	0	0.624	0.103	0	0.624	0.105	0	0.937
360	0.441	0.022	0	0.458	0.026	0	0.438	0.032	0	0.545	0.042	0	0.668	0.108	0	0.668	0.11	0	1.002
420	0.47	0.023	0	0.488	0.027	0	0.467	0.033	0	0.581	0.044	0	0.712	0.113	0	0.712	0.116	0	1.068
480	0.499	0.024	0	0.518	0.029	0	0.496	0.035	0	0.617	0.046	0	0.756	0.118	0	0.756	0.121	0	1.133
540	0.527	0.025	0	0.548	0.03	0	0.524	0.036	0	0.652	0.048	0	0.799	0.123	0	0.799	0.126	0	1.199
600	0.556	0.026	0	0.578	0.031	0	0.553	0.038	0	0.688	0.05	0	0.843	0.128	0	0.843	0.131	0	1.264
660	0.585	0.027	0	0.608	0.032	0	0.581	0.039	0	0.724	0.052	0	0.887	0.133	0	0.887	0.136	0	1.33
720	0.614	0.028	0	0.638	0.033	0	0.61	0.041	0	0.759	0.054	0	0.93	0.138	0	0.93	0.14	0	1.395

Pollutant Name: Methane Emissions **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.5347073	1.699484	0	0.603415	0.355386	0	0.606377	1.160278	0	0.743311	0.632836	0	0	0.25188	0	0	0.066585	0	0
10	0.8259238	5.300784	0	0.932383	1.385584	0	0.936568	3.015811	0	1.150252	2.302827	0	0	0.834728	0	0	0.196144	0	0
20	0.8397275	9.3413	0	0.947629	2.511508	0	0.95228	6.073839	0	1.167328	4.306612	0	0	1.58225	0	0	0.383415	0	0
30	0.9453205	14.38155	0	1.068247	3.909597	0	1.07232	9.818634	0	1.316388	6.783323	0	0	2.451205	0	0	0.588504	0	0
40	0.6772004	12.44476	0	0.765281	3.202919	0	0.768513	8.278481	0	0.943141	5.703447	0	0	2.05725	0	0	0.500081	0	0
50	0.7365449	15.0784	0	0.831384	3.744308	0	0.834156	9.865452	0	1.024081	6.784475	0	0	2.44427	0	0	0.582558	0	0
60	0.5584202	12.38452	0	0.630958	3.16528	0	0.63418	8.142055	0	0.777135	5.636425	0	0	2.013955	0	0	0.485219	0	0
120	0.4419765	16.23654	0	0.498093	3.819696	0	0.501335	10.46924	0	0.614666	7.557493	0	0	2.431475	0	0	0.577237	0	0
180	0.755207	20.22632	0	0.853341	4.897437	0	0.857051	13.08221	0	1.05121	9.513688	0	0	3.628834	0	0	0.871238	0	0
240	0.6902312	17.98566	0	0.779635	4.513261	0	0.78365	11.86994	0	0.961007	8.483266	0	0	3.232095	0	0	0.775135	0	0
300	0.4565218	11.61139	0	0.51549	2.890598	0	0.518501	7.549881	0	0.635751	5.49045	0	0	2.110173	0	0	0.505475	0	0
360	0.4886556	12.16431	0	0.551622	3.006222	0	0.553911	8.053206	0	0.679381	5.764973	0	0	2.212608	0	0	0.529546	0	0
420	0.5285497	12.90673	0	0.596513	3.168365	0	0.599386	8.42862	0	0.73505	6.12949	0	0	2.34954	0	0	0.566751	0	0
480	0.5568038	13.36329	0	0.628266	3.376627	0	0.631662	8.870013	0	0.774532	6.358332	0	0	2.434446	0	0	0.586588	0	0
540	0.5897348	13.96004	0	0.666559	3.503086	0	0.669235	9.149623	0	0.820817	6.65382	0	0	2.544883	0	0	0.61258	0	0
600	0.622187	14.51844	0	0.70305	3.619856	0	0.706273	9.657936	0	0.866138	6.931063	0	0	2.648333	0	0	0.636889	0	0
660	0.6546392	15.07685	0	0.73954	3.736625	0	0.742034	9.912092	0	0.911459	7.208305	0	0	2.751784	0	0	0.661198	0	0
720	0.6878102	15.6516	0	0.776843	3.857426	0	0.779887	10.4313	0	0.956521	7.493378	0	0	2.858221	0	0	0.681357	0	0
Total (grams/day):	11.590162	234.332	0	13.08825	58.66378	0	13.14732	153.8286	0	16.12817	109.7342	0	0	40.83793	0	0	9.806499	0	0
Total (lbs/day):	0.0255519	0.516614	0	0.028855	0.129331	0	0.028985	0.339134	0	0.035557	0.241923	0	0	0.090032	0	0	0.02162	0	0

Grand Total (lbs/day): 2.0341454

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.019	0	1.448	0.082	0	0.713	0.032	0	0.907	0.039	0	0.14	0.018	0	0.713	0.037	0	0.713	0.016	0
0.038	0	1.436	0.16	0	0.707	0.063	0	0.899	0.075	0	0.139	0.035	0	0.707	0.071	0	0.707	0.032	0
0.071	0	1.45	0.303	0	0.714	0.119	0	0.908	0.142	0	0.14	0.067	0	0.714	0.135	0	0.714	0.06	0
0.101	0	1.515	0.429	0	0.746	0.169	0	0.949	0.202	0	0.147	0.095	0	0.746	0.192	0	0.746	0.085	0
0.127	0	1.631	0.539	0	0.803	0.212	0	1.022	0.254	0	0.158	0.12	0	0.803	0.241	0	0.803	0.107	0
0.148	0	1.799	0.632	0	0.886	0.248	0	1.127	0.297	0	0.174	0.14	0	0.886	0.282	0	0.886	0.125	0
0.166	0	1.871	0.709	0	0.921	0.278	0	1.172	0.333	0	0.181	0.157	0	0.921	0.317	0	0.921	0.141	0
0.151	0	1.503	0.631	0	0.74	0.258	0	0.941	0.314	0	0.146	0.167	0	0.74	0.271	0	0.74	0.115	0
0.16	0	1.636	0.669	0	0.806	0.274	0	1.025	0.333	0	0.158	0.144	0	0.806	0.287	0	0.806	0.122	0
0.169	0	1.769	0.707	0	0.871	0.289	0	1.108	0.351	0	0.171	0.152	0	0.871	0.303	0	0.871	0.129	0
0.178	0	1.902	0.743	0	0.937	0.304	0	1.192	0.369	0	0.184	0.159	0	0.937	0.319	0	0.937	0.135	0
0.186	0	2.035	0.778	0	1.002	0.318	0	1.275	0.387	0	0.197	0.167	0	1.002	0.334	0	1.002	0.142	0
0.194	0	2.169	0.811	0	1.068	0.332	0	1.358	0.403	0	0.21	0.174	0	1.068	0.348	0	1.068	0.148	0
0.202	0	2.302	0.844	0	1.133	0.345	0	1.442	0.419	0	0.223	0.181	0	1.133	0.362	0	1.133	0.154	0
0.209	0	2.435	0.875	0	1.199	0.358	0	1.525	0.435	0	0.236	0.188	0	1.199	0.376	0	1.199	0.159	0
0.217	0	2.568	0.905	0	1.264	0.37	0	1.608	0.45	0	0.249	0.194	0	1.264	0.388	0	1.264	0.165	0
0.223	0	2.701	0.934	0	1.33	0.382	0	1.692	0.464	0	0.261	0.2	0	1.33	0.401	0	1.33	0.17	0
0.23	0	2.834	0.961	0	1.395	0.393	0	1.775	0.478	0	0.274	0.206	0	1.395	0.413	0	1.395	0.175	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.070337	0	0	0	0	0	0	0	0	0	0	5.437696	0.733516	0	0	0	0	0	0.385179	0
0.219384	0	0	0	0	0	0	0	0	0	0	8.419666	2.224325	0	0	0	0	0	1.201394	0
0.412771	0	0	0	0	0	0	0	0	0	0	8.539593	4.287796	0	0	0	0	0	2.26838	0
0.632803	0	0	0	0	0	0	0	0	0	0	9.663246	6.552084	0	0	0	0	0	3.46322	0
0.529649	0	0	0	0	0	0	0	0	0	0	6.913533	5.50902	0	0	0	0	0	2.901899	0
0.607629	0	0	0	0	0	0	0	0	0	0	7.495218	6.327224	0	0	0	0	0	3.337341	0
0.497572	0	0	0	0	0	0	0	0	0	0	5.692265	5.180317	0	0	0	0	0	2.748408	0
0.445042	0	0	0	0	0	0	0	0	0	0	4.514762	5.41812	0	0	0	0	0	2.204121	0
0.742036	0	0	0	0	0	0	0	0	0	0	7.688122	7.351498	0	0	0	0	0	3.679413	0
0.662102	0	0	0	0	0	0	0	0	0	0	7.028981	6.555261	0	0	0	0	0	3.286559	0
0.428772	0	0	0	0	0	0	0	0	0	0	4.650317	4.216111	0	0	0	0	0	2.114725	0
0.448043	0	0	0	0	0	0	0	0	0	0	4.978872	4.428242	0	0	0	0	0	2.224378	0
0.474277	0	0	0	0	0	0	0	0	0	0	5.386513	4.682608	0	0	0	0	0	2.352912	0
0.489999	0	0	0	0	0	0	0	0	0	0	5.675537	4.833156	0	0	0	0	0	2.429284	0
0.508434	0	0	0	0	0	0	0	0	0	0	6.023635	5.03448	0	0	0	0	0	2.515355	0
0.527896	0	0	0	0	0	0	0	0	0	0	6.355445	5.195155	0	0	0	0	0	2.610274	0
0.542492	0	0	0	0	0	0	0	0	0	0	6.661731	5.35583	0	0	0	0	0	2.689373	0
0.560106	0	0	0	0	0	0	0	0	0	0	7.000858	5.522275	0	0	0	0	0	2.771368	0
8.799343	0	0	0	0	0	0	0	0	0	0	118.126	89.40702	0	0	0	0	0	45.18358	0
0.019399	0	0	0	0	0	0	0	0	0	0	0.260423	0.197109	0	0	0	0	0	0.099613	0

Temperature: 60F

Pollutant Name: Oxides of Nitrogen Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	1.173	0.155	0	1.17	0.186	0	1.158	0.318	0	1.948	0.379	0	0.559	1.455	0	0.559	1.427	0	0.838
10	1.275	0.173	0	1.271	0.207	0	1.259	0.353	0	2.117	0.418	0	0.608	1.627	0	0.608	1.637	0	0.911
20	1.46	0.204	0	1.456	0.245	0	1.442	0.415	0	2.425	0.488	0	0.696	1.933	0	0.696	2.01	0	1.044
30	1.621	0.23	0	1.617	0.276	0	1.601	0.467	0	2.692	0.547	0	0.773	2.188	0	0.773	2.319	0	1.159
40	1.757	0.251	0	1.752	0.302	0	1.735	0.509	0	2.918	0.594	0	0.837	2.392	0	0.837	2.564	0	1.256
50	1.868	0.267	0	1.863	0.321	0	1.845	0.541	0	3.103	0.629	0	0.89	2.546	0	0.89	2.745	0	1.336
60	1.954	0.277	0	1.949	0.333	0	1.93	0.562	0	3.246	0.654	0	0.932	2.648	0	0.932	2.862	0	1.397
120	2	0.295	0	1.995	0.356	0	1.976	0.599	0	3.323	0.699	0	0.953	2.819	0	0.953	3.025	0	1.43
180	1.953	0.306	0	1.948	0.367	0	1.928	0.62	0	3.243	0.723	0	0.931	2.828	0	0.931	3.031	0	1.396
240	1.889	0.304	0	1.885	0.365	0	1.866	0.616	0	3.138	0.718	0	0.901	2.808	0	0.901	3.01	0	1.351
300	1.811	0.3	0	1.806	0.361	0	1.788	0.609	0	3.008	0.71	0	0.863	2.777	0	0.863	2.979	0	1.295
360	1.716	0.296	0	1.712	0.355	0	1.695	0.599	0	2.851	0.699	0	0.818	2.735	0	0.818	2.936	0	1.227
420	1.607	0.29	0	1.603	0.348	0	1.587	0.587	0	2.669	0.685	0	0.766	2.682	0	0.766	2.883	0	1.149
480	1.482	0.283	0	1.478	0.34	0	1.463	0.573	0	2.461	0.667	0	0.706	2.617	0	0.706	2.818	0	1.059
540	1.341	0.274	0	1.338	0.33	0	1.324	0.556	0	2.227	0.647	0	0.639	2.542	0	0.639	2.742	0	0.959
600	1.185	0.265	0	1.182	0.318	0	1.17	0.537	0	1.968	0.624	0	0.565	2.455	0	0.565	2.656	0	0.847
660	1.013	0.254	0	1.011	0.306	0	1.001	0.515	0	1.683	0.598	0	0.483	2.358	0	0.483	2.558	0	0.724
720	0.826	0.242	0	0.824	0.291	0	0.816	0.49	0	1.372	0.569	0	0.394	2.249	0	0.394	2.449	0	0.591

Pollutant Name: Nitrous Oxide **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.0973381	6.418258	0	0.105532	1.610576	0	0.109672	5.993308	0	0.181855	3.8959	0	0	2.232361	0	0	0.514464	0	0
10	0.1650016	11.17184	0	0.178787	2.795322	0	0.185954	10.37546	0	0.308213	6.700975	0	0	3.892979	0	0	0.920393	0	0
20	0.1902655	13.26594	0	0.206244	3.331629	0	0.214474	12.28315	0	0.355526	7.877904	0	0	4.657529	0	0	1.138019	0	0
30	0.22766	16.11878	0	0.246846	4.044792	0	0.256624	14.89619	0	0.425335	9.516445	0	0	5.681559	0	0	1.414982	0	0
40	0.1642528	11.70888	0	0.178028	2.945991	0	0.185115	10.8072	0	0.306887	6.878775	0	0	4.134459	0	0	1.041371	0	0
50	0.1719135	12.26154	0	0.186362	3.082631	0	0.19379	11.30798	0	0.321268	7.170796	0	0	4.332195	0	0	1.097544	0	0
60	0.1312892	9.287202	0	0.142341	2.334706	0	0.148001	8.576211	0	0.245361	5.443347	0	0	3.289569	0	0	0.83545	0	0
120	0.1321326	9.725291	0	0.143263	2.45422	0	0.148994	8.987966	0	0.246981	5.720591	0	0	3.443433	0	0	0.868264	0	0
180	0.2030315	15.87388	0	0.220121	3.98117	0	0.228755	14.63887	0	0.379281	9.310718	0	0	5.43572	0	0	1.368969	0	0
240	0.1658923	13.32197	0	0.179936	3.344803	0	0.187028	12.28654	0	0.310027	7.810924	0	0	4.559402	0	0	1.148437	0	0
300	0.097787	8.083223	0	0.105997	2.034011	0	0.110187	7.468521	0	0.182723	4.749029	0	0	2.772395	0	0	0.698843	0	0
360	0.0926574	7.975447	0	0.10048	2.000205	0	0.104456	7.345885	0	0.173186	4.675452	0	0	2.730465	0	0	0.688756	0	0
420	0.0880648	7.930216	0	0.095484	1.989982	0	0.099258	7.305991	0	0.164546	4.650083	0	0	2.717451	0	0	0.6864	0	0
480	0.0805839	7.67869	0	0.087355	1.929134	0	0.090792	7.07635	0	0.150544	4.492723	0	0	2.630997	0	0	0.665714	0	0
540	0.0731263	7.455826	0	0.079307	1.877768	0	0.082401	6.88611	0	0.136621	4.370515	0	0	2.56293	0	0	0.649619	0	0
600	0.0646194	7.210926	0	0.070061	1.809486	0	0.072817	6.650794	0	0.120732	4.215149	0	0	2.475213	0	0	0.629244	0	0
660	0.0552401	6.911605	0	0.059925	1.741203	0	0.062299	6.378322	0	0.103248	4.039518	0	0	2.377415	0	0	0.606026	0	0
720	0.0450898	6.591961	0	0.048892	1.657582	0	0.050838	6.075043	0	0.084257	3.847642	0	0	2.269889	0	0	0.58081	0	0
Total (grams/day):	2.245946	178.9915	0	2.43496	44.96521	0	2.531453	165.3399	0	4.196592	105.3665	0	0	62.19596	0	0	15.5533	0	0
Total (lbs/day):	0.0049515	0.394609	0	0.005368	0.099131	0	0.005581	0.364512	0	0.009252	0.232293	0	0	0.137119	0	0	0.034289	0	0

Grand Total (lbs/day): 1.476493

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
1.036	0	4.103	4.071	0	0.838	1.957	0	1.112	2.576	0	0.292	0.094	0	0.838	1.625	0	0.838	0.729	0
1.562	0	4.46	6.134	0	0.911	2.948	0	1.208	3.881	0	0.318	0.141	0	0.911	2.448	0	0.911	1.098	0
2.484	0	5.109	9.756	0	1.044	4.689	0	1.384	6.173	0	0.364	0.225	0	1.044	3.894	0	1.044	1.746	0
3.236	0	5.671	12.708	0	1.159	6.108	0	1.537	8.041	0	0.404	0.293	0	1.159	5.072	0	1.159	2.274	0
3.816	0	6.147	14.989	0	1.256	7.205	0	1.666	9.484	0	0.438	0.345	0	1.256	5.982	0	1.256	2.683	0
4.226	0	6.536	16.6	0	1.336	7.979	0	1.771	10.503	0	0.466	0.382	0	1.336	6.625	0	1.336	2.971	0
4.466	0	6.838	17.54	0	1.397	8.431	0	1.853	11.097	0	0.487	0.404	0	1.397	7	0	1.397	3.139	0
4.533	0	6.999	17.804	0	1.43	8.557	0	1.897	11.263	0	0.499	0.406	0	1.43	7.106	0	1.43	3.187	0
4.516	0	6.832	17.739	0	1.396	8.526	0	1.851	11.222	0	0.487	0.408	0	1.396	7.08	0	1.396	3.175	0
4.491	0	6.611	17.639	0	1.351	8.478	0	1.791	11.159	0	0.471	0.406	0	1.351	7.04	0	1.351	3.158	0
4.457	0	6.335	17.504	0	1.295	8.413	0	1.717	11.074	0	0.451	0.403	0	1.295	6.987	0	1.295	3.134	0
4.414	0	6.005	17.335	0	1.227	8.332	0	1.627	10.967	0	0.428	0.399	0	1.227	6.919	0	1.227	3.103	0
4.362	0	5.622	17.132	0	1.149	8.234	0	1.523	10.838	0	0.4	0.394	0	1.149	6.838	0	1.149	3.067	0
4.301	0	5.184	16.894	0	1.059	8.12	0	1.405	10.687	0	0.369	0.389	0	1.059	6.743	0	1.059	3.024	0
4.232	0	4.692	16.621	0	0.959	7.988	0	1.271	10.515	0	0.334	0.383	0	0.959	6.634	0	0.959	2.975	0
4.153	0	4.146	16.314	0	0.847	7.841	0	1.123	10.321	0	0.295	0.376	0	0.847	6.511	0	0.847	2.92	0
4.066	0	3.545	15.972	0	0.724	7.677	0	0.961	10.104	0	0.253	0.368	0	0.724	6.375	0	0.724	2.859	0
3.971	0	2.891	15.596	0	0.591	7.496	0	0.783	9.866	0	0.206	0.359	0	0.591	6.225	0	0.591	2.792	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.18689	0	0	0	0	0	0	0	0	0	0	0.552673	0.186665	0	0	0	0	0	0.855201	0
0.439442	0	0	0	0	0	0	0	0	0	0	0.938654	0.436664	0	0	0	0	0	2.008798	0
0.703722	0	0	0	0	0	0	0	0	0	0	1.081955	0.701682	0	0	0	0	0	3.216676	0
0.987994	0	0	0	0	0	0	0	0	0	0	1.294153	0.984741	0	0	0	0	0	4.514921	0
0.775517	0	0	0	0	0	0	0	0	0	0	0.933933	0.771811	0	0	0	0	0	3.545828	0
0.845483	0	0	0	0	0	0	0	0	0	0	0.978182	0.841293	0	0	0	0	0	3.865375	0
0.652327	0	0	0	0	0	0	0	0	0	0	0.746335	0.649586	0	0	0	0	0	2.981617	0
0.65104	0	0	0	0	0	0	0	0	0	0	0.751936	0.641884	0	0	0	0	0	2.976583	0
1.020604	0	0	0	0	0	0	0	0	0	0	1.154757	1.015014	0	0	0	0	0	4.666173	0
0.857392	0	0	0	0	0	0	0	0	0	0	0.943443	0.853239	0	0	0	0	0	3.920689	0
0.523176	0	0	0	0	0	0	0	0	0	0	0.555443	0.520737	0	0	0	0	0	2.392311	0
0.518128	0	0	0	0	0	0	0	0	0	0	0.527117	0.515568	0	0	0	0	0	2.368648	0
0.519654	0	0	0	0	0	0	0	0	0	0	0.499973	0.516694	0	0	0	0	0	2.376053	0
0.508407	0	0	0	0	0	0	0	0	0	0	0.457643	0.506175	0	0	0	0	0	2.324544	0
0.501687	0	0	0	0	0	0	0	0	0	0	0.415424	0.499797	0	0	0	0	0	2.293441	0
0.492321	0	0	0	0	0	0	0	0	0	0	0.366916	0.490663	0	0	0	0	0	2.251041	0
0.482008	0	0	0	0	0	0	0	0	0	0	0.314677	0.480223	0	0	0	0	0	2.204016	0
0.471239	0	0	0	0	0	0	0	0	0	0	0.256488	0.468969	0	0	0	0	0	2.154617	0
11.13703	0	0	0	0	0	0	0	0	0	0	12.7697	11.0814	0	0	0	0	0	50.91653	0
0.024553	0	0	0	0	0	0	0	0	0	0	0.028152	0.02443	0	0	0	0	0	0.112252	0

Previous Winter

Pollutant Name: Carbon Dioxide Temperature: 60F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4776.899	4776.899
5	1313.985	940.5	357.05	940.537	1317.523	1180.496	346.547	1159.149	1318.476	1188.89	350.624	1188.322	1661.584	1622.257	346.656	1619.634	2513.51	2513.51
10	992.919	710.693	357.05	710.777	995.592	892.047	346.547	878.15	996.312	898.39	350.624	898.038	1255.583	1225.865	346.656	1224.064	1672.267	1672.267
15	778.741	557.393	357.05	557.508	780.837	699.628	346.547	690.7	781.402	704.602	350.624	704.395	984.746	961.439	346.656	960.186	1175.484	1175.484
20	633.91	453.728	357.05	453.866	635.617	569.51	346.547	563.943	636.076	573.56	350.624	573.45	801.603	782.63	346.656	781.747	873	873
25	535.572	383.342	357.05	383.494	537.014	481.163	346.547	477.878	537.403	484.584	350.624	484.541	677.251	661.222	346.656	660.59	685.012	685.012
30	469.639	336.15	357.05	336.311	470.904	421.928	346.547	420.173	471.244	424.928	350.624	424.929	593.876	579.82	346.656	579.358	567.895	567.895
35	427.432	305.939	357.05	306.107	428.582	384.008	346.547	383.232	428.892	386.739	350.624	386.768	540.503	527.71	346.656	527.355	497.421	497.421
40	403.761	288.997	357.05	289.168	404.848	362.742	346.547	362.516	405.141	365.322	350.624	365.367	510.571	498.486	346.656	498.192	460.326	460.326
45	395.857	283.339	357.05	283.511	396.922	355.641	346.547	355.598	397.209	358.17	350.624	358.22	500.575	488.728	346.656	488.454	450.085	450.085
50	402.817	288.321	357.05	288.492	403.901	361.894	346.547	361.689	404.193	364.467	350.624	364.513	509.376	497.32	346.656	497.028	464.953	464.953
55	425.434	304.509	357.05	304.677	426.579	382.214	346.547	381.484	426.888	384.931	350.624	384.962	537.977	525.244	346.656	524.894	507.469	507.469
60	466.351	333.796	357.05	333.958	467.607	418.974	346.547	417.295	467.945	421.953	350.624	421.956	589.719	575.761	346.656	575.306	585.19	585.19
65	530.579	379.768	357.05	379.92	532.007	476.677	346.547	473.507	532.392	480.066	350.624	480.026	670.936	655.057	346.656	654.438	712.968	712.968

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
4098	4631.367	4776.899	4776.9	4098	4463.379	4776.9	4776.901	4098	4205.719	0	0	6617.133	6526.543	4776.9	4776.901	4098	4384.923	0
519.721	2086.113	2513.51	2513.51	523.528	1594.521	2513.51	2513.51	1505	1665.018	2513.51	2513.51	3845.36	3827.127	2513.51	2513.51	1505	1931.226	2513.51
519.721	1425.202	1672.268	1672.267	523.528	1141.77	1672.267	1672.267	1505	1531.54	1672.267	1672.267	3165.446	3145.004	1672.267	1672.267	1505	1575.692	1672.267
519.721	1034.912	1175.485	1175.484	523.528	874.406	1175.485	1175.484	1505	1452.716	1175.484	1175.484	2595.958	2576.511	1175.484	1175.484	1505	1365.737	1175.484
519.721	797.27	873	873	523.528	711.611	873	873	1505	1404.722	873	873	2183.16	2165.223	873	873	1505	1237.898	873
519.721	649.579	685.012	685.012	523.528	610.437	685.012	685.012	1505	1374.894	685.012	685.012	2042.684	2024.097	685.012	685.011	1505	1158.449	685.012
519.721	557.568	567.895	567.895	523.528	547.406	567.895	567.895	1505	1356.311	567.895	567.895	1924.234	1905.665	567.895	567.894	1505	1108.952	567.895
519.721	502.201	497.421	497.421	523.528	509.477	497.421	497.421	1505	1345.129	497.421	497.421	1827.808	1809.595	497.421	497.421	1505	1079.167	497.421
519.721	473.058	460.327	460.326	523.528	489.513	460.326	460.326	1505	1339.244	460.326	460.326	1753.407	1735.704	460.326	460.326	1505	1063.49	460.326
519.721	465.012	450.085	450.085	523.528	484.001	450.085	450.085	1505	1337.619	450.085	450.085	1701.03	1683.905	450.085	450.085	1505	1059.162	450.085
519.721	476.693	464.953	464.953	523.528	492.003	464.953	464.953	1505	1339.978	464.953	464.953	1670.679	1654.172	464.953	464.953	1505	1065.446	464.953
519.721	510.096	507.469	507.469	523.528	514.885	507.469	507.469	1505	1346.724	507.469	507.469	1662.352	1646.541	507.469	507.469	1505	1083.414	507.469
519.721	571.156	585.19	585.19	523.528	556.714	585.19	585.19	1505	1359.056	585.19	585.19	1676.05	1661.115	585.19	585.19	1505	1116.261	585.19
519.721	671.542	712.968	712.968	523.528	625.483	712.968	712.968	1505	1379.33	712.968	712.968	1711.772	1698.098	712.968	712.968	1505	1170.264	712.968

Previous Winter

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	4776.9	4776.899	4098.001	4153.271	0	0	0	0	44.012	135.533	5820.026	743.399
2513.51	2545.789	2526.19	230.45	279.459	0	258.098	2513.51	2513.51	1505	1587.104	2513.51	2513.51	1505	2406.219	542.215	1155.561	3142.764	1364.398
1672.267	2545.789	2015.396	197.158	230.874	0	216.179	1672.267	1672.267	1505	1518.618	1672.267	1672.267	1505	1654.472	423.46	865.574	2634.886	1052.168
1175.484	2545.789	1713.754	171.303	197.497	0	186.08	1175.484	1175.484	1505	1478.174	1175.484	1175.484	1505	1210.54	342.483	674.324	2209.494	836.551
873	2545.789	1530.089	151.155	174.913	0	164.558	873	873	1505	1453.548	873	873	1505	940.236	286.241	546.141	1901.145	689.537
685.012	2545.789	1415.944	135.454	160.389	0	149.521	685.012	685.011	1505	1438.244	685.012	685.012	1505	772.247	246.811	459.708	1796.214	601.42
567.895	2545.789	1344.832	123.274	152.295	0	139.646	567.895	567.894	1505	1428.709	567.895	567.895	1505	667.59	219.279	402.072	1707.734	540.673
497.421	2545.789	1302.041	113.935	149.792	0	134.164	497.421	497.421	1505	1422.971	497.421	497.421	1505	604.613	200.577	365.349	1635.707	500.284
460.326	2545.789	1279.518	106.944	152.669	0	132.74	460.327	460.326	1505	1419.952	460.326	460.326	1505	571.465	188.823	344.866	1580.131	476.1
450.085	2545.789	1273.299	101.945	161.315	0	135.439	450.085	450.085	1505	1419.118	450.085	450.085	1505	562.313	182.952	338.152	1541.007	465.922
464.953	2545.789	1282.327	98.692	176.796	0	142.755	464.953	464.953	1505	1420.328	464.953	464.953	1505	575.599	182.528	344.421	1518.336	469.052
507.469	2545.789	1308.142	97.031	201.074	0	155.728	507.469	507.469	1505	1423.79	507.469	507.469	1505	613.593	187.674	364.419	1512.116	486.15
585.19	2545.789	1355.333	96.883	237.42	0	176.168	585.19	585.19	1505	1430.117	585.19	585.19	1505	683.045	199.116	400.573	1522.347	519.373
712.968	2545.789	1432.919	98.242	291.148	0	207.071	712.968	712.968	1505	1440.519	712.968	712.968	1505	797.229	218.342	457.498	1549.031	572.824

Previous Winter

Pollutant Name: Methane Temperature: 60F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.917	0.957
5	0.92	0.047	0.019	0.048	0.97	0.055	0.009	0.058	0.943	0.067	0.013	0.068	1.151	0.076	0.009	0.078	0.848	0.061
10	0.687	0.036	0.015	0.036	0.723	0.043	0.007	0.045	0.703	0.052	0.011	0.053	0.852	0.06	0.007	0.061	0.594	0.043
15	0.54	0.028	0.012	0.028	0.567	0.034	0.006	0.036	0.552	0.04	0.008	0.041	0.663	0.047	0.005	0.049	0.441	0.031
20	0.446	0.022	0.01	0.022	0.466	0.028	0.005	0.029	0.455	0.032	0.007	0.032	0.542	0.038	0.004	0.039	0.346	0.024
25	0.384	0.018	0.008	0.018	0.401	0.023	0.004	0.024	0.392	0.027	0.006	0.027	0.462	0.032	0.004	0.033	0.284	0.019
30	0.344	0.015	0.007	0.015	0.358	0.019	0.003	0.021	0.35	0.022	0.005	0.023	0.411	0.027	0.003	0.028	0.244	0.016
35	0.319	0.013	0.006	0.013	0.332	0.017	0.003	0.018	0.325	0.02	0.004	0.02	0.379	0.025	0.003	0.025	0.217	0.014
40	0.305	0.012	0.005	0.012	0.317	0.016	0.003	0.017	0.31	0.018	0.004	0.018	0.361	0.023	0.002	0.023	0.199	0.012
45	0.301	0.011	0.005	0.012	0.313	0.015	0.002	0.016	0.306	0.017	0.004	0.018	0.356	0.022	0.002	0.022	0.187	0.011
50	0.305	0.011	0.005	0.011	0.317	0.015	0.002	0.016	0.311	0.017	0.003	0.017	0.362	0.021	0.002	0.022	0.18	0.011
55	0.32	0.011	0.005	0.012	0.332	0.015	0.002	0.016	0.325	0.018	0.003	0.018	0.38	0.022	0.002	0.023	0.176	0.01
60	0.345	0.012	0.004	0.013	0.36	0.016	0.002	0.018	0.352	0.019	0.003	0.019	0.412	0.024	0.002	0.025	0.175	0.01
65	0.386	0.014	0.004	0.014	0.403	0.018	0.002	0.02	0.394	0.021	0.003	0.022	0.465	0.026	0.002	0.027	0.178	0.011

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
0.147	0.783	0.917	0.962	0.147	0.586	0.917	0.961	0.147	0.276	0	0	0.46	0.454	0.917	0.929	0.147	0.478	0
0.017	0.052	0.848	0.055	0.021	0.04	1.217	0.084	0.02	0.031	3.935	0.453	0.302	0.304	1.217	0.189	0.017	0.091	1.517
0.013	0.037	0.594	0.039	0.016	0.029	0.836	0.06	0.015	0.023	2.617	0.333	0.166	0.169	0.836	0.146	0.013	0.071	1.033
0.011	0.027	0.441	0.029	0.013	0.022	0.606	0.046	0.012	0.018	1.823	0.259	0.079	0.082	0.606	0.119	0.011	0.057	0.741
0.009	0.021	0.346	0.022	0.011	0.017	0.464	0.036	0.01	0.015	1.331	0.211	0.043	0.046	0.464	0.101	0.009	0.048	0.56
0.007	0.017	0.284	0.018	0.009	0.014	0.372	0.03	0.009	0.012	1.016	0.179	0.036	0.038	0.372	0.089	0.007	0.042	0.444
0.006	0.014	0.244	0.015	0.008	0.012	0.313	0.026	0.007	0.011	0.812	0.156	0.029	0.031	0.313	0.081	0.006	0.038	0.368
0.005	0.012	0.217	0.013	0.007	0.01	0.273	0.023	0.006	0.009	0.676	0.14	0.025	0.026	0.273	0.074	0.005	0.035	0.318
0.005	0.011	0.199	0.011	0.006	0.009	0.247	0.021	0.006	0.008	0.586	0.128	0.021	0.023	0.247	0.07	0.005	0.033	0.285
0.004	0.01	0.187	0.01	0.006	0.008	0.229	0.02	0.005	0.008	0.527	0.12	0.02	0.021	0.229	0.066	0.004	0.031	0.263
0.004	0.01	0.18	0.01	0.005	0.008	0.218	0.019	0.005	0.007	0.491	0.115	0.019	0.021	0.218	0.064	0.004	0.03	0.249
0.004	0.009	0.176	0.009	0.005	0.008	0.213	0.019	0.005	0.007	0.473	0.112	0.02	0.022	0.213	0.063	0.004	0.029	0.242
0.004	0.009	0.175	0.009	0.005	0.007	0.212	0.019	0.005	0.007	0.47	0.111	0.023	0.024	0.212	0.062	0.004	0.029	0.241
0.004	0.009	0.178	0.01	0.005	0.008	0.216	0.019	0.005	0.007	0.482	0.113	0.027	0.028	0.216	0.063	0.004	0.029	0.246

Previous Winter

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	0.917	0.936	0.147	0.211	0	0	0	0	0.008	0.027	0.375	0.064
0.23	0.067	0.166	0.344	0.267	0	0.301	1.217	0.353	0.045	0.081	1.217	0.097	0.011	0.096	0.512	0.059	0.23	0.08
0.161	0.048	0.117	0.295	0.225	0	0.255	0.836	0.255	0.035	0.061	0.836	0.072	0.008	0.071	0.408	0.045	0.128	0.056
0.118	0.036	0.086	0.262	0.198	0	0.226	0.606	0.195	0.028	0.047	0.606	0.056	0.007	0.055	0.343	0.035	0.062	0.04
0.091	0.028	0.067	0.241	0.18	0	0.207	0.464	0.158	0.023	0.038	0.464	0.046	0.005	0.045	0.3	0.028	0.035	0.031
0.072	0.023	0.053	0.228	0.169	0	0.195	0.372	0.133	0.019	0.032	0.372	0.039	0.005	0.038	0.273	0.023	0.029	0.026
0.06	0.019	0.044	0.222	0.163	0	0.189	0.313	0.116	0.017	0.027	0.313	0.034	0.004	0.033	0.257	0.02	0.024	0.022
0.051	0.016	0.038	0.221	0.16	0	0.187	0.273	0.105	0.015	0.024	0.273	0.03	0.003	0.029	0.249	0.018	0.02	0.019
0.046	0.015	0.033	0.225	0.161	0	0.189	0.247	0.096	0.013	0.022	0.247	0.027	0.003	0.026	0.248	0.016	0.017	0.018
0.042	0.014	0.031	0.235	0.165	0	0.196	0.229	0.091	0.012	0.02	0.229	0.025	0.003	0.024	0.255	0.016	0.016	0.017
0.04	0.013	0.029	0.253	0.173	0	0.208	0.218	0.087	0.011	0.019	0.218	0.024	0.003	0.023	0.269	0.015	0.016	0.017
0.039	0.013	0.028	0.28	0.186	0	0.227	0.213	0.085	0.011	0.018	0.213	0.023	0.003	0.023	0.293	0.016	0.016	0.018
0.038	0.013	0.029	0.322	0.207	0	0.257	0.212	0.085	0.01	0.018	0.212	0.023	0.002	0.022	0.33	0.017	0.018	0.019
0.039	0.014	0.029	0.386	0.239	0	0.303	0.216	0.086	0.01	0.018	0.216	0.024	0.002	0.023	0.389	0.019	0.021	0.022

Pollutant Name: Oxides of Nitrogen Temperature: 60F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.35	1.431
5	3.232	0.199	2.027	0.203	3.214	0.314	2.079	0.374	3.179	0.454	2.026	0.459	5.323	0.525	2.091	0.54	1.582	0.288
10	3.398	0.172	1.682	0.177	3.379	0.269	1.725	0.322	3.343	0.389	1.681	0.395	5.597	0.451	1.735	0.466	1.663	0.303
15	3.568	0.152	1.446	0.157	3.549	0.236	1.483	0.285	3.511	0.342	1.445	0.347	5.877	0.396	1.491	0.412	1.743	0.317
20	3.742	0.137	1.288	0.142	3.721	0.212	1.321	0.258	3.681	0.306	1.287	0.312	6.163	0.355	1.328	0.372	1.823	0.332
25	3.918	0.126	1.188	0.131	3.897	0.195	1.219	0.24	3.855	0.28	1.188	0.286	6.454	0.326	1.226	0.342	1.903	0.347
30	4.098	0.118	1.136	0.123	4.076	0.183	1.166	0.227	4.032	0.261	1.136	0.268	6.75	0.304	1.172	0.322	1.983	0.361
35	4.28	0.112	1.126	0.117	4.257	0.175	1.155	0.22	4.211	0.249	1.125	0.255	7.05	0.29	1.161	0.308	2.064	0.376
40	4.464	0.109	1.156	0.114	4.44	0.171	1.186	0.218	4.392	0.241	1.155	0.248	7.353	0.282	1.192	0.301	2.144	0.39
45	4.65	0.107	1.229	0.113	4.624	0.17	1.261	0.22	4.575	0.239	1.229	0.246	7.659	0.279	1.268	0.299	2.224	0.405
50	4.837	0.108	1.355	0.114	4.81	0.173	1.39	0.227	4.759	0.241	1.354	0.249	7.967	0.282	1.398	0.303	2.304	0.42
55	5.024	0.11	1.547	0.117	4.997	0.179	1.587	0.239	4.943	0.249	1.547	0.257	8.276	0.291	1.596	0.313	2.384	0.434
60	5.212	0.115	1.831	0.122	5.184	0.189	1.878	0.258	5.128	0.262	1.83	0.271	8.585	0.307	1.889	0.33	2.465	0.449
65	5.4	0.123	2.245	0.13	5.37	0.205	2.303	0.285	5.313	0.282	2.243	0.291	8.894	0.33	2.315	0.355	2.545	0.463

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
75.051	17.212	1.35	1.441	75.051	35.434	1.35	1.44	75.051	63.371	0	0	117.359	115.753	1.35	1.375	75.051	43.913	0
4.251	1.139	1.582	0.287	4.927	2.431	2.374	0.658	6.368	5.463	17.222	5.376	20.66	20.451	2.374	2.352	5.591	4.222	3.147
3.526	0.995	1.663	0.302	4.088	2.051	2.494	0.691	5.283	4.556	18.095	5.649	14.543	14.421	2.494	2.472	4.639	3.723	3.307
3.031	0.9	1.743	0.316	3.514	1.794	2.614	0.724	4.541	3.937	18.968	5.921	10.645	10.581	2.614	2.591	3.988	3.397	3.466
2.7	0.841	1.823	0.331	3.13	1.624	2.734	0.758	4.045	3.525	19.841	6.194	8.965	8.927	2.734	2.71	3.552	3.196	3.626
2.492	0.808	1.903	0.345	2.889	1.521	2.855	0.791	3.733	3.268	20.714	6.466	8.424	8.398	2.855	2.829	3.278	3.088	3.786
2.383	0.796	1.983	0.36	2.762	1.47	2.975	0.824	3.57	3.136	21.587	6.739	7.983	7.967	2.975	2.949	3.134	3.056	3.945
2.361	0.803	2.064	0.374	2.737	1.466	3.095	0.858	3.537	3.114	22.46	7.012	7.641	7.633	3.095	3.068	3.106	3.09	4.105
2.424	0.828	2.144	0.389	2.81	1.508	3.216	0.891	3.631	3.198	23.333	7.284	7.399	7.398	3.216	3.187	3.188	3.188	4.264
2.578	0.873	2.224	0.404	2.989	1.598	3.336	0.924	3.862	3.398	24.206	7.557	7.256	7.261	3.336	3.306	3.391	3.355	4.424
2.841	0.94	2.304	0.418	3.294	1.747	3.456	0.958	4.257	3.735	25.079	7.829	7.213	7.222	3.456	3.426	3.738	3.606	4.583
3.245	1.039	2.384	0.433	3.761	1.971	3.577	0.991	4.861	4.249	25.952	8.102	7.269	7.281	3.577	3.545	4.268	3.962	4.743
3.839	1.177	2.465	0.447	4.451	2.297	3.697	1.024	5.752	5.004	26.825	8.374	7.424	7.438	3.697	3.664	5.05	4.464	4.902
4.707	1.375	2.545	0.462	5.457	2.77	3.817	1.058	7.051	6.103	27.698	8.647	7.679	7.693	3.817	3.783	6.192	5.174	5.062

Previous Winter

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	1.35	1.389	75.051	69.054	0	0	0	0	0.012	0.041	103.729	11.139
2.603	23.486	10.806	1.027	1.242	0	1.149	2.374	2.224	19.068	17.698	2.374	0.671	9.174	1.589	1.67	0.331	16.978	2.121
2.735	17.965	8.718	1.077	1.149	0	1.117	2.494	2.337	15.819	14.724	2.494	0.705	7.611	1.453	1.753	0.29	12.14	1.567
2.867	14.446	7.416	1.127	1.079	0	1.1	2.614	2.45	13.599	12.693	2.614	0.739	6.543	1.371	1.838	0.259	9.046	1.21
2.999	12.212	6.618	1.179	1.029	0	1.094	2.734	2.562	12.113	11.337	2.734	0.773	5.828	1.326	1.925	0.237	7.669	1.043
3.131	10.853	6.164	1.23	0.996	0	1.098	2.855	2.675	11.178	10.489	2.855	0.807	5.378	1.309	2.013	0.22	7.189	0.977
3.263	10.139	5.964	1.283	0.977	0	1.11	2.975	2.788	10.689	10.048	2.975	0.841	5.143	1.315	2.102	0.209	6.819	0.928
3.395	9.958	5.973	1.336	0.972	0	1.131	3.095	2.9	10.591	9.967	3.095	0.875	5.095	1.341	2.192	0.202	6.556	0.894
3.527	10.282	6.181	1.389	0.98	0	1.158	3.216	3.013	10.873	10.235	3.216	0.909	5.231	1.387	2.283	0.198	6.398	0.875
3.659	11.161	6.606	1.442	1	0	1.193	3.336	3.126	11.565	10.881	3.336	0.943	5.564	1.453	2.374	0.197	6.347	0.869
3.791	12.736	7.305	1.496	1.033	0	1.235	3.456	3.239	12.746	11.975	3.456	0.977	6.132	1.545	2.466	0.2	6.411	0.879
3.923	15.278	8.383	1.549	1.081	0	1.285	3.577	3.351	14.556	13.647	3.577	1.011	7.003	1.668	2.558	0.206	6.601	0.906
4.055	19.267	10.031	1.602	1.145	0	1.344	3.697	3.464	17.223	16.106	3.697	1.045	8.286	1.836	2.65	0.216	6.935	0.951
4.187	25.544	12.576	1.654	1.23	0	1.415	3.817	3.577	21.115	19.69	3.817	1.079	10.159	2.066	2.741	0.231	7.446	1.019

Previous Winter

Vehicle Miles Traveled: 309,276

VEHICLE PERCENTAGES

Vehicle Type	Percent	Non-catalyst	Catalyst	Diesel
Light Auto	46.0%	0.2%	99.8%	0.0%
Light Truck < 3,750 lbs	10.0%	1.0%	96.0%	3.0%
Light Truck 3,751-5,750	21.0%	0.5%	99.5%	0.0%
Medium Truck 5,751-8,500	11.5%	0.9%	99.1%	0.0%
Lite-Heavy 8,501-10,000	2.1%	0.0%	81.0%	19.0%
Lite-Heavy 10,001-14,000	0.7%	0.0%	57.1%	42.9%
Med-Heavy 14,001-33,000	1.0%	0.0%	20.0%	80.0%
Heavy-Heavy 33,001-60,000	1.8%	0.0%	0.0%	100.0%
Line Haul > 60,000 lbs	0.1%	0.0%	0.0%	100.0%
Urban Bus	0.0%	0.0%	0.0%	0.0%
Motorcycle	4.3%	48.8%	51.2%	0.0%
School Bus	0.1%	0.0%	0.0%	100.0%
Motorhome	1.4%	0.0%	92.9%	7.1%

CO2 EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	469.639	336.15	357.05
Light Truck < 3,750 lbs	LDT1	470.904	421.928	346.547
Light Truck 3,751-5,750	LDT2	471.244	424.928	350.624
Medium Truck 5,751-8,500	MDV	593.876	579.82	346.656
Lite-Heavy 8,501-10,000	LHDT1	567.895	567.895	519.721
Lite-Heavy 10,001-14,000	LHDT2	567.895	567.895	523.528
Med-Heavy 14,001-33,000	MHDT	567.895	567.895	1505
Heavy-Heavy 33,001-60,000	HHDT	567.895	567.895	1924.234
Line Haul > 60,000 lbs	LHV	567.895	567.894	1505
Urban Bus	UB	567.895	567.895	2545.789
Motorcycle	MCY	123.274	152.295	0
School Bus	SBUS	567.895	567.894	1505
Motorhome	MH	567.895	567.895	1505

METHANE EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	0.344	0.015	0.007
Light Truck < 3,750 lbs	LDT1	0.358	0.019	0.003
Light Truck 3,751-5,750	LDT2	0.35	0.022	0.005
Medium Truck 5,751-8,500	MDV	0.411	0.027	0.003
Lite-Heavy 8,501-10,000	LHDT1	0.244	0.016	0.006
Lite-Heavy 10,001-14,000	LHDT2	0.244	0.015	0.008
Med-Heavy 14,001-33,000	MHDT	0.313	0.026	0.007
Heavy-Heavy 33,001-60,000	HHDT	0.812	0.156	0.029
Line Haul > 60,000 lbs	LHV	0.313	0.081	0.006
Urban Bus	UB	0.368	0.06	0.019
Motorcycle	MCY	0.222	0.163	0
School Bus	SBUS	0.313	0.116	0.017
Motorhome	MH	0.313	0.034	0.004

NOx EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	4.098	0.118	1.136
Light Truck < 3,750 lbs	LDT1	4.076	0.183	1.166
Light Truck 3,751-5,750	LDT2	4.032	0.261	1.136
Medium Truck 5,751-8,500	MDV	6.75	0.304	1.172
Lite-Heavy 8,501-10,000	LHDT1	1.983	0.361	2.383
Lite-Heavy 10,001-14,000	LHDT2	1.983	0.36	2.762
Med-Heavy 14,001-33,000	MHDT	2.975	0.824	3.57
Heavy-Heavy 33,001-60,000	HHDT	21.587	6.739	7.983
Line Haul > 60,000 lbs	LHV	2.975	2.949	3.134
Urban Bus	UB	3.945	3.263	10.139
Motorcycle	MCY	1.283	0.977	0
School Bus	SBUS	2.975	2.788	10.689
Motorhome	MH	2.975	0.841	5.143

CO2 EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	133,628.29	47,727,417.22	0.00
Light Truck < 3,750 lbs	145,639.38	12,527,258.08	321,536.18
Light Truck 3,751-5,750	153,031.76	27,460,229.92	0.00
Medium Truck 5,751-8,500	190,100.20	20,436,716.99	0.00
Lite-Heavy 8,501-10,000	0.00	2,987,574.91	3,375,483.62
Lite-Heavy 10,001-14,000	0.00	702,018.63	486,229.93
Med-Heavy 14,001-33,000	0.00	351,272.77	3,723,684.97
Heavy-Heavy 33,001-60,000	0.00	0.00	10,712,154.64
Line Haul > 60,000 lbs	0.00	0.00	465,460.62
Urban Bus	0.00	0.00	0.00
Motorcycle	800,029.88	1,036,980.30	0.00
School Bus	0.00	0.00	465,460.62
Motorhome	0.00	2,284,326.82	462,667.86
Total (grams)	1,422,429.52	115,513,795.64	20,012,678.44
Total (pounds)	3,135.92	254,664.33	44,120.40

Total CO2 Running Emissions (pounds): 301,920.65

METHANE EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	97.88	2,129.74	0.00
Light Truck < 3,750 lbs	110.72	564.12	2.78
Light Truck 3,751-5,750	113.66	1,421.71	0.00
Medium Truck 5,751-8,500	131.56	951.66	0.00
Lite-Heavy 8,501-10,000	0.00	84.17	7.40
Lite-Heavy 10,001-14,000	0.00	18.54	7.43
Med-Heavy 14,001-33,000	0.00	16.08	17.32
Heavy-Heavy 33,001-60,000	0.00	0.00	161.44
Line Haul > 60,000 lbs	0.00	0.00	1.86
Urban Bus	0.00	0.00	0.00
Motorcycle	1,440.75	1,109.87	0.00
School Bus	0.00	0.00	5.26
Motorhome	0.00	136.76	1.23
Total (grams)	1,894.57	6,432.66	204.72
Total (pounds)	4.18	14.18	0.45

Total Methane Running Emissions (pounds): 18.81

N2O EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	56.82	816.42	0.00
Light Truck < 3,750 lbs	61.43	264.77	52.72
Light Truck 3,751-5,750	63.81	821.92	0.00
Medium Truck 5,751-8,500	105.29	522.14	0.00
Lite-Heavy 8,501-10,000	0.00	92.55	143.30
Lite-Heavy 10,001-14,000	0.00	21.69	125.00
Med-Heavy 14,001-33,000	0.00	24.84	430.43
Heavy-Heavy 33,001-60,000	0.00	0.00	2,165.63
Line Haul > 60,000 lbs	0.00	0.00	47.23
Urban Bus	0.00	0.00	0.00
Motorcycle	405.75	324.17	0.00
School Bus	0.00	0.00	161.09
Motorhome	0.00	164.85	77.05
Total (grams)	693.10	3,053.34	3,202.45
Total (pounds)	1.53	6.73	7.06

Total N2O Running Emissions (pounds): 15.32

N_2O/NOx Ratio		
N_2O (mg km^{-1})	NOx (mg km^{-1})	N_2O/NOx Ratio
20	700	0.029
30	650	0.046
12	340	0.035
13	250	0.052
12	260	0.046
13	215	0.060
9	140	0.064
15	160	0.094
0.5	35	0.014
2	35	0.057
23	1300	0.018
22	800	0.028
40	1700	0.024
35	950	0.037
80	1700	0.047
120	1200	0.100
35	1400	0.025
43	1000	0.043
18	600	0.030
20	420	0.048
25	550	0.045
25	500	0.050
12	150	0.080
15	150	0.100
4	110	0.036
5	85	0.059
	Average	0.04873

Source: California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

Carbon Dioxide Calculation
Based on URBEMIS 2007 Assumptions and EMFAC 2007 Emission Factors

Minutes since engine shutoff	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
Home-Work	0.7%	1.0%	1.4%	2.2%	2.6%	2.8%	2.2%	2.6%	6.2%	8.9%	8.6%	8.6%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	100.0%
Home-Shop	3.3%	9.5%	14.4%	18.3%	12.2%	7.5%	4.2%	3.6%	3.7%	2.1%	2.6%	2.6%	2.6%	2.6%	2.7%	2.7%	2.7%	2.7%	100.0%
Home-Other	6.1%	7.6%	7.8%	7.2%	7.0%	7.9%	6.2%	6.6%	7.2%	4.9%	4.0%	4.0%	4.0%	3.9%	3.9%	3.9%	3.9%	3.9%	100.0%
Commercial Commute	2.6%	5.0%	3.7%	4.2%	4.7%	3.7%	3.0%	3.3%	8.5%	10.8%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.4%	100.0%
Commercial Non-Commute	5.8%	11.3%	7.3%	7.4%	7.7%	5.5%	4.4%	4.4%	12.1%	13.9%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.7%	100.0%
Commercial Customer	9.3%	14.7%	13.2%	14.0%	6.7%	7.1%	5.1%	4.5%	8.8%	6.4%	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	100.0%

Residential Trips	Home-Work %	Home-Shop %	Home-Other %
593.34	33%	18%	49%
1312.64			

Commercial Trips	Commute	Non-Work	Customer
1,365.72	2.0%	1.0%	97.0%

Trips	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
Home-Work	4.39	6.27	8.78	13.80	16.30	17.56	13.80	16.30	38.88	55.81	53.93	53.93	54.55	54.55	54.55	54.55	54.55	54.55	627.07
Home-Shop	11.32	32.59	49.40	62.78	41.86	25.73	14.41	12.35	12.69	7.20	8.92	8.92	8.92	8.92	9.26	9.26	9.26	9.26	343.08
Home-Other	57.09	71.12	73.00	67.38	65.51	73.93	58.02	61.77	67.38	45.86	37.43	37.43	37.43	36.50	36.50	36.50	36.50	36.50	935.84
Commercial Commute	0.71	1.37	1.01	1.15	1.28	1.01	0.82	0.90	2.32	2.95	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.75	27.31
Commercial Non-Commute	0.79	1.54	1.00	1.01	1.05	0.75	0.60	0.60	1.65	1.90	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.37	13.66
Commercial Customer	123.20	194.74	174.87	185.46	88.76	94.06	67.56	59.61	116.58	84.78	15.90	15.90	17.22	17.22	17.22	17.22	17.22	17.22	1,324.75
Total	197.50	307.63	308.05	331.58	214.76	213.04	155.21	151.54	239.50	198.50	118.24	118.24	120.19	119.26	119.60	119.60	119.60	119.65	3,271.70

User Input from URBEMIS

Trip Distribution

Trips	Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
197.50	5	0.1817008	90.66871	0	0.197501	18.96009	0.592503	0.207376	41.26781	0	0.204413	22.50819	0	0	3.35949	0.788029	0	0.789411	0.593095	0
307.63	10	0.2830228	141.2284	0	0.307633	29.53281	0.9229	0.323015	64.28002	0	0.318401	35.05945	0	0	5.232845	1.227458	0	1.229611	0.923823	0
308.05	20	0.2834074	141.4203	0	0.308052	29.57295	0.924155	0.323454	64.36737	0	0.318833	35.1071	0	0	5.239957	1.229126	0	1.231282	0.925079	0
331.58	30	0.3050548	152.2223	0	0.331581	31.8318	0.994744	0.34816	69.28391	0	0.343187	37.78866	0	0	5.640198	1.323009	0	1.32533	0.995739	0
214.76	40	0.1975802	98.59254	0	0.214761	20.61707	0.644283	0.225499	44.87434	0	0.222278	24.47525	0	0	3.653087	0.856897	0	0.8584	0.644928	0
213.04	50	0.1959955	97.80176	0	0.213039	20.4517	0.639116	0.223691	44.51441	0	0.220495	24.27894	0	0	3.623786	0.850024	0	0.851515	0.639755	0
155.21	60	0.1427923	71.25337	0	0.155209	14.90007	0.465627	0.16297	32.43093	0	0.160641	17.6884	0	0	2.640106	0.619284	0	0.620371	0.466093	0
151.54	120	0.1394128	69.56699	0	0.151536	14.54742	0.454607	0.159112	31.66338	0	0.156839	17.26976	0	0	2.577622	0.604627	0	0.605688	0.455062	0
239.50	180	0.220344	109.9516	0	0.239504	22.99241	0.718513	0.25148	50.04443	0	0.247887	27.29511	0	0	4.073968	0.955622	0	0.957299	0.719231	0
198.50	240	0.1826216	91.1282	0	0.198502	19.05617	0.595505	0.208427	41.47695	0	0.205449	22.62226	0	0	3.376515	0.792022	0	0.793412	0.596101	0
118.24	300	0.1087812	54.28183	0	0.11824	11.35108	0.354721	0.124152	24.70634	0	0.122379	13.47527	0	0	2.01127	0.471779	0	0.472607	0.355076	0
118.24	360	0.1087812	54.28183	0	0.11824	11.35108	0.354721	0.124152	24.70634	0	0.122379	13.47527	0	0	2.01127	0.471779	0	0.472607	0.355076	0
120.19	420	0.1105769	55.17787	0	0.120192	11.53846	0.360577	0.126202	25.11417	0	0.124399	13.69771	0	0	2.04447	0.479567	0	0.480408	0.360937	0
119.26	480	0.1097159	54.74824	0	0.119256	11.44862	0.357769	0.125219	24.91863	0	0.12343	13.59106	0	0	2.028552	0.475833	0	0.476668	0.358127	0
119.60	540	0.1100315	54.90574	0	0.1196	11.48155	0.358799	0.125579	24.99032	0	0.123785	13.63016	0	0	2.034388	0.477202	0	0.478039	0.359157	0
119.60	600	0.1100315	54.90574	0	0.1196	11.48155	0.358799	0.125579	24.99032	0	0.123785	13.63016	0	0	2.034388	0.477202	0	0.478039	0.359157	0
119.60	660	0.1100315	54.90574	0	0.1196	11.48155	0.358799	0.125579	24.99032	0	0.123785	13.63016	0	0	2.034388	0.477202	0	0.478039	0.359157	0
119.65	720	0.1100818	54.93082	0	0.119654	11.4868	0.358962	0.125637	25.00173	0	0.123842	13.63638	0	0	2.035317	0.47742	0	0.478258	0.359321	0
3272		3	1502	0	3	314	10	3	684	0	3	373	0	0	56	13	0	13	10	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.395002	1.580007	0	0	3.555016	0	0	0.197501	0	0	0	4.144359	4.34818	0	0	0	0.197501	0	2.568697	0.196316
0.615267	2.461068	0	0	5.537403	0	0	0.307633	0	0	0	6.455381	6.772859	0	0	0	0.307633	0	4.001081	0.305788
0.616103	2.464413	0	0	5.544928	0	0	0.308052	0	0	0	6.464154	6.782063	0	0	0	0.308052	0	4.006519	0.306203
0.663163	2.65265	0	0	5.968463	0	0	0.331581	0	0	0	6.957902	7.300094	0	0	0	0.331581	0	4.312546	0.329592
0.429522	1.718089	0	0	3.8657	0	0	0.214761	0	0	0	4.506548	4.728181	0	0	0	0.214761	0	2.793183	0.213473
0.426077	1.704309	0	0	3.834695	0	0	0.213039	0	0	0	4.470402	4.690258	0	0	0	0.213039	0	2.77078	0.21176
0.310418	1.241672	0	0	2.793763	0	0	0.155209	0	0	0	3.256907	3.417082	0	0	0	0.155209	0	2.018649	0.154278
0.303071	1.212285	0	0	2.727642	0	0	0.151536	0	0	0	3.179824	3.336209	0	0	0	0.151536	0	1.970873	0.150626
0.479009	1.916035	0	0	4.311078	0	0	0.239504	0	0	0	5.025759	5.272927	0	0	0	0.239504	0	3.114993	0.238067
0.397004	1.588014	0	0	3.573032	0	0	0.198502	0	0	0	4.165361	4.370215	0	0	0	0.198502	0	2.581714	0.197311
0.236481	0.945924	0	0	2.128328	0	0	0.11824	0	0	0	2.481158	2.603182	0	0	0	0.11824	0	1.537835	0.117531
0.236481	0.945924	0	0	2.128328	0	0	0.11824	0	0	0	2.481158	2.603182	0	0	0	0.11824	0	1.537835	0.117531
0.240385	0.961538	0	0	2.163461	0	0	0.120192	0	0	0	2.522115	2.646153	0	0	0	0.120192	0	1.563221	0.119471
0.238513	0.954051	0	0	2.146616	0	0	0.119256	0	0	0	2.502477	2.62555	0	0	0	0.119256	0	1.551049	0.118541
0.239199	0.956796	0	0	2.152791	0	0	0.1196	0	0	0	2.509676	2.633103	0	0	0	0.1196	0	1.555511	0.118882
0.239199	0.956796	0	0	2.152791	0	0	0.1196	0	0	0	2.509676	2.633103	0	0	0	0.1196	0	1.555511	0.118882
0.239199	0.956796	0	0	2.152791	0	0	0.1196	0	0	0	2.509676	2.633103	0	0	0	0.1196	0	1.555511	0.118882
0.239308	0.957233	0	0	2.153774	0	0	0.119654	0	0	0	2.510822	2.634305	0	0	0	0.119654	0	1.556222	0.118936
7	26	0	0	59	0	0	3	0	0	0	69	72	0	0	0	3	0	43	3

Temperature: 80F

Pollutant Name: Carbon Dioxide Relative Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	111.902	11.431	0	112.19	14.176	0	112.288	14.273	0	141.795	19.37	0	170.667	22.627	0	170.667	21.598	0	170.667
10	121.432	13.227	0	121.744	16.482	0	121.851	16.583	0	153.87	22.571	0	185.2	27.148	0	185.2	26.511	0	185.2
20	139.927	17.26	0	140.287	21.638	0	140.41	21.751	0	177.306	29.712	0	213.408	37.003	0	213.408	37.071	0	213.408
30	157.671	21.884	0	158.076	27.518	0	158.215	27.649	0	199.79	37.838	0	240.47	47.939	0	240.47	48.611	0	240.47
40	174.663	27.097	0	175.112	34.122	0	175.266	34.277	0	221.321	46.95	0	266.386	59.958	0	266.386	61.132	0	266.386
50	190.904	32.9	0	191.394	41.45	0	191.562	41.636	0	241.9	57.047	0	291.155	73.058	0	291.155	74.633	0	291.155
60	206.393	39.292	0	206.923	49.502	0	207.105	49.725	0	261.526	68.128	0	314.778	87.241	0	314.778	89.114	0	314.778
120	279.289	88.25	0	280.007	110.585	0	280.253	111.17	0	353.896	151.82	0	425.955	188.621	0	425.955	188.643	0	425.955
180	279.509	100.586	0	280.227	126.121	0	280.473	126.776	0	354.174	173.198	0	426.29	215.939	0	426.29	216.508	0	426.29
240	279.728	112.81	0	280.447	141.498	0	280.694	142.226	0	354.452	194.347	0	426.625	242.8	0	426.625	243.793	0	426.625
300	279.948	124.92	0	280.667	156.716	0	280.914	157.518	0	354.731	215.266	0	426.96	269.205	0	426.96	270.498	0	426.96
360	280.167	136.918	0	280.887	171.775	0	281.134	172.653	0	355.009	235.956	0	427.294	295.153	0	427.294	296.623	0	427.294
420	280.387	148.803	0	281.107	186.675	0	281.354	187.63	0	355.287	256.416	0	427.629	320.645	0	427.629	322.169	0	427.629
480	280.606	160.575	0	281.327	201.416	0	281.575	202.451	0	355.565	276.647	0	427.964	345.68	0	427.964	347.135	0	427.964
540	280.826	172.234	0	281.548	215.998	0	281.795	217.114	0	355.843	296.649	0	428.299	370.258	0	428.299	371.521	0	428.299
600	281.045	183.78	0	281.768	230.421	0	282.015	231.62	0	356.121	316.422	0	428.633	394.38	0	428.633	395.327	0	428.633
660	281.265	195.213	0	281.988	244.685	0	282.235	245.969	0	356.399	335.965	0	428.968	418.045	0	428.968	418.554	0	428.968
720	281.484	206.534	0	282.208	258.79	0	282.456	260.161	0	356.677	355.279	0	429.303	441.254	0	429.303	441.201	0	429.303

Pollutant Name: Carbon Dioxide Emissions **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	20.332685	1036.434	0	22.15763	268.7782	0	23.28583	589.0155	0	28.9848	435.9836	0	0	76.01518	0	0	17.0497	0	0
10	34.368025	1868.028	0	37.45253	486.7598	0	39.35972	1065.956	0	48.99231	791.3268	0	0	142.0613	0	0	32.59822	0	0
20	39.656353	2440.915	0	43.21563	639.8995	0	45.4162	1400.055	0	56.53107	1043.102	0	0	193.8941	0	0	45.64486	0	0
30	48.098292	3331.234	0	52.41504	875.9476	0	55.08419	1915.631	0	68.56526	1429.847	0	0	270.3854	0	0	64.42564	0	0
40	34.509957	2671.562	0	37.60725	703.4956	0	39.52234	1538.158	0	49.19474	1149.113	0	0	219.0318	0	0	52.47572	0	0
50	37.416326	3217.678	0	40.77431	847.7232	0	42.8506	1853.402	0	53.33773	1385.041	0	0	264.7466	0	0	63.55114	0	0
60	29.471337	2799.687	0	32.11632	737.5832	0	33.7518	1612.628	0	42.01189	1205.075	0	0	230.3255	0	0	55.2837	0	0
120	38.936464	6139.287	0	42.43105	1608.727	0	44.59174	3520.018	0	55.50484	2621.895	0	0	486.1936	0	0	114.2588	0	0
180	61.588123	11059.6	0	67.11558	2899.826	0	70.53322	6344.432	0	87.79512	4727.458	0	0	879.7287	0	0	207.2628	0	0
240	51.084386	10280.17	0	55.66923	2696.41	0	58.50417	5899.1	0	72.82193	4396.567	0	0	819.8179	0	0	193.4282	0	0
300	30.453083	6780.886	0	33.18619	1778.896	0	34.87617	3891.694	0	43.41158	2900.768	0	0	541.444	0	0	127.8393	0	0
360	30.476906	7432.159	0	33.21221	1949.832	0	34.90348	4265.624	0	43.4456	3179.571	0	0	593.6324	0	0	140.1861	0	0
420	31.004321	8210.632	0	33.78689	2153.942	0	35.5074	4712.172	0	44.19735	3512.312	0	0	655.5492	0	0	154.7727	0	0
480	30.786944	8791.199	0	33.55005	2305.935	0	35.25861	5044.802	0	43.88753	3759.926	0	0	701.2298	0	0	165.4681	0	0
540	30.899719	9456.635	0	33.673	2479.992	0	35.38767	5425.748	0	44.0482	4043.373	0	0	753.2483	0	0	177.6016	0	0
600	30.923816	10090.58	0	33.69931	2645.591	0	35.4153	5788.257	0	44.08261	4312.882	0	0	802.3218	0	0	188.9818	0	0
660	30.948023	10718.31	0	33.72563	2809.364	0	35.44292	6146.843	0	44.11702	4579.256	0	0	850.4656	0	0	200.0852	0	0
720	30.986266	11345.08	0	33.76735	2972.668	0	35.48688	6504.475	0	44.1716	4844.721	0	0	898.0917	0	0	211.0077	0	0
Total (grams/day):	641.94103	117670.1	0	699.5552	30861.37	0	735.1782	67518.01	0	915.1012	50318.22	0	0	9378.183	0	0	2211.921	0	0
Total (lbs/day):	1.4152377	259.4181	0	1.542255	68.03767	0	1.620791	148.8517	0	2.017453	110.9327	0	0	20.67535	0	0	4.876452	0	0

Grand Total (lbs/day): 653.92407

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
9.546	0	170.667	9.546	0	170.667	9.546	0	170.667	9.546	0	35.404	1.776	0	170.667	9.546	0	170.667	9.546	0
19.039	0	185.2	19.039	0	185.2	19.039	0	185.2	19.039	0	38.42	3.543	0	185.2	19.039	0	185.2	19.039	0
37.866	0	213.408	37.866	0	213.408	37.866	0	213.408	37.866	0	44.271	7.047	0	213.408	37.866	0	213.408	37.866	0
56.482	0	240.47	56.482	0	240.47	56.482	0	240.47	56.482	0	49.885	10.511	0	240.47	56.482	0	240.47	56.482	0
74.887	0	266.386	74.887	0	266.386	74.887	0	266.386	74.887	0	55.261	13.936	0	266.386	74.887	0	266.386	74.887	0
93.081	0	291.155	93.081	0	291.155	93.081	0	291.155	93.081	0	60.4	17.322	0	291.155	93.081	0	291.155	93.081	0
111.063	0	314.778	111.063	0	314.778	111.063	0	314.778	111.063	0	65.3	20.668	0	314.778	111.063	0	314.778	111.063	0
188.899	0	425.955	188.899	0	425.955	188.899	0	425.955	188.899	0	88.364	35.153	0	425.955	188.899	0	425.955	188.899	0
223.17	0	426.29	223.17	0	426.29	223.17	0	426.29	223.17	0	88.433	41.53	0	426.29	223.17	0	426.29	223.17	0
255.419	0	426.625	255.419	0	426.625	255.419	0	426.625	255.419	0	88.503	47.531	0	426.625	255.419	0	426.625	255.418	0
285.644	0	426.96	285.644	0	426.96	285.644	0	426.96	285.644	0	88.572	53.156	0	426.96	285.644	0	426.96	285.644	0
313.847	0	427.294	313.847	0	427.295	313.847	0	427.294	313.847	0	88.642	58.404	0	427.294	313.847	0	427.294	313.847	0
340.027	0	427.629	340.027	0	427.629	340.027	0	427.629	340.027	0	88.711	63.276	0	427.629	340.027	0	427.629	340.027	0
364.184	0	427.964	364.184	0	427.964	364.184	0	427.964	364.184	0	88.78	67.772	0	427.964	364.184	0	427.964	364.184	0
386.319	0	428.299	386.319	0	428.299	386.319	0	428.299	386.319	0	88.85	71.891	0	428.299	386.319	0	428.299	386.319	0
406.43	0	428.633	406.43	0	428.633	406.43	0	428.633	406.43	0	88.919	75.633	0	428.633	406.43	0	428.633	406.43	0
424.519	0	428.968	424.519	0	428.968	424.519	0	428.968	424.519	0	88.989	78.999	0	428.968	424.519	0	428.968	424.519	0
440.585	0	429.303	440.585	0	429.303	440.585	0	429.303	440.585	0	89.058	81.989	0	429.303	440.586	0	429.303	440.586	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
3.770687	0	0	0	0	0	0	0	0	0	0	146.7269	7.722367	0	0	0	0	0	24.52078	0
11.71407	0	0	0	0	0	0	0	0	0	0	248.0157	23.99624	0	0	0	0	0	76.17658	0
23.32936	0	0	0	0	0	0	0	0	0	0	286.1746	47.7932	0	0	0	0	0	151.7108	0
37.45675	0	0	0	0	0	0	0	0	0	0	347.0949	76.73128	0	0	0	0	0	243.5812	0
32.16563	0	0	0	0	0	0	0	0	0	0	249.0363	65.89193	0	0	0	0	0	209.1731	0
39.65969	0	0	0	0	0	0	0	0	0	0	270.0123	81.24464	0	0	0	0	0	257.907	0
34.47597	0	0	0	0	0	0	0	0	0	0	212.676	70.62426	0	0	0	0	0	224.1972	0
57.24987	0	0	0	0	0	0	0	0	0	0	280.982	117.2778	0	0	0	0	0	372.2959	0
106.9004	0	0	0	0	0	0	0	0	0	0	444.4429	218.9847	0	0	0	0	0	695.173	0
101.4023	0	0	0	0	0	0	0	0	0	0	368.647	207.7207	0	0	0	0	0	659.4163	0
67.54935	0	0	0	0	0	0	0	0	0	0	219.7611	138.3747	0	0	0	0	0	439.2734	0
74.21882	0	0	0	0	0	0	0	0	0	0	219.9348	152.0362	0	0	0	0	0	482.645	0
81.73723	0	0	0	0	0	0	0	0	0	0	223.7393	167.438	0	0	0	0	0	531.5372	0
86.86257	0	0	0	0	0	0	0	0	0	0	222.1699	177.9387	0	0	0	0	0	564.8673	0
92.40712	0	0	0	0	0	0	0	0	0	0	222.9847	189.2964	0	0	0	0	0	600.9235	0
97.21765	0	0	0	0	0	0	0	0	0	0	223.1579	199.1495	0	0	0	0	0	632.2064	0
101.5445	0	0	0	0	0	0	0	0	0	0	223.3336	208.0125	0	0	0	0	0	660.344	0
105.4356	0	0	0	0	0	0	0	0	0	0	223.6088	215.9841	0	0	0	0	0	685.6495	0
1155.098	0	0	0	0	0	0	0	0	0	0	4632.499	2366.217	0	0	0	0	0	7511.598	0
2.546554	0	0	0	0	0	0	0	0	0	0	10.21291	5.216616	0	0	0	0	0	16.56024	0

Temperature: 80F

Pollutant Name: Methane Relative Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.205	0.001	0	0.213	0.001	0	0.204	0.002	0	0.254	0.002	0	0.311	0.006	0	0.311	0.007	0	0.466
10	0.203	0.002	0	0.211	0.003	0	0.202	0.003	0	0.252	0.004	0	0.308	0.012	0	0.308	0.013	0	0.462
20	0.205	0.005	0	0.213	0.005	0	0.204	0.006	0	0.254	0.008	0	0.311	0.023	0	0.311	0.025	0	0.467
30	0.215	0.006	0	0.223	0.008	0	0.213	0.009	0	0.265	0.012	0	0.325	0.034	0	0.325	0.035	0	0.488
40	0.231	0.008	0	0.24	0.01	0	0.23	0.012	0	0.286	0.015	0	0.35	0.043	0	0.35	0.045	0	0.525
50	0.255	0.01	0	0.265	0.012	0	0.253	0.014	0	0.315	0.018	0	0.386	0.051	0	0.386	0.053	0	0.579
60	0.265	0.011	0	0.275	0.013	0	0.263	0.016	0	0.328	0.021	0	0.402	0.058	0	0.402	0.061	0	0.602
120	0.295	0.016	0	0.307	0.019	0	0.293	0.023	0	0.365	0.03	0	0.447	0.083	0	0.447	0.085	0	0.671
180	0.321	0.018	0	0.334	0.021	0	0.319	0.026	0	0.397	0.034	0	0.487	0.089	0	0.487	0.09	0	0.73
240	0.347	0.019	0	0.361	0.023	0	0.345	0.027	0	0.43	0.036	0	0.527	0.094	0	0.527	0.096	0	0.79
300	0.374	0.02	0	0.388	0.024	0	0.371	0.029	0	0.462	0.038	0	0.566	0.099	0	0.566	0.101	0	0.849
360	0.4	0.021	0	0.415	0.025	0	0.397	0.03	0	0.494	0.04	0	0.606	0.104	0	0.606	0.106	0	0.909
420	0.426	0.022	0	0.442	0.026	0	0.423	0.032	0	0.527	0.042	0	0.645	0.109	0	0.645	0.111	0	0.968
480	0.452	0.023	0	0.469	0.027	0	0.449	0.033	0	0.559	0.044	0	0.685	0.114	0	0.685	0.116	0	1.027
540	0.478	0.024	0	0.497	0.029	0	0.475	0.035	0	0.591	0.046	0	0.725	0.119	0	0.725	0.121	0	1.087
600	0.504	0.025	0	0.524	0.03	0	0.501	0.036	0	0.624	0.048	0	0.764	0.124	0	0.764	0.126	0	1.146
660	0.53	0.026	0	0.551	0.031	0	0.527	0.038	0	0.656	0.05	0	0.804	0.129	0	0.804	0.13	0	1.206
720	0.557	0.027	0	0.578	0.032	0	0.553	0.039	0	0.688	0.051	0	0.843	0.133	0	0.843	0.135	0	1.265

Pollutant Name: Methane Emissions **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.0372487	0.090669	0	0.042068	0.01896	0	0.042305	0.082536	0	0.051921	0.045016	0	0	0.020157	0	0	0.005526	0	0
10	0.0574536	0.282457	0	0.064911	0.088598	0	0.065249	0.19284	0	0.080237	0.140238	0	0	0.062794	0	0	0.015985	0	0
20	0.0580985	0.707102	0	0.065615	0.147865	0	0.065985	0.386204	0	0.080984	0.280857	0	0	0.120519	0	0	0.030782	0	0
30	0.0655868	0.913334	0	0.073943	0.254654	0	0.074158	0.623555	0	0.090944	0.453464	0	0	0.191767	0	0	0.046387	0	0
40	0.045641	0.78874	0	0.051543	0.206171	0	0.051865	0.538492	0	0.063571	0.367129	0	0	0.157083	0	0	0.038628	0	0
50	0.0499789	0.978018	0	0.056455	0.24542	0	0.056594	0.623202	0	0.069456	0.437021	0	0	0.184813	0	0	0.04513	0	0
60	0.03784	0.783787	0	0.042682	0.193701	0	0.042861	0.518895	0	0.05269	0.371456	0	0	0.153126	0	0	0.037843	0	0
120	0.0411268	1.113072	0	0.046521	0.276401	0	0.04662	0.728258	0	0.057246	0.518093	0	0	0.213943	0	0	0.051483	0	0
180	0.0707304	1.97913	0	0.079994	0.482841	0	0.080222	1.301155	0	0.098411	0.928034	0	0	0.362583	0	0	0.086157	0	0
240	0.0633697	1.731436	0	0.071659	0.438292	0	0.071907	1.119878	0	0.088343	0.814401	0	0	0.317392	0	0	0.076168	0	0
300	0.0406842	1.085637	0	0.045877	0.272426	0	0.046061	0.716484	0	0.056539	0.51206	0	0	0.199116	0	0	0.047733	0	0
360	0.0435125	1.139918	0	0.04907	0.283777	0	0.049289	0.74119	0	0.060455	0.539011	0	0	0.209172	0	0	0.050096	0	0
420	0.0471058	1.213913	0	0.053125	0.3	0	0.053383	0.803654	0	0.065558	0.575304	0	0	0.222847	0	0	0.053325	0	0
480	0.0495916	1.25921	0	0.055931	0.309113	0	0.056223	0.822315	0	0.068998	0.598007	0	0	0.231255	0	0	0.055293	0	0
540	0.0525951	1.317738	0	0.059441	0.332965	0	0.05965	0.874661	0	0.073157	0.626987	0	0	0.242092	0	0	0.057843	0	0
600	0.0554559	1.372644	0	0.06267	0.344447	0	0.062915	0.899651	0	0.077242	0.654248	0	0	0.252264	0	0	0.060233	0	0
660	0.0583167	1.427549	0	0.065899	0.355928	0	0.06618	0.949632	0	0.081203	0.681508	0	0	0.262436	0	0	0.062145	0	0
720	0.0613156	1.483132	0	0.06916	0.367578	0	0.069477	0.975068	0	0.085203	0.695456	0	0	0.270697	0	0	0.064565	0	0
Total (grams/day):	0.9356516	19.66748	0	1.056565	4.919136	0	1.060944	12.89767	0	1.302161	9.238289	0	0	3.674056	0	0	0.885322	0	0
Total (lbs/day):	0.0020628	0.043359	0	0.002329	0.010845	0	0.002339	0.028434	0	0.002871	0.020367	0	0	0.0081	0	0	0.001952	0	0

Grand Total (lbs/day): 0.1716343

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.014	0	0.947	0.058	0	0.466	0.024	0	0.593	0.029	0	0.092	0.013	0	0.466	0.025	0	0.466	0.011	0
0.027	0	0.939	0.114	0	0.462	0.046	0	0.588	0.056	0	0.091	0.025	0	0.462	0.049	0	0.462	0.021	0
0.052	0	0.948	0.216	0	0.467	0.088	0	0.594	0.106	0	0.092	0.047	0	0.467	0.094	0	0.467	0.04	0
0.073	0	0.991	0.306	0	0.488	0.124	0	0.62	0.151	0	0.096	0.066	0	0.488	0.133	0	0.488	0.057	0
0.092	0	1.067	0.385	0	0.525	0.156	0	0.668	0.189	0	0.103	0.083	0	0.525	0.167	0	0.525	0.071	0
0.108	0	1.177	0.451	0	0.579	0.183	0	0.737	0.222	0	0.114	0.098	0	0.579	0.195	0	0.579	0.084	0
0.121	0	1.223	0.506	0	0.602	0.205	0	0.766	0.249	0	0.118	0.109	0	0.602	0.219	0	0.602	0.094	0
0.147	0	1.363	0.615	0	0.671	0.249	0	0.854	0.302	0	0.132	0.133	0	0.671	0.266	0	0.671	0.114	0
0.156	0	1.483	0.652	0	0.73	0.265	0	0.929	0.321	0	0.144	0.141	0	0.73	0.282	0	0.73	0.121	0
0.164	0	1.604	0.689	0	0.79	0.279	0	1.005	0.338	0	0.155	0.149	0	0.79	0.298	0	0.79	0.128	0
0.173	0	1.725	0.724	0	0.849	0.294	0	1.08	0.356	0	0.167	0.157	0	0.849	0.313	0	0.849	0.134	0
0.181	0	1.845	0.758	0	0.909	0.307	0	1.156	0.372	0	0.179	0.164	0	0.909	0.328	0	0.909	0.141	0
0.188	0	1.966	0.791	0	0.968	0.321	0	1.231	0.388	0	0.19	0.171	0	0.968	0.342	0	0.968	0.147	0
0.196	0	2.087	0.822	0	1.027	0.334	0	1.307	0.404	0	0.202	0.178	0	1.027	0.356	0	1.027	0.153	0
0.203	0	2.207	0.853	0	1.087	0.346	0	1.383	0.419	0	0.214	0.184	0	1.087	0.369	0	1.087	0.158	0
0.21	0	2.328	0.882	0	1.146	0.358	0	1.458	0.433	0	0.225	0.191	0	1.146	0.382	0	1.146	0.164	0
0.217	0	2.449	0.91	0	1.206	0.369	0	1.534	0.447	0	0.237	0.197	0	1.206	0.394	0	1.206	0.169	0
0.223	0	2.569	0.937	0	1.265	0.38	0	1.609	0.46	0	0.249	0.203	0	1.265	0.405	0	1.265	0.174	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.00553	0	0	0	0	0	0	0	0	0	0	0.381281	0.056526	0	0	0	0	0	0.028256	0
0.016612	0	0	0	0	0	0	0	0	0	0	0.58744	0.169321	0	0	0	0	0	0.084023	0
0.032037	0	0	0	0	0	0	0	0	0	0	0.594702	0.318757	0	0	0	0	0	0.160261	0
0.048411	0	0	0	0	0	0	0	0	0	0	0.667959	0.481806	0	0	0	0	0	0.245815	0
0.039516	0	0	0	0	0	0	0	0	0	0	0.464174	0.392439	0	0	0	0	0	0.198316	0
0.046016	0	0	0	0	0	0	0	0	0	0	0.509626	0.459645	0	0	0	0	0	0.232746	0
0.037561	0	0	0	0	0	0	0	0	0	0	0.384315	0.372462	0	0	0	0	0	0.189753	0
0.044551	0	0	0	0	0	0	0	0	0	0	0.419737	0.443716	0	0	0	0	0	0.22468	0
0.074725	0	0	0	0	0	0	0	0	0	0	0.723709	0.743483	0	0	0	0	0	0.376914	0
0.065109	0	0	0	0	0	0	0	0	0	0	0.645631	0.651162	0	0	0	0	0	0.330459	0
0.040911	0	0	0	0	0	0	0	0	0	0	0.414353	0.4087	0	0	0	0	0	0.20607	0
0.042803	0	0	0	0	0	0	0	0	0	0	0.444127	0.426922	0	0	0	0	0	0.216835	0
0.045192	0	0	0	0	0	0	0	0	0	0	0.479202	0.452492	0	0	0	0	0	0.229793	0
0.046749	0	0	0	0	0	0	0	0	0	0	0.5055	0.467348	0	0	0	0	0	0.237311	0
0.048557	0	0	0	0	0	0	0	0	0	0	0.537071	0.484491	0	0	0	0	0	0.245771	0
0.050232	0	0	0	0	0	0	0	0	0	0	0.564677	0.502923	0	0	0	0	0	0.255104	0
0.051906	0	0	0	0	0	0	0	0	0	0	0.594793	0.518721	0	0	0	0	0	0.262881	0
0.053366	0	0	0	0	0	0	0	0	0	0	0.625195	0.534764	0	0	0	0	0	0.270783	0
0.789785	0	0	0	0	0	0	0	0	0	0	9.543492	7.885678	0	0	0	0	0	3.995769	0
0.001741	0	0	0	0	0	0	0	0	0	0	0.02104	0.017385	0	0	0	0	0	0.008809	0

Temperature: 80F

Pollutant Name: Oxides of Nitrogen Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	1.045	0.136	0	1.042	0.163	0	1.032	0.278	0	1.736	0.331	0	0.498	1.332	0	0.498	1.306	0	0.747
10	1.136	0.151	0	1.133	0.181	0	1.122	0.309	0	1.887	0.366	0	0.541	1.49	0	0.541	1.499	0	0.812
20	1.301	0.178	0	1.298	0.214	0	1.285	0.363	0	2.161	0.427	0	0.62	1.77	0	0.62	1.84	0	0.93
30	1.444	0.201	0	1.441	0.242	0	1.427	0.408	0	2.399	0.478	0	0.688	2.003	0	0.688	2.123	0	1.033
40	1.566	0.219	0	1.562	0.264	0	1.546	0.445	0	2.601	0.519	0	0.746	2.19	0	0.746	2.347	0	1.119
50	1.665	0.233	0	1.66	0.28	0	1.644	0.472	0	2.765	0.55	0	0.793	2.33	0	0.793	2.513	0	1.19
60	1.742	0.242	0	1.737	0.291	0	1.72	0.491	0	2.893	0.571	0	0.83	2.424	0	0.83	2.621	0	1.245
120	1.745	0.257	0	1.741	0.309	0	1.724	0.522	0	2.899	0.608	0	0.832	2.569	0	0.832	2.754	0	1.248
180	1.704	0.257	0	1.699	0.308	0	1.683	0.521	0	2.83	0.607	0	0.812	2.562	0	0.812	2.746	0	1.218
240	1.649	0.255	0	1.644	0.306	0	1.628	0.517	0	2.738	0.603	0	0.786	2.544	0	0.786	2.728	0	1.179
300	1.58	0.252	0	1.576	0.303	0	1.56	0.511	0	2.624	0.596	0	0.753	2.516	0	0.753	2.699	0	1.13
360	1.498	0.248	0	1.494	0.298	0	1.479	0.503	0	2.488	0.587	0	0.714	2.478	0	0.714	2.66	0	1.071
420	1.402	0.243	0	1.398	0.292	0	1.385	0.493	0	2.329	0.575	0	0.668	2.43	0	0.668	2.612	0	1.002
480	1.293	0.237	0	1.289	0.285	0	1.277	0.481	0	2.147	0.561	0	0.616	2.371	0	0.616	2.553	0	0.924
540	1.17	0.231	0	1.167	0.277	0	1.156	0.467	0	1.944	0.544	0	0.558	2.303	0	0.558	2.485	0	0.837
600	1.034	0.223	0	1.031	0.267	0	1.021	0.451	0	1.717	0.524	0	0.493	2.225	0	0.493	2.406	0	0.739
660	0.884	0.214	0	0.882	0.257	0	0.873	0.432	0	1.469	0.503	0	0.421	2.136	0	0.421	2.318	0	0.632
720	0.721	0.204	0	0.719	0.245	0	0.712	0.412	0	1.198	0.478	0	0.344	2.037	0	0.344	2.219	0	0.515

Pollutant Name: Nitrous Oxide **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.0092528	0.60089	0	0.010028	0.1506	0	0.010429	0.559055	0	0.017292	0.36305	0	0	0.21806	0	0	0.050239	0	0
10	0.0156674	1.039196	0	0.016985	0.260485	0	0.017661	0.967905	0	0.029278	0.625295	0	0	0.379947	0	0	0.089819	0	0
20	0.0179675	1.226677	0	0.019485	0.308395	0	0.020254	1.138599	0	0.033575	0.730502	0	0	0.451959	0	0	0.110401	0	0
30	0.0214656	1.490984	0	0.023284	0.375383	0	0.02421	1.377498	0	0.04012	0.880213	0	0	0.550521	0	0	0.137111	0	0
40	0.0150777	1.052172	0	0.016347	0.265234	0	0.016988	0.973098	0	0.028173	0.619003	0	0	0.389855	0	0	0.098175	0	0
50	0.0159023	1.110455	0	0.017233	0.279053	0	0.01792	1.023861	0	0.029709	0.650715	0	0	0.41145	0	0	0.104276	0	0
60	0.0121214	0.840271	0	0.013138	0.21129	0	0.013659	0.77596	0	0.022647	0.492179	0	0	0.311855	0	0	0.079235	0	0
120	0.0118549	0.871234	0	0.012856	0.21905	0	0.013367	0.805427	0	0.022157	0.511668	0	0	0.322687	0	0	0.081285	0	0
180	0.0182966	1.376998	0	0.019829	0.345091	0	0.020625	1.27055	0	0.034185	0.807369	0	0	0.508622	0	0	0.128099	0	0
240	0.0146748	1.132378	0	0.015902	0.284155	0	0.016535	1.044951	0	0.027412	0.66474	0	0	0.418586	0	0	0.105473	0	0
300	0.0083755	0.666582	0	0.009081	0.167602	0	0.009438	0.615216	0	0.015648	0.391365	0	0	0.246592	0	0	0.062159	0	0
360	0.0079408	0.656001	0	0.008608	0.164836	0	0.008948	0.605585	0	0.014837	0.385455	0	0	0.242868	0	0	0.06126	0	0
420	0.0075546	0.653386	0	0.008188	0.164183	0	0.008518	0.603343	0	0.014118	0.383808	0	0	0.242095	0	0	0.061148	0	0
480	0.006913	0.632291	0	0.007491	0.159	0	0.007792	0.584074	0	0.012914	0.371548	0	0	0.234378	0	0	0.059301	0	0
540	0.0062734	0.618057	0	0.006801	0.154981	0	0.007074	0.568705	0	0.011726	0.361325	0	0	0.228311	0	0	0.057888	0	0
600	0.0055442	0.596652	0	0.006009	0.149386	0	0.006248	0.549221	0	0.010357	0.348041	0	0	0.220578	0	0	0.056048	0	0
660	0.0047399	0.572572	0	0.00514	0.143791	0	0.005342	0.526083	0	0.008861	0.334093	0	0	0.211755	0	0	0.053998	0	0
720	0.0038677	0.546065	0	0.004192	0.13714	0	0.004359	0.501956	0	0.00723	0.317633	0	0	0.202033	0	0	0.051715	0	0
Total (grams/day):	0.2034897	15.68286	0	0.220598	3.939655	0	0.229369	14.49109	0	0.38024	9.238004	0	0	5.79215	0	0	1.447631	0	0
Total (lbs/day):	0.0004486	0.034575	0	0.000486	0.008685	0	0.000506	0.031947	0	0.000838	0.020366	0	0	0.01277	0	0	0.003191	0	0

Grand Total (lbs/day): 0.1313105

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.949	0	3.656	3.727	0	0.747	1.791	0	0.991	2.358	0	0.26	0.086	0	0.747	1.487	0	0.747	0.667	0
1.43	0	3.974	5.615	0	0.812	2.699	0	1.077	3.553	0	0.283	0.129	0	0.812	2.24	0	0.812	1.004	0
2.274	0	4.553	8.931	0	0.93	4.293	0	1.234	5.652	0	0.324	0.206	0	0.93	3.564	0	0.93	1.598	0
2.962	0	5.054	11.633	0	1.033	5.592	0	1.369	7.362	0	0.36	0.268	0	1.033	4.642	0	1.033	2.081	0
3.494	0	5.478	13.722	0	1.119	6.596	0	1.484	8.683	0	0.39	0.316	0	1.119	5.475	0	1.119	2.455	0
3.869	0	5.825	15.196	0	1.19	7.305	0	1.578	9.616	0	0.415	0.35	0	1.19	6.064	0	1.19	2.719	0
4.088	0	6.094	16.056	0	1.245	7.718	0	1.651	10.16	0	0.434	0.37	0	1.245	6.407	0	1.245	2.872	0
4.106	0	6.107	16.127	0	1.248	7.752	0	1.655	10.205	0	0.435	0.371	0	1.248	6.435	0	1.248	2.885	0
4.091	0	5.961	16.068	0	1.218	7.724	0	1.615	10.168	0	0.425	0.37	0	1.218	6.411	0	1.218	2.874	0
4.068	0	5.768	15.977	0	1.179	7.68	0	1.563	10.11	0	0.411	0.368	0	1.179	6.375	0	1.179	2.858	0
4.037	0	5.528	15.855	0	1.13	7.622	0	1.498	10.033	0	0.394	0.365	0	1.13	6.326	0	1.13	2.836	0
3.998	0	5.24	15.702	0	1.071	7.548	0	1.42	9.937	0	0.373	0.361	0	1.071	6.265	0	1.071	2.809	0
3.951	0	4.905	15.518	0	1.002	7.46	0	1.329	9.82	0	0.349	0.357	0	1.002	6.192	0	1.002	2.776	0
3.896	0	4.523	15.302	0	0.924	7.356	0	1.226	9.683	0	0.322	0.352	0	0.924	6.106	0	0.924	2.737	0
3.833	0	4.094	15.055	0	0.837	7.237	0	1.109	9.527	0	0.292	0.346	0	0.837	6.007	0	0.837	2.693	0
3.762	0	3.617	14.777	0	0.739	7.103	0	0.98	9.351	0	0.258	0.34	0	0.739	5.896	0	0.739	2.643	0
3.684	0	3.094	14.467	0	0.632	6.955	0	0.838	9.155	0	0.22	0.333	0	0.632	5.772	0	0.632	2.588	0
3.597	0	2.523	14.126	0	0.515	6.791	0	0.684	8.939	0	0.18	0.325	0	0.515	5.636	0	0.515	2.527	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.018267	0	0	0	0	0	0	0	0	0	0	0.052508	0.018222	0	0	0	0	0	0.083491	0
0.042874	0	0	0	0	0	0	0	0	0	0	0.089024	0.042576	0	0	0	0	0	0.195754	0
0.068272	0	0	0	0	0	0	0	0	0	0	0.10206	0.068081	0	0	0	0	0	0.311991	0
0.09572	0	0	0	0	0	0	0	0	0	0	0.122062	0.095337	0	0	0	0	0	0.437325	0
0.073132	0	0	0	0	0	0	0	0	0	0	0.085646	0.072808	0	0	0	0	0	0.334156	0
0.080331	0	0	0	0	0	0	0	0	0	0	0.090405	0.079995	0	0	0	0	0	0.367121	0
0.061838	0	0	0	0	0	0	0	0	0	0	0.06888	0.061611	0	0	0	0	0	0.282516	0
0.06064	0	0	0	0	0	0	0	0	0	0	0.067405	0.060315	0	0	0	0	0	0.277079	0
0.095493	0	0	0	0	0	0	0	0	0	0	0.104085	0.095072	0	0	0	0	0	0.436257	0
0.0787	0	0	0	0	0	0	0	0	0	0	0.083424	0.07837	0	0	0	0	0	0.359558	0
0.046521	0	0	0	0	0	0	0	0	0	0	0.047638	0.046302	0	0	0	0	0	0.212527	0
0.046072	0	0	0	0	0	0	0	0	0	0	0.045098	0.045794	0	0	0	0	0	0.210504	0
0.046282	0	0	0	0	0	0	0	0	0	0	0.042893	0.046034	0	0	0	0	0	0.211465	0
0.045282	0	0	0	0	0	0	0	0	0	0	0.039267	0.045036	0	0	0	0	0	0.206871	0
0.044678	0	0	0	0	0	0	0	0	0	0	0.035711	0.044396	0	0	0	0	0	0.204131	0
0.043851	0	0	0	0	0	0	0	0	0	0	0.031553	0.043626	0	0	0	0	0	0.200341	0
0.042942	0	0	0	0	0	0	0	0	0	0	0.026905	0.042728	0	0	0	0	0	0.196171	0
0.041947	0	0	0	0	0	0	0	0	0	0	0.022024	0.04172	0	0	0	0	0	0.191635	0
1.032843	0	0	0	0	0	0	0	0	0	0	1.156588	1.028023	0	0	0	0	0	4.718892	0
0.002277	0	0	0	0	0	0	0	0	0	0	0.00255	0.002266	0	0	0	0	0	0.010403	0

Pollutant Name: Carbon Dioxide Temperature: 80F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4776.899	4776.899
5	1390.875	1106.483	357.05	1106.313	1355.893	1379.009	346.547	1351.663	1357.102	1389.994	350.624	1389.005	1715.729	1897.84	346.656	1894.099	2513.51	2513.51
10	1041.217	823.535	357.05	823.475	1019.694	1026.975	346.547	1008.991	1020.575	1035.092	350.624	1034.451	1289.594	1413.211	346.656	1410.642	1672.267	1672.267
15	816.573	640.995	357.05	641.006	799.717	799.58	346.547	787.63	800.408	805.875	350.624	805.455	1011.388	1100.237	346.656	1098.419	1175.484	1175.484
20	666.307	520.411	357.05	520.467	651.784	649.232	346.547	641.259	652.351	654.335	350.624	654.057	824.417	893.338	346.656	892.008	873	873
25	564.821	440.072	357.05	440.156	551.611	548.987	346.547	543.659	552.096	553.304	350.624	553.119	697.848	755.407	346.656	754.398	685.012	685.012
30	497.077	387.224	357.05	387.326	484.596	482.995	346.547	479.404	485.028	486.8	350.624	486.674	613.198	664.618	346.656	663.817	567.895	567.895
35	453.981	354.239	357.05	354.352	441.831	441.764	346.547	439.253	442.23	445.254	350.624	445.164	559.199	607.905	346.656	607.232	497.421	497.421
40	430.147	336.602	357.05	336.719	418.015	419.675	346.547	417.738	418.396	422.999	350.624	422.927	529.152	577.532	346.656	576.924	460.326	460.326
45	422.711	331.826	357.05	331.943	410.324	413.635	346.547	411.849	410.7	416.92	350.624	416.851	519.486	569.243	346.656	568.649	450.085	450.085
50	430.735	338.892	357.05	339.005	417.834	422.388	346.547	420.365	418.219	425.748	350.624	425.669	529.037	581.303	346.656	580.678	464.953	464.953
55	455.019	358.021	357.05	358.128	441.343	446.23	346.547	443.577	441.75	449.78	350.624	449.678	558.811	614.118	346.656	613.415	507.469	507.469
60	498.236	390.743	357.05	390.84	483.518	487.101	346.547	483.376	483.963	490.965	350.624	490.828	612.172	670.346	346.656	669.517	585.19	585.19
65	565.463	440.286	357.05	440.371	549.416	549.072	346.547	543.731	549.916	553.405	350.624	553.217	695.502	755.58	346.656	754.565	712.968	712.968

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
4098	4631.367	4776.899	4776.9	4098	4463.379	4776.9	4776.901	4098	4205.719	0	0	6617.133	6526.543	4776.9	4776.901	4098	4384.923	0
519.721	2086.113	2513.51	2513.51	523.528	1594.521	2513.51	2513.51	1505	1665.018	2513.51	2513.51	3845.36	3827.127	2513.51	2513.51	1505	1931.226	2513.51
519.721	1425.202	1672.268	1672.267	523.528	1141.77	1672.267	1672.267	1505	1531.54	1672.267	1672.267	3165.446	3145.004	1672.267	1672.267	1505	1575.692	1672.267
519.721	1034.912	1175.485	1175.484	523.528	874.406	1175.485	1175.484	1505	1452.716	1175.484	1175.484	2595.958	2576.511	1175.484	1175.484	1505	1365.737	1175.484
519.721	797.27	873	873	523.528	711.611	873	873	1505	1404.722	873	873	2183.16	2165.223	873	873	1505	1237.898	873
519.721	649.579	685.012	685.012	523.528	610.437	685.012	685.012	1505	1374.894	685.012	685.012	2042.684	2024.097	685.012	685.011	1505	1158.449	685.012
519.721	557.568	567.895	567.895	523.528	547.406	567.895	567.895	1505	1356.311	567.895	567.895	1924.234	1905.665	567.895	567.894	1505	1108.952	567.895
519.721	502.201	497.421	497.421	523.528	509.477	497.421	497.421	1505	1345.129	497.421	497.421	1827.808	1809.595	497.421	497.421	1505	1079.167	497.421
519.721	473.058	460.327	460.326	523.528	489.513	460.326	460.326	1505	1339.244	460.326	460.326	1753.407	1735.704	460.326	460.326	1505	1063.49	460.326
519.721	465.012	450.085	450.085	523.528	484.001	450.085	450.085	1505	1337.619	450.085	450.085	1701.03	1683.905	450.085	450.085	1505	1059.162	450.085
519.721	476.693	464.953	464.953	523.528	492.003	464.953	464.953	1505	1339.978	464.953	464.953	1670.679	1654.172	464.953	464.953	1505	1065.446	464.953
519.721	510.096	507.469	507.469	523.528	514.885	507.469	507.469	1505	1346.724	507.469	507.469	1662.352	1646.541	507.469	507.469	1505	1083.414	507.469
519.721	571.156	585.19	585.19	523.528	556.714	585.19	585.19	1505	1359.056	585.19	585.19	1676.05	1661.115	585.19	585.19	1505	1116.261	585.19
519.721	671.542	712.968	712.968	523.528	625.483	712.968	712.968	1505	1379.33	712.968	712.968	1711.772	1698.098	712.968	712.968	1505	1170.264	712.968

Incremental Summer

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	4776.9	4776.899	4098.001	4153.271	0	0	0	0	44.012	135.533	5820.026	743.399
2513.51	2545.789	2526.19	230.45	279.459	0	258.098	2513.51	2513.51	1505	1587.104	2513.51	2513.51	1505	2406.219	555.181	1339.589	3142.764	1527.651
1672.267	2545.789	2015.396	197.158	230.874	0	216.179	1672.267	1672.267	1505	1518.618	1672.267	1672.267	1505	1654.472	431.605	990.676	2634.886	1163.143
1175.484	2545.789	1713.754	171.303	197.497	0	186.08	1175.484	1175.484	1505	1478.174	1175.484	1175.484	1505	1210.54	348.863	767.006	2209.494	918.769
873	2545.789	1530.089	151.155	174.913	0	164.558	873	873	1505	1453.548	873	873	1505	940.236	291.705	620.065	1901.145	755.118
685.012	2545.789	1415.944	135.454	160.389	0	149.521	685.012	685.011	1505	1438.244	685.012	685.012	1505	772.247	251.743	522.598	1796.214	657.214
567.895	2545.789	1344.832	123.274	152.295	0	139.646	567.895	567.894	1505	1428.709	567.895	567.895	1505	667.59	223.906	458.695	1707.734	590.908
497.421	2545.789	1302.041	113.935	149.792	0	134.164	497.421	497.421	1505	1422.971	497.421	497.421	1505	604.613	205.054	418.898	1635.707	547.792
460.326	2545.789	1279.518	106.944	152.669	0	132.74	460.327	460.326	1505	1419.952	460.326	460.326	1505	571.465	193.272	397.647	1580.131	522.927
450.085	2545.789	1273.299	101.945	161.315	0	135.439	450.085	450.085	1505	1419.118	450.085	450.085	1505	562.313	187.481	391.913	1541.007	513.619
464.953	2545.789	1282.327	98.692	176.796	0	142.755	464.953	464.953	1505	1420.328	464.953	464.953	1505	575.599	187.236	400.496	1518.336	518.801
507.469	2545.789	1308.142	97.031	201.074	0	155.728	507.469	507.469	1505	1423.79	507.469	507.469	1505	613.593	192.663	423.757	1512.116	538.794
585.19	2545.789	1355.333	96.883	237.42	0	176.168	585.19	585.19	1505	1430.117	585.19	585.19	1505	683.045	204.493	463.721	1522.347	575.398
712.968	2545.789	1432.919	98.242	291.148	0	207.071	712.968	712.968	1505	1440.519	712.968	712.968	1505	797.229	224.225	524.607	1549.031	632.364

Incremental Summer

Pollutant Name: Methane Temperature: 80F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.917	0.957
5	0.851	0.051	0.019	0.052	0.876	0.059	0.009	0.062	0.852	0.072	0.013	0.074	1.041	0.081	0.009	0.084	0.75	0.063
10	0.638	0.039	0.015	0.04	0.656	0.046	0.007	0.048	0.639	0.057	0.011	0.057	0.774	0.065	0.007	0.066	0.53	0.045
15	0.504	0.03	0.012	0.031	0.517	0.037	0.006	0.038	0.504	0.044	0.008	0.044	0.605	0.052	0.005	0.053	0.397	0.033
20	0.417	0.025	0.01	0.025	0.427	0.03	0.005	0.032	0.417	0.035	0.007	0.035	0.496	0.042	0.004	0.043	0.314	0.025
25	0.361	0.02	0.008	0.02	0.369	0.025	0.004	0.026	0.361	0.029	0.006	0.03	0.425	0.035	0.004	0.036	0.261	0.02
30	0.324	0.017	0.007	0.017	0.331	0.021	0.003	0.022	0.324	0.025	0.005	0.025	0.379	0.03	0.003	0.031	0.226	0.017
35	0.301	0.015	0.006	0.015	0.307	0.019	0.003	0.02	0.301	0.022	0.004	0.022	0.35	0.027	0.003	0.027	0.202	0.014
40	0.288	0.013	0.005	0.014	0.294	0.017	0.003	0.018	0.288	0.02	0.004	0.02	0.334	0.025	0.002	0.026	0.186	0.013
45	0.285	0.013	0.005	0.013	0.29	0.017	0.002	0.017	0.284	0.019	0.004	0.019	0.329	0.024	0.002	0.025	0.176	0.012
50	0.289	0.012	0.005	0.013	0.295	0.016	0.002	0.017	0.289	0.019	0.003	0.019	0.335	0.024	0.002	0.024	0.169	0.011
55	0.302	0.013	0.005	0.013	0.308	0.017	0.002	0.018	0.302	0.019	0.003	0.02	0.351	0.024	0.002	0.025	0.166	0.011
60	0.325	0.014	0.004	0.014	0.332	0.018	0.002	0.019	0.325	0.021	0.003	0.021	0.38	0.026	0.002	0.027	0.165	0.011
65	0.363	0.016	0.004	0.016	0.371	0.02	0.002	0.021	0.363	0.023	0.003	0.024	0.427	0.028	0.002	0.029	0.168	0.011

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
0.147	0.783	0.917	0.962	0.147	0.586	0.917	0.961	0.147	0.276	0	0	0.46	0.454	0.917	0.929	0.147	0.478	0
0.017	0.054	0.75	0.057	0.021	0.041	1.07	0.087	0.02	0.031	3.426	0.469	0.302	0.304	1.07	0.194	0.017	0.093	1.33
0.013	0.038	0.53	0.041	0.016	0.03	0.739	0.063	0.015	0.024	2.284	0.343	0.166	0.169	0.739	0.15	0.013	0.072	0.91
0.011	0.028	0.397	0.03	0.013	0.022	0.54	0.047	0.012	0.018	1.596	0.266	0.079	0.082	0.54	0.122	0.011	0.058	0.657
0.009	0.022	0.314	0.023	0.011	0.017	0.417	0.038	0.01	0.015	1.168	0.216	0.043	0.046	0.417	0.103	0.009	0.049	0.5
0.007	0.017	0.261	0.018	0.009	0.014	0.337	0.031	0.009	0.012	0.896	0.183	0.036	0.038	0.337	0.091	0.007	0.043	0.399
0.006	0.015	0.226	0.015	0.008	0.012	0.286	0.027	0.007	0.011	0.718	0.16	0.029	0.031	0.286	0.082	0.006	0.039	0.334
0.005	0.013	0.202	0.013	0.007	0.01	0.251	0.024	0.006	0.009	0.601	0.143	0.025	0.026	0.251	0.076	0.005	0.035	0.29
0.005	0.011	0.186	0.012	0.006	0.009	0.228	0.022	0.006	0.008	0.523	0.131	0.021	0.023	0.228	0.071	0.005	0.033	0.261
0.004	0.01	0.176	0.011	0.006	0.008	0.213	0.02	0.005	0.008	0.472	0.123	0.02	0.021	0.213	0.067	0.004	0.031	0.242
0.004	0.01	0.169	0.01	0.005	0.008	0.203	0.02	0.005	0.007	0.44	0.117	0.019	0.021	0.203	0.065	0.004	0.03	0.23
0.004	0.009	0.166	0.01	0.005	0.008	0.198	0.019	0.005	0.007	0.424	0.114	0.02	0.022	0.198	0.064	0.004	0.03	0.224
0.004	0.009	0.165	0.01	0.005	0.008	0.198	0.019	0.005	0.007	0.422	0.114	0.023	0.024	0.198	0.064	0.004	0.029	0.223
0.004	0.01	0.168	0.01	0.005	0.008	0.201	0.019	0.005	0.007	0.433	0.116	0.027	0.028	0.201	0.064	0.004	0.03	0.227

Incremental Summer

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	0.917	0.936	0.147	0.211	0	0	0	0	0.008	0.027	0.375	0.064
0.241	0.067	0.172	0.313	0.275	0	0.292	1.07	0.373	0.045	0.081	1.07	0.101	0.011	0.099	0.465	0.064	0.23	0.084
0.169	0.048	0.122	0.27	0.231	0	0.248	0.739	0.269	0.035	0.06	0.739	0.074	0.008	0.073	0.373	0.049	0.128	0.06
0.124	0.036	0.089	0.242	0.202	0	0.22	0.54	0.205	0.028	0.047	0.54	0.058	0.007	0.056	0.315	0.038	0.062	0.043
0.095	0.028	0.069	0.223	0.184	0	0.201	0.417	0.164	0.023	0.038	0.417	0.047	0.005	0.046	0.277	0.031	0.035	0.033
0.075	0.023	0.055	0.212	0.173	0	0.19	0.337	0.138	0.019	0.032	0.337	0.04	0.005	0.038	0.253	0.026	0.029	0.028
0.062	0.019	0.045	0.206	0.166	0	0.184	0.286	0.12	0.017	0.027	0.286	0.035	0.004	0.033	0.239	0.022	0.024	0.024
0.053	0.016	0.039	0.205	0.163	0	0.182	0.251	0.108	0.015	0.024	0.251	0.031	0.003	0.03	0.232	0.02	0.02	0.021
0.047	0.015	0.034	0.209	0.164	0	0.184	0.228	0.099	0.013	0.022	0.228	0.028	0.003	0.027	0.231	0.018	0.017	0.019
0.043	0.014	0.032	0.218	0.168	0	0.19	0.213	0.093	0.012	0.02	0.213	0.026	0.003	0.025	0.236	0.017	0.016	0.018
0.041	0.013	0.03	0.233	0.177	0	0.201	0.203	0.09	0.011	0.019	0.203	0.025	0.003	0.024	0.249	0.017	0.016	0.018
0.04	0.013	0.029	0.257	0.191	0	0.22	0.198	0.088	0.011	0.018	0.198	0.024	0.003	0.023	0.27	0.018	0.016	0.019
0.04	0.013	0.029	0.294	0.212	0	0.248	0.198	0.087	0.01	0.018	0.198	0.024	0.002	0.023	0.303	0.019	0.018	0.021
0.04	0.014	0.03	0.35	0.246	0	0.291	0.201	0.089	0.01	0.018	0.201	0.024	0.002	0.023	0.354	0.021	0.021	0.023

Incremental Summer

Pollutant Name: Oxides of Nitrogen Temperature: 80F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.35	1.431
5	2.363	0.144	1.747	0.148	2.294	0.225	1.793	0.277	2.27	0.327	1.746	0.331	3.811	0.38	1.802	0.391	1.103	0.205
10	2.484	0.125	1.45	0.129	2.412	0.193	1.487	0.238	2.387	0.281	1.449	0.285	4.008	0.326	1.495	0.337	1.158	0.216
15	2.609	0.11	1.246	0.114	2.533	0.17	1.278	0.21	2.506	0.247	1.246	0.251	4.208	0.286	1.285	0.298	1.214	0.226
20	2.736	0.1	1.11	0.103	2.656	0.152	1.139	0.19	2.628	0.221	1.109	0.225	4.413	0.257	1.145	0.269	1.27	0.237
25	2.865	0.091	1.024	0.095	2.782	0.14	1.051	0.176	2.752	0.202	1.024	0.207	4.621	0.235	1.057	0.248	1.326	0.247
30	2.996	0.085	0.98	0.089	2.909	0.131	1.005	0.167	2.879	0.189	0.979	0.193	4.833	0.22	1.01	0.233	1.382	0.257
35	3.129	0.081	0.971	0.085	3.039	0.125	0.996	0.162	3.006	0.179	0.97	0.184	5.048	0.209	1.001	0.223	1.438	0.268
40	3.264	0.079	0.996	0.083	3.169	0.122	1.022	0.16	3.136	0.174	0.996	0.179	5.265	0.203	1.028	0.217	1.494	0.278
45	3.4	0.078	1.06	0.082	3.301	0.121	1.087	0.162	3.266	0.172	1.059	0.178	5.484	0.202	1.093	0.216	1.55	0.289
50	3.536	0.078	1.168	0.083	3.434	0.123	1.198	0.167	3.397	0.174	1.167	0.18	5.705	0.204	1.205	0.219	1.606	0.299
55	3.673	0.08	1.334	0.085	3.567	0.128	1.368	0.177	3.529	0.179	1.333	0.185	5.926	0.21	1.376	0.226	1.662	0.309
60	3.811	0.083	1.578	0.089	3.7	0.135	1.619	0.191	3.661	0.189	1.577	0.195	6.147	0.221	1.628	0.239	1.717	0.32
65	3.948	0.089	1.935	0.094	3.834	0.147	1.985	0.213	3.793	0.203	1.934	0.21	6.369	0.238	1.996	0.257	1.773	0.33

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
75.051	17.212	1.35	1.441	75.051	35.434	1.35	1.44	75.051	63.371	0	0	117.359	115.753	1.35	1.375	75.051	43.913	0
3.664	0.948	1.103	0.205	4.248	2.072	1.654	0.469	5.489	4.694	12	3.84	17.81	17.619	1.654	1.68	4.82	3.493	2.193
3.04	0.822	1.158	0.215	3.524	1.744	1.738	0.493	4.554	3.911	12.608	4.035	12.536	12.42	1.738	1.765	3.999	3.055	2.304
2.613	0.739	1.214	0.226	3.029	1.521	1.822	0.517	3.915	3.377	13.217	4.229	9.176	9.109	1.822	1.851	3.437	2.767	2.415
2.328	0.686	1.27	0.236	2.698	1.374	1.905	0.541	3.487	3.021	13.825	4.424	7.728	7.683	1.905	1.936	3.062	2.586	2.527
2.148	0.655	1.326	0.246	2.49	1.283	1.989	0.565	3.218	2.798	14.433	4.619	7.262	7.226	1.989	2.021	2.826	2.485	2.638
2.054	0.644	1.382	0.257	2.381	1.239	2.073	0.588	3.077	2.684	15.042	4.813	6.882	6.854	2.073	2.106	2.702	2.45	2.749
2.035	0.648	1.438	0.267	2.359	1.234	2.157	0.612	3.049	2.664	15.65	5.008	6.587	6.566	2.157	2.191	2.677	2.472	2.86
2.089	0.668	1.494	0.278	2.422	1.269	2.241	0.636	3.13	2.736	16.258	5.203	6.378	6.363	2.241	2.276	2.748	2.549	2.971
2.222	0.704	1.55	0.288	2.576	1.346	2.325	0.66	3.329	2.907	16.866	5.397	6.255	6.244	2.325	2.362	2.923	2.686	3.082
2.449	0.761	1.606	0.298	2.839	1.473	2.408	0.684	3.669	3.197	17.475	5.592	6.218	6.21	2.408	2.447	3.222	2.894	3.194
2.797	0.844	1.662	0.309	3.243	1.664	2.492	0.707	4.19	3.639	18.083	5.786	6.266	6.26	2.492	2.532	3.679	3.194	3.305
3.31	0.962	1.717	0.319	3.837	1.944	2.576	0.731	4.958	4.289	18.691	5.981	6.4	6.395	2.576	2.617	4.353	3.62	3.416
4.058	1.131	1.773	0.33	4.704	2.35	2.66	0.755	6.078	5.235	19.3	6.176	6.62	6.614	2.66	2.702	5.337	4.224	3.527

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	1.35	1.389	75.051	69.054	0	0	0	0	0.012	0.041	103.729	11.139
1.857	20.246	9.08	0.716	0.884	0	0.811	1.654	1.576	16.437	15.228	1.654	0.475	7.908	1.275	1.183	0.239	14.636	1.786
1.951	15.486	7.268	0.75	0.817	0	0.788	1.738	1.656	13.637	12.663	1.738	0.499	6.561	1.154	1.242	0.209	10.465	1.313
2.045	12.453	6.134	0.785	0.768	0	0.775	1.822	1.736	11.723	10.911	1.822	0.523	5.64	1.078	1.302	0.187	7.798	1.009
2.139	10.527	5.434	0.821	0.732	0	0.771	1.905	1.816	10.441	9.74	1.905	0.547	5.024	1.034	1.364	0.171	6.611	0.867
2.234	9.355	5.031	0.857	0.708	0	0.773	1.989	1.896	9.636	9.007	1.989	0.571	4.636	1.015	1.426	0.159	6.197	0.813
2.328	8.74	4.847	0.894	0.694	0	0.781	2.073	1.975	9.215	8.626	2.073	0.595	4.433	1.015	1.489	0.15	5.879	0.772
2.422	8.585	4.843	0.931	0.691	0	0.795	2.157	2.055	9.13	8.555	2.157	0.619	4.392	1.033	1.553	0.145	5.652	0.743
2.516	8.864	5.009	0.968	0.696	0	0.814	2.241	2.135	9.373	8.785	2.241	0.643	4.509	1.067	1.618	0.142	5.515	0.727
2.61	9.621	5.364	1.005	0.71	0	0.838	2.325	2.215	9.97	9.34	2.325	0.668	4.796	1.12	1.683	0.142	5.472	0.722
2.704	10.979	5.955	1.042	0.734	0	0.868	2.408	2.295	10.988	10.282	2.408	0.692	5.286	1.194	1.748	0.144	5.527	0.73
2.798	13.17	6.873	1.079	0.768	0	0.903	2.492	2.375	12.548	11.721	2.492	0.716	6.037	1.296	1.813	0.148	5.69	0.752
2.892	16.609	8.281	1.116	0.814	0	0.945	2.576	2.455	14.847	13.839	2.576	0.74	7.143	1.435	1.878	0.156	5.978	0.79
2.987	22.02	10.463	1.153	0.874	0	0.995	2.66	2.535	18.202	16.928	2.66	0.764	8.757	1.629	1.943	0.166	6.419	0.846

Vehicle Miles Traveled: 31,510

VEHICLE PERCENTAGES

Vehicle Type	Percent	Non-catalyst	Catalyst	Diesel
Light Auto	46.0%	0.2%	99.8%	0.0%
Light Truck < 3,750 lbs	10.0%	1.0%	96.0%	3.0%
Light Truck 3,751-5,750	21.0%	0.5%	99.5%	0.0%
Medium Truck 5,751-8,500	11.5%	0.9%	99.1%	0.0%
Lite-Heavy 8,501-10,000	2.1%	0.0%	81.0%	19.0%
Lite-Heavy 10,001-14,000	0.7%	0.0%	57.1%	42.9%
Med-Heavy 14,001-33,000	1.0%	0.0%	20.0%	80.0%
Heavy-Heavy 33,001-60,000	1.8%	0.0%	0.0%	100.0%
Line Haul > 60,000 lbs	0.1%	0.0%	0.0%	100.0%
Urban Bus	0.0%	0.0%	0.0%	0.0%
Motorcycle	4.3%	48.8%	51.2%	0.0%
School Bus	0.1%	0.0%	0.0%	100.0%
Motorhome	1.4%	0.0%	92.9%	7.1%

CO2 EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	497.077	387.224	357.05
Light Truck < 3,750 lbs	LDT1	484.596	482.995	346.547
Light Truck 3,751-5,750	LDT2	485.028	486.8	350.624
Medium Truck 5,751-8,500	MDV	613.198	664.618	346.656
Lite-Heavy 8,501-10,000	LHDT1	567.895	567.895	519.721
Lite-Heavy 10,001-14,000	LHDT2	567.895	567.895	523.528
Med-Heavy 14,001-33,000	MHDT	567.895	567.895	1505
Heavy-Heavy 33,001-60,000	HHDT	567.895	567.895	1924.234
Line Haul > 60,000 lbs	LHV	567.895	567.894	1505
Urban Bus	UB	567.895	567.895	2545.789
Motorcycle	MCY	123.274	152.295	0
School Bus	SBUS	567.895	567.894	1505
Motorhome	MH	567.895	567.895	1505

METHANE EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	0.324	0.017	0.007
Light Truck < 3,750 lbs	LDT1	0.331	0.021	0.003
Light Truck 3,751-5,750	LDT2	0.324	0.025	0.005
Medium Truck 5,751-8,500	MDV	0.379	0.03	0.003
Lite-Heavy 8,501-10,000	LHDT1	0.226	0.017	0.006
Lite-Heavy 10,001-14,000	LHDT2	0.226	0.015	0.008
Med-Heavy 14,001-33,000	MHDT	0.286	0.027	0.007
Heavy-Heavy 33,001-60,000	HHDT	0.718	0.16	0.029
Line Haul > 60,000 lbs	LHV	0.286	0.082	0.006
Urban Bus	UB	0.334	0.062	0.019
Motorcycle	MCY	0.206	0.166	0
School Bus	SBUS	0.286	0.12	0.017
Motorhome	MH	0.286	0.035	0.004

NOx EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	2.996	0.085	0.98
Light Truck < 3,750 lbs	LDT1	2.909	0.131	1.005
Light Truck 3,751-5,750	LDT2	2.879	0.189	0.979
Medium Truck 5,751-8,500	MDV	4.833	0.22	1.01
Lite-Heavy 8,501-10,000	LHDT1	1.382	0.257	2.054
Lite-Heavy 10,001-14,000	LHDT2	1.382	0.257	2.381
Med-Heavy 14,001-33,000	MHDT	2.073	0.588	3.077
Heavy-Heavy 33,001-60,000	HHDT	15.042	4.813	6.882
Line Haul > 60,000 lbs	LHV	2.073	2.106	2.702
Urban Bus	UB	2.749	2.328	8.74
Motorcycle	MCY	0.894	0.694	0
School Bus	SBUS	2.073	1.975	9.215
Motorhome	MH	2.073	0.595	4.433

CO2 EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	14,410.02	5,601,492.12	0.00
Light Truck < 3,750 lbs	15,269.78	1,461,056.32	32,759.44
Light Truck 3,751-5,750	16,047.57	3,205,132.84	0.00
Medium Truck 5,751-8,500	19,998.35	2,386,693.68	0.00
Lite-Heavy 8,501-10,000	0.00	304,386.54	343,908.29
Lite-Heavy 10,001-14,000	0.00	71,524.57	49,539.13
Med-Heavy 14,001-33,000	0.00	35,789.13	379,384.49
Heavy-Heavy 33,001-60,000	0.00	0.00	1,091,398.82
Line Haul > 60,000 lbs	0.00	0.00	47,423.06
Urban Bus	0.00	0.00	0.00
Motorcycle	81,510.37	105,651.86	0.00
School Bus	0.00	0.00	47,423.06
Motorhome	0.00	232,736.71	47,138.52
Total (grams)	147,236.09	13,404,463.77	2,038,974.82
Total (pounds)	324.60	29,551.78	4,495.17

Total CO2 Running Emissions (pounds): 34,371.55

METHANE EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	9.39	245.92	0.00
Light Truck < 3,750 lbs	10.43	63.52	0.28
Light Truck 3,751-5,750	10.72	164.60	0.00
Medium Truck 5,751-8,500	12.36	107.73	0.00
Lite-Heavy 8,501-10,000	0.00	9.11	0.75
Lite-Heavy 10,001-14,000	0.00	1.89	0.76
Med-Heavy 14,001-33,000	0.00	1.70	1.76
Heavy-Heavy 33,001-60,000	0.00	0.00	16.45
Line Haul > 60,000 lbs	0.00	0.00	0.19
Urban Bus	0.00	0.00	0.00
Motorcycle	136.21	115.16	0.00
School Bus	0.00	0.00	0.54
Motorhome	0.00	14.34	0.13
Total (grams)	179.11	723.98	20.86
Total (pounds)	0.39	1.60	0.05

Total Methane Running Emissions (pounds): 2.04

N2O EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	4.23	59.92	0.00
Light Truck < 3,750 lbs	4.47	19.31	4.63
Light Truck 3,751-5,750	4.64	60.64	0.00
Medium Truck 5,751-8,500	7.68	38.50	0.00
Lite-Heavy 8,501-10,000	0.00	6.71	12.58
Lite-Heavy 10,001-14,000	0.00	1.58	10.98
Med-Heavy 14,001-33,000	0.00	1.81	37.80
Heavy-Heavy 33,001-60,000	0.00	0.00	190.21
Line Haul > 60,000 lbs	0.00	0.00	4.15
Urban Bus	0.00	0.00	0.00
Motorcycle	28.81	23.46	0.00
School Bus	0.00	0.00	14.15
Motorhome	0.00	11.88	6.77
Total (grams)	49.83	223.81	281.27
Total (pounds)	0.11	0.49	0.62

Total N2O Running Emissions (pounds): 1.22

N_2O/NOx Ratio		
N_2O (mg km^{-1})	NOx (mg km^{-1})	N_2O/NOx Ratio
20	700	0.029
30	650	0.046
12	340	0.035
13	250	0.052
12	260	0.046
13	215	0.060
9	140	0.064
15	160	0.094
0.5	35	0.014
2	35	0.057
23	1300	0.018
22	800	0.028
40	1700	0.024
35	950	0.037
80	1700	0.047
120	1200	0.100
35	1400	0.025
43	1000	0.043
18	600	0.030
20	420	0.048
25	550	0.045
25	500	0.050
12	150	0.080
15	150	0.100
4	110	0.036
5	85	0.059
	Average	0.04873

Source: California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

Carbon Dioxide Calculation
Based on URBEMIS 2007 Assumptions and EMFAC 2007 Emission Factors

Minutes since engine shutoff	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
Home-Work	0.7%	1.0%	1.4%	2.2%	2.6%	2.8%	2.2%	2.6%	6.2%	8.9%	8.6%	8.6%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%	100.0%
Home-Shop	3.3%	9.5%	14.4%	18.3%	12.2%	7.5%	4.2%	3.6%	3.7%	2.1%	2.6%	2.6%	2.6%	2.6%	2.7%	2.7%	2.7%	2.7%	100.0%
Home-Other	6.1%	7.6%	7.8%	7.2%	7.0%	7.9%	6.2%	6.6%	7.2%	4.9%	4.0%	4.0%	4.0%	3.9%	3.9%	3.9%	3.9%	3.9%	100.0%
Commercial Commute	2.6%	5.0%	3.7%	4.2%	4.7%	3.7%	3.0%	3.3%	8.5%	10.8%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.4%	100.0%
Commercial Non-Commute	5.8%	11.3%	7.3%	7.4%	7.7%	5.5%	4.4%	4.4%	12.1%	13.9%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.7%	100.0%
Commercial Customer	9.3%	14.7%	13.2%	14.0%	6.7%	7.1%	5.1%	4.5%	8.8%	6.4%	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	100.0%

Residential Trips	Home-Work %	Home-Shop %	Home-Other %
593.34	33%	18%	49%
1312.64			

Commercial Trips	Commute	Non-Work	Customer
1,365.72	2.0%	1.0%	97.0%

Trips	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
Home-Work	4.39	6.27	8.78	13.80	16.30	17.56	13.80	16.30	38.88	55.81	53.93	53.93	54.55	54.55	54.55	54.55	54.55	54.55	627.07
Home-Shop	11.32	32.59	49.40	62.78	41.86	25.73	14.41	12.35	12.69	7.20	8.92	8.92	8.92	8.92	9.26	9.26	9.26	9.26	343.08
Home-Other	57.09	71.12	73.00	67.38	65.51	73.93	58.02	61.77	67.38	45.86	37.43	37.43	37.43	36.50	36.50	36.50	36.50	36.50	935.84
Commercial Commute	0.71	1.37	1.01	1.15	1.28	1.01	0.82	0.90	2.32	2.95	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.75	27.31
Commercial Non-Commute	0.79	1.54	1.00	1.01	1.05	0.75	0.60	0.60	1.65	1.90	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.37	13.66
Commercial Customer	123.20	194.74	174.87	185.46	88.76	94.06	67.56	59.61	116.58	84.78	15.90	15.90	17.22	17.22	17.22	17.22	17.22	17.22	1,324.75
Total	197.50	307.63	308.05	331.58	214.76	213.04	155.21	151.54	239.50	198.50	118.24	118.24	120.19	119.26	119.60	119.60	119.60	119.65	3,271.70

User Input from URBEMIS

Trip Distribution

Trips	Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
197.50	5	0.1817008	90.66871	0	0.197501	18.96009	0.592503	0.207376	41.26781	0	0.204413	22.50819	0	0	3.35949	0.788029	0	0.789411	0.593095	0
307.63	10	0.2830228	141.2284	0	0.307633	29.53281	0.9229	0.323015	64.28002	0	0.318401	35.05945	0	0	5.232845	1.227458	0	1.229611	0.923823	0
308.05	20	0.2834074	141.4203	0	0.308052	29.57295	0.924155	0.323454	64.36737	0	0.318833	35.1071	0	0	5.239957	1.229126	0	1.231282	0.925079	0
331.58	30	0.3050548	152.2223	0	0.331581	31.8318	0.994744	0.34816	69.28391	0	0.343187	37.78866	0	0	5.640198	1.323009	0	1.32533	0.995739	0
214.76	40	0.1975802	98.59254	0	0.214761	20.61707	0.644283	0.225499	44.87434	0	0.222278	24.47525	0	0	3.653087	0.856897	0	0.8584	0.644928	0
213.04	50	0.1959955	97.80176	0	0.213039	20.4517	0.639116	0.223691	44.51441	0	0.220495	24.27894	0	0	3.623786	0.850024	0	0.851515	0.639755	0
155.21	60	0.1427923	71.25337	0	0.155209	14.90007	0.465627	0.16297	32.43093	0	0.160641	17.6884	0	0	2.640106	0.619284	0	0.620371	0.466093	0
151.54	120	0.1394128	69.56699	0	0.151536	14.54742	0.454607	0.159112	31.66338	0	0.156839	17.26976	0	0	2.577622	0.604627	0	0.605688	0.455062	0
239.50	180	0.220344	109.9516	0	0.239504	22.99241	0.718513	0.25148	50.04443	0	0.247887	27.29511	0	0	4.073968	0.955622	0	0.957299	0.719231	0
198.50	240	0.1826216	91.1282	0	0.198502	19.05617	0.595505	0.208427	41.47695	0	0.205449	22.62226	0	0	3.376515	0.792022	0	0.793412	0.596101	0
118.24	300	0.1087812	54.28183	0	0.11824	11.35108	0.354721	0.124152	24.70634	0	0.122379	13.47527	0	0	2.01127	0.471779	0	0.472607	0.355076	0
118.24	360	0.1087812	54.28183	0	0.11824	11.35108	0.354721	0.124152	24.70634	0	0.122379	13.47527	0	0	2.01127	0.471779	0	0.472607	0.355076	0
120.19	420	0.1105769	55.17787	0	0.120192	11.53846	0.360577	0.126202	25.11417	0	0.124399	13.69771	0	0	2.04447	0.479567	0	0.480408	0.360937	0
119.26	480	0.1097159	54.74824	0	0.119256	11.44862	0.357769	0.125219	24.91863	0	0.12343	13.59106	0	0	2.028552	0.475833	0	0.476668	0.358127	0
119.60	540	0.1100315	54.90574	0	0.1196	11.48155	0.358799	0.125579	24.99032	0	0.123785	13.63016	0	0	2.034388	0.477202	0	0.478039	0.359157	0
119.60	600	0.1100315	54.90574	0	0.1196	11.48155	0.358799	0.125579	24.99032	0	0.123785	13.63016	0	0	2.034388	0.477202	0	0.478039	0.359157	0
119.60	660	0.1100315	54.90574	0	0.1196	11.48155	0.358799	0.125579	24.99032	0	0.123785	13.63016	0	0	2.034388	0.477202	0	0.478039	0.359157	0
119.65	720	0.1100818	54.93082	0	0.119654	11.4868	0.358962	0.125637	25.00173	0	0.123842	13.63638	0	0	2.035317	0.47742	0	0.478258	0.359321	0
3272		3	1502	0	3	314	10	3	684	0	3	373	0	0	56	13	0	13	10	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.395002	1.580007	0	0	3.555016	0	0	0.197501	0	0	0	4.144359	4.34818	0	0	0	0.197501	0	2.568697	0.196316
0.615267	2.461068	0	0	5.537403	0	0	0.307633	0	0	0	6.455381	6.772859	0	0	0	0.307633	0	4.001081	0.305788
0.616103	2.464413	0	0	5.544928	0	0	0.308052	0	0	0	6.464154	6.782063	0	0	0	0.308052	0	4.006519	0.306203
0.663163	2.65265	0	0	5.968463	0	0	0.331581	0	0	0	6.957902	7.300094	0	0	0	0.331581	0	4.312546	0.329592
0.429522	1.718089	0	0	3.8657	0	0	0.214761	0	0	0	4.506548	4.728181	0	0	0	0.214761	0	2.793183	0.213473
0.426077	1.704309	0	0	3.834695	0	0	0.213039	0	0	0	4.470402	4.690258	0	0	0	0.213039	0	2.77078	0.21176
0.310418	1.241672	0	0	2.793763	0	0	0.155209	0	0	0	3.256907	3.417082	0	0	0	0.155209	0	2.018649	0.154278
0.303071	1.212285	0	0	2.727642	0	0	0.151536	0	0	0	3.179824	3.336209	0	0	0	0.151536	0	1.970873	0.150626
0.479009	1.916035	0	0	4.311078	0	0	0.239504	0	0	0	5.025759	5.272927	0	0	0	0.239504	0	3.114993	0.238067
0.397004	1.588014	0	0	3.573032	0	0	0.198502	0	0	0	4.165361	4.370215	0	0	0	0.198502	0	2.581714	0.197311
0.236481	0.945924	0	0	2.128328	0	0	0.11824	0	0	0	2.481158	2.603182	0	0	0	0.11824	0	1.537835	0.117531
0.236481	0.945924	0	0	2.128328	0	0	0.11824	0	0	0	2.481158	2.603182	0	0	0	0.11824	0	1.537835	0.117531
0.240385	0.961538	0	0	2.163461	0	0	0.120192	0	0	0	2.522115	2.646153	0	0	0	0.120192	0	1.563221	0.119471
0.238513	0.954051	0	0	2.146616	0	0	0.119256	0	0	0	2.502477	2.62555	0	0	0	0.119256	0	1.551049	0.118541
0.239199	0.956796	0	0	2.152791	0	0	0.1196	0	0	0	2.509676	2.633103	0	0	0	0.1196	0	1.555511	0.118882
0.239199	0.956796	0	0	2.152791	0	0	0.1196	0	0	0	2.509676	2.633103	0	0	0	0.1196	0	1.555511	0.118882
0.239199	0.956796	0	0	2.152791	0	0	0.1196	0	0	0	2.509676	2.633103	0	0	0	0.1196	0	1.555511	0.118882
0.239308	0.957233	0	0	2.153774	0	0	0.119654	0	0	0	2.510822	2.634305	0	0	0	0.119654	0	1.556222	0.118936
7	26	0	0	59	0	0	3	0	0	0	69	72	0	0	0	3	0	43	3

Temperature: 60F

Pollutant Name: Carbon Dioxide Relative Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	111.902	11.431	0	112.19	14.176	0	112.288	14.273	0	141.795	19.37	0	170.667	22.627	0	170.667	21.598	0	170.667
10	121.432	13.227	0	121.744	16.482	0	121.851	16.583	0	153.87	22.571	0	185.2	27.148	0	185.2	26.511	0	185.2
20	139.927	17.26	0	140.287	21.638	0	140.41	21.751	0	177.306	29.712	0	213.408	37.003	0	213.408	37.071	0	213.408
30	157.671	21.884	0	158.076	27.518	0	158.215	27.649	0	199.79	37.838	0	240.47	47.939	0	240.47	48.611	0	240.47
40	174.663	27.097	0	175.112	34.122	0	175.266	34.277	0	221.321	46.95	0	266.386	59.958	0	266.386	61.132	0	266.386
50	190.904	32.9	0	191.394	41.45	0	191.562	41.636	0	241.9	57.047	0	291.155	73.058	0	291.155	74.633	0	291.155
60	206.393	39.292	0	206.923	49.502	0	207.105	49.725	0	261.526	68.128	0	314.778	87.241	0	314.778	89.114	0	314.778
120	279.289	88.25	0	280.007	110.585	0	280.253	111.17	0	353.896	151.82	0	425.955	188.621	0	425.955	188.643	0	425.955
180	279.509	100.586	0	280.227	126.121	0	280.473	126.776	0	354.174	173.198	0	426.29	215.939	0	426.29	216.508	0	426.29
240	279.728	112.81	0	280.447	141.498	0	280.694	142.226	0	354.452	194.347	0	426.625	242.8	0	426.625	243.793	0	426.625
300	279.948	124.92	0	280.667	156.716	0	280.914	157.518	0	354.731	215.266	0	426.96	269.205	0	426.96	270.498	0	426.96
360	280.167	136.918	0	280.887	171.775	0	281.134	172.653	0	355.009	235.956	0	427.294	295.153	0	427.294	296.623	0	427.294
420	280.387	148.803	0	281.107	186.675	0	281.354	187.63	0	355.287	256.416	0	427.629	320.645	0	427.629	322.169	0	427.629
480	280.606	160.575	0	281.327	201.416	0	281.575	202.451	0	355.565	276.647	0	427.964	345.68	0	427.964	347.135	0	427.964
540	280.826	172.234	0	281.548	215.998	0	281.795	217.114	0	355.843	296.649	0	428.299	370.258	0	428.299	371.521	0	428.299
600	281.045	183.78	0	281.768	230.421	0	282.015	231.62	0	356.121	316.422	0	428.633	394.38	0	428.633	395.327	0	428.633
660	281.265	195.213	0	281.988	244.685	0	282.235	245.969	0	356.399	335.965	0	428.968	418.045	0	428.968	418.554	0	428.968
720	281.484	206.534	0	282.208	258.79	0	282.456	260.161	0	356.677	355.279	0	429.303	441.254	0	429.303	441.201	0	429.303

Pollutant Name: Carbon Dioxide Emissions **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	20.332685	1036.434	0	22.15763	268.7782	0	23.28583	589.0155	0	28.9848	435.9836	0	0	76.01518	0	0	17.0497	0	0
10	34.368025	1868.028	0	37.45253	486.7598	0	39.35972	1065.956	0	48.99231	791.3268	0	0	142.0613	0	0	32.59822	0	0
20	39.656353	2440.915	0	43.21563	639.8995	0	45.4162	1400.055	0	56.53107	1043.102	0	0	193.8941	0	0	45.64486	0	0
30	48.098292	3331.234	0	52.41504	875.9476	0	55.08419	1915.631	0	68.56526	1429.847	0	0	270.3854	0	0	64.42564	0	0
40	34.509957	2671.562	0	37.60725	703.4956	0	39.52234	1538.158	0	49.19474	1149.113	0	0	219.0318	0	0	52.47572	0	0
50	37.416326	3217.678	0	40.77431	847.7232	0	42.8506	1853.402	0	53.33773	1385.041	0	0	264.7466	0	0	63.55114	0	0
60	29.471337	2799.687	0	32.11632	737.5832	0	33.7518	1612.628	0	42.01189	1205.075	0	0	230.3255	0	0	55.2837	0	0
120	38.936464	6139.287	0	42.43105	1608.727	0	44.59174	3520.018	0	55.50484	2621.895	0	0	486.1936	0	0	114.2588	0	0
180	61.588123	11059.6	0	67.11558	2899.826	0	70.53322	6344.432	0	87.79512	4727.458	0	0	879.7287	0	0	207.2628	0	0
240	51.084386	10280.17	0	55.66923	2696.41	0	58.50417	5899.1	0	72.82193	4396.567	0	0	819.8179	0	0	193.4282	0	0
300	30.453083	6780.886	0	33.18619	1778.896	0	34.87617	3891.694	0	43.41158	2900.768	0	0	541.444	0	0	127.8393	0	0
360	30.476906	7432.159	0	33.21221	1949.832	0	34.90348	4265.624	0	43.4456	3179.571	0	0	593.6324	0	0	140.1861	0	0
420	31.004321	8210.632	0	33.78689	2153.942	0	35.5074	4712.172	0	44.19735	3512.312	0	0	655.5492	0	0	154.7727	0	0
480	30.786944	8791.199	0	33.55005	2305.935	0	35.25861	5044.802	0	43.88753	3759.926	0	0	701.2298	0	0	165.4681	0	0
540	30.899719	9456.635	0	33.673	2479.992	0	35.38767	5425.748	0	44.0482	4043.373	0	0	753.2483	0	0	177.6016	0	0
600	30.923816	10090.58	0	33.69931	2645.591	0	35.4153	5788.257	0	44.08261	4312.882	0	0	802.3218	0	0	188.9818	0	0
660	30.948023	10718.31	0	33.72563	2809.364	0	35.44292	6146.843	0	44.11702	4579.256	0	0	850.4656	0	0	200.0852	0	0
720	30.986266	11345.08	0	33.76735	2972.668	0	35.48688	6504.475	0	44.1716	4844.721	0	0	898.0917	0	0	211.0077	0	0
Total (grams/day):	641.94103	117670.1	0	699.5552	30861.37	0	735.1782	67518.01	0	915.1012	50318.22	0	0	9378.183	0	0	2211.921	0	0
Total (lbs/day):	1.4152377	259.4181	0	1.542255	68.03767	0	1.620791	148.8517	0	2.017453	110.9327	0	0	20.67535	0	0	4.876452	0	0

Grand Total (lbs/day): 653.92407

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
9.546	0	170.667	9.546	0	170.667	9.546	0	170.667	9.546	0	35.404	1.776	0	170.667	9.546	0	170.667	9.546	0
19.039	0	185.2	19.039	0	185.2	19.039	0	185.2	19.039	0	38.42	3.543	0	185.2	19.039	0	185.2	19.039	0
37.866	0	213.408	37.866	0	213.408	37.866	0	213.408	37.866	0	44.271	7.047	0	213.408	37.866	0	213.408	37.866	0
56.482	0	240.47	56.482	0	240.47	56.482	0	240.47	56.482	0	49.885	10.511	0	240.47	56.482	0	240.47	56.482	0
74.887	0	266.386	74.887	0	266.386	74.887	0	266.386	74.887	0	55.261	13.936	0	266.386	74.887	0	266.386	74.887	0
93.081	0	291.155	93.081	0	291.155	93.081	0	291.155	93.081	0	60.4	17.322	0	291.155	93.081	0	291.155	93.081	0
111.063	0	314.778	111.063	0	314.778	111.063	0	314.778	111.063	0	65.3	20.668	0	314.778	111.063	0	314.778	111.063	0
188.899	0	425.955	188.899	0	425.955	188.899	0	425.955	188.899	0	88.364	35.153	0	425.955	188.899	0	425.955	188.899	0
223.17	0	426.29	223.17	0	426.29	223.17	0	426.29	223.17	0	88.433	41.53	0	426.29	223.17	0	426.29	223.17	0
255.419	0	426.625	255.419	0	426.625	255.419	0	426.625	255.419	0	88.503	47.531	0	426.625	255.419	0	426.625	255.418	0
285.644	0	426.96	285.644	0	426.96	285.644	0	426.96	285.644	0	88.572	53.156	0	426.96	285.644	0	426.96	285.644	0
313.847	0	427.294	313.847	0	427.295	313.847	0	427.294	313.847	0	88.642	58.404	0	427.294	313.847	0	427.294	313.847	0
340.027	0	427.629	340.027	0	427.629	340.027	0	427.629	340.027	0	88.711	63.276	0	427.629	340.027	0	427.629	340.027	0
364.184	0	427.964	364.184	0	427.964	364.184	0	427.964	364.184	0	88.78	67.772	0	427.964	364.184	0	427.964	364.184	0
386.319	0	428.299	386.319	0	428.299	386.319	0	428.299	386.319	0	88.85	71.891	0	428.299	386.319	0	428.299	386.319	0
406.43	0	428.633	406.43	0	428.633	406.43	0	428.633	406.43	0	88.919	75.633	0	428.633	406.43	0	428.633	406.43	0
424.519	0	428.968	424.519	0	428.968	424.519	0	428.968	424.519	0	88.989	78.999	0	428.968	424.519	0	428.968	424.519	0
440.585	0	429.303	440.585	0	429.303	440.585	0	429.303	440.585	0	89.058	81.989	0	429.303	440.586	0	429.303	440.586	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
3.770687	0	0	0	0	0	0	0	0	0	0	146.7269	7.722367	0	0	0	0	0	24.52078	0
11.71407	0	0	0	0	0	0	0	0	0	0	248.0157	23.99624	0	0	0	0	0	76.17658	0
23.32936	0	0	0	0	0	0	0	0	0	0	286.1746	47.7932	0	0	0	0	0	151.7108	0
37.45675	0	0	0	0	0	0	0	0	0	0	347.0949	76.73128	0	0	0	0	0	243.5812	0
32.16563	0	0	0	0	0	0	0	0	0	0	249.0363	65.89193	0	0	0	0	0	209.1731	0
39.65969	0	0	0	0	0	0	0	0	0	0	270.0123	81.24464	0	0	0	0	0	257.907	0
34.47597	0	0	0	0	0	0	0	0	0	0	212.676	70.62426	0	0	0	0	0	224.1972	0
57.24987	0	0	0	0	0	0	0	0	0	0	280.982	117.2778	0	0	0	0	0	372.2959	0
106.9004	0	0	0	0	0	0	0	0	0	0	444.4429	218.9847	0	0	0	0	0	695.173	0
101.4023	0	0	0	0	0	0	0	0	0	0	368.647	207.7207	0	0	0	0	0	659.4163	0
67.54935	0	0	0	0	0	0	0	0	0	0	219.7611	138.3747	0	0	0	0	0	439.2734	0
74.21882	0	0	0	0	0	0	0	0	0	0	219.9348	152.0362	0	0	0	0	0	482.645	0
81.73723	0	0	0	0	0	0	0	0	0	0	223.7393	167.438	0	0	0	0	0	531.5372	0
86.86257	0	0	0	0	0	0	0	0	0	0	222.1699	177.9387	0	0	0	0	0	564.8673	0
92.40712	0	0	0	0	0	0	0	0	0	0	222.9847	189.2964	0	0	0	0	0	600.9235	0
97.21765	0	0	0	0	0	0	0	0	0	0	223.1579	199.1495	0	0	0	0	0	632.2064	0
101.5445	0	0	0	0	0	0	0	0	0	0	223.3336	208.0125	0	0	0	0	0	660.344	0
105.4356	0	0	0	0	0	0	0	0	0	0	223.6088	215.9841	0	0	0	0	0	685.6495	0
1155.098	0	0	0	0	0	0	0	0	0	0	4632.499	2366.217	0	0	0	0	0	7511.598	0
2.546554	0	0	0	0	0	0	0	0	0	0	10.21291	5.216616	0	0	0	0	0	16.56024	0

Temperature: 60F

Pollutant Name: Methane Relative Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.314	0.002	0	0.326	0.002	0	0.312	0.003	0	0.388	0.003	0	0.475	0.008	0	0.475	0.009	0	0.713
10	0.311	0.004	0	0.323	0.005	0	0.309	0.005	0	0.385	0.007	0	0.471	0.017	0	0.471	0.017	0	0.707
20	0.314	0.007	0	0.326	0.009	0	0.312	0.01	0	0.388	0.013	0	0.476	0.032	0	0.476	0.033	0	0.714
30	0.328	0.01	0	0.341	0.013	0	0.326	0.015	0	0.406	0.019	0	0.497	0.046	0	0.497	0.047	0	0.746
40	0.353	0.013	0	0.367	0.016	0	0.351	0.019	0	0.437	0.024	0	0.535	0.058	0	0.535	0.06	0	0.803
50	0.39	0.016	0	0.405	0.019	0	0.387	0.023	0	0.482	0.029	0	0.591	0.07	0	0.591	0.071	0	0.886
60	0.405	0.018	0	0.421	0.022	0	0.403	0.026	0	0.501	0.033	0	0.614	0.079	0	0.614	0.081	0	0.921
120	0.326	0.024	0	0.338	0.027	0	0.324	0.034	0	0.403	0.045	0	0.493	0.097	0	0.493	0.098	0	0.74
180	0.354	0.019	0	0.368	0.022	0	0.352	0.027	0	0.438	0.036	0	0.537	0.092	0	0.537	0.094	0	0.806
240	0.383	0.02	0	0.398	0.024	0	0.381	0.029	0	0.474	0.038	0	0.581	0.097	0	0.581	0.099	0	0.871
300	0.412	0.021	0	0.428	0.025	0	0.41	0.03	0	0.51	0.04	0	0.624	0.103	0	0.624	0.105	0	0.937
360	0.441	0.022	0	0.458	0.026	0	0.438	0.032	0	0.545	0.042	0	0.668	0.108	0	0.668	0.11	0	1.002
420	0.47	0.023	0	0.488	0.027	0	0.467	0.033	0	0.581	0.044	0	0.712	0.113	0	0.712	0.116	0	1.068
480	0.499	0.024	0	0.518	0.029	0	0.496	0.035	0	0.617	0.046	0	0.756	0.118	0	0.756	0.121	0	1.133
540	0.527	0.025	0	0.548	0.03	0	0.524	0.036	0	0.652	0.048	0	0.799	0.123	0	0.799	0.126	0	1.199
600	0.556	0.026	0	0.578	0.031	0	0.553	0.038	0	0.688	0.05	0	0.843	0.128	0	0.843	0.131	0	1.264
660	0.585	0.027	0	0.608	0.032	0	0.581	0.039	0	0.724	0.052	0	0.887	0.133	0	0.887	0.136	0	1.33
720	0.614	0.028	0	0.638	0.033	0	0.61	0.041	0	0.759	0.054	0	0.93	0.138	0	0.93	0.14	0	1.395

Pollutant Name: Methane Emissions **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.0570541	0.181337	0	0.064385	0.03792	0	0.064701	0.123803	0	0.079312	0.067525	0	0	0.026876	0	0	0.007105	0	0
10	0.0880201	0.564914	0	0.099366	0.147664	0	0.099812	0.3214	0	0.122584	0.245416	0	0	0.088958	0	0	0.020903	0	0
20	0.0889899	0.989942	0	0.100425	0.266157	0	0.100918	0.643674	0	0.123707	0.456392	0	0	0.167679	0	0	0.040632	0	0
30	0.100058	1.522223	0	0.113069	0.413813	0	0.1135	1.039259	0	0.139334	0.717985	0	0	0.259449	0	0	0.062291	0	0
40	0.0697458	1.281703	0	0.078817	0.329873	0	0.07915	0.852612	0	0.097135	0.587406	0	0	0.211879	0	0	0.051504	0	0
50	0.0764382	1.564828	0	0.086281	0.388582	0	0.086568	1.023832	0	0.106279	0.704089	0	0	0.253665	0	0	0.060458	0	0
60	0.0578309	1.282561	0	0.065343	0.327802	0	0.065677	0.843204	0	0.080481	0.583717	0	0	0.208568	0	0	0.05025	0	0
120	0.0454486	1.669608	0	0.051219	0.39278	0	0.051552	1.076555	0	0.063206	0.777139	0	0	0.250029	0	0	0.059357	0	0
180	0.0780018	2.089081	0	0.088138	0.505833	0	0.088521	1.3512	0	0.108574	0.982624	0	0	0.374805	0	0	0.089986	0	0
240	0.0699441	1.822564	0	0.079004	0.457348	0	0.079411	1.202831	0	0.097383	0.859646	0	0	0.327522	0	0	0.078548	0	0
300	0.0448179	1.139918	0	0.050607	0.283777	0	0.050903	0.74119	0	0.062413	0.539011	0	0	0.207161	0	0	0.049624	0	0
360	0.0479725	1.1942	0	0.054154	0.295128	0	0.054379	0.790603	0	0.066696	0.565961	0	0	0.217217	0	0	0.051987	0	0
420	0.0519711	1.269091	0	0.058654	0.311538	0	0.058936	0.828768	0	0.072276	0.602699	0	0	0.231025	0	0	0.055727	0	0
480	0.0547482	1.313958	0	0.061775	0.33201	0	0.062109	0.872152	0	0.076157	0.625189	0	0	0.239369	0	0	0.057677	0	0
540	0.0579866	1.372644	0	0.065541	0.344447	0	0.065804	0.899651	0	0.080708	0.654248	0	0	0.25023	0	0	0.060233	0	0
600	0.0611775	1.427549	0	0.069129	0.355928	0	0.069445	0.949632	0	0.085164	0.681508	0	0	0.260402	0	0	0.062623	0	0
660	0.0643685	1.482455	0	0.072716	0.36741	0	0.072962	0.974622	0	0.089621	0.708768	0	0	0.270574	0	0	0.065013	0	0
720	0.0675902	1.538063	0	0.076339	0.379064	0	0.076638	1.025071	0	0.093996	0.736365	0	0	0.280874	0	0	0.066956	0	0
Total (grams/day):	1.182164	23.70664	0	1.334961	5.937075	0	1.340986	15.56006	0	1.645028	11.09569	0	0	4.126282	0	0	0.990874	0	0
Total (lbs/day):	0.0026062	0.052264	0	0.002943	0.013089	0	0.002956	0.034304	0	0.003627	0.024462	0	0	0.009097	0	0	0.002185	0	0

Grand Total (lbs/day): 0.2061458

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.019	0	1.448	0.082	0	0.713	0.032	0	0.907	0.039	0	0.14	0.018	0	0.713	0.037	0	0.713	0.016	0
0.038	0	1.436	0.16	0	0.707	0.063	0	0.899	0.075	0	0.139	0.035	0	0.707	0.071	0	0.707	0.032	0
0.071	0	1.45	0.303	0	0.714	0.119	0	0.908	0.142	0	0.14	0.067	0	0.714	0.135	0	0.714	0.06	0
0.101	0	1.515	0.429	0	0.746	0.169	0	0.949	0.202	0	0.147	0.095	0	0.746	0.192	0	0.746	0.085	0
0.127	0	1.631	0.539	0	0.803	0.212	0	1.022	0.254	0	0.158	0.12	0	0.803	0.241	0	0.803	0.107	0
0.148	0	1.799	0.632	0	0.886	0.248	0	1.127	0.297	0	0.174	0.14	0	0.886	0.282	0	0.886	0.125	0
0.166	0	1.871	0.709	0	0.921	0.278	0	1.172	0.333	0	0.181	0.157	0	0.921	0.317	0	0.921	0.141	0
0.151	0	1.503	0.631	0	0.74	0.258	0	0.941	0.314	0	0.146	0.167	0	0.74	0.271	0	0.74	0.115	0
0.16	0	1.636	0.669	0	0.806	0.274	0	1.025	0.333	0	0.158	0.144	0	0.806	0.287	0	0.806	0.122	0
0.169	0	1.769	0.707	0	0.871	0.289	0	1.108	0.351	0	0.171	0.152	0	0.871	0.303	0	0.871	0.129	0
0.178	0	1.902	0.743	0	0.937	0.304	0	1.192	0.369	0	0.184	0.159	0	0.937	0.319	0	0.937	0.135	0
0.186	0	2.035	0.778	0	1.002	0.318	0	1.275	0.387	0	0.197	0.167	0	1.002	0.334	0	1.002	0.142	0
0.194	0	2.169	0.811	0	1.068	0.332	0	1.358	0.403	0	0.21	0.174	0	1.068	0.348	0	1.068	0.148	0
0.202	0	2.302	0.844	0	1.133	0.345	0	1.442	0.419	0	0.223	0.181	0	1.133	0.362	0	1.133	0.154	0
0.209	0	2.435	0.875	0	1.199	0.358	0	1.525	0.435	0	0.236	0.188	0	1.199	0.376	0	1.199	0.159	0
0.217	0	2.568	0.905	0	1.264	0.37	0	1.608	0.45	0	0.249	0.194	0	1.264	0.388	0	1.264	0.165	0
0.223	0	2.701	0.934	0	1.33	0.382	0	1.692	0.464	0	0.261	0.2	0	1.33	0.401	0	1.33	0.17	0
0.23	0	2.834	0.961	0	1.395	0.393	0	1.775	0.478	0	0.274	0.206	0	1.395	0.413	0	1.395	0.175	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.007505	0	0	0	0	0	0	0	0	0	0	0.58021	0.078267	0	0	0	0	0	0.041099	0
0.02338	0	0	0	0	0	0	0	0	0	0	0.897298	0.23705	0	0	0	0	0	0.128035	0
0.043743	0	0	0	0	0	0	0	0	0	0	0.904982	0.454398	0	0	0	0	0	0.240391	0
0.066979	0	0	0	0	0	0	0	0	0	0	1.022812	0.693509	0	0	0	0	0	0.366566	0
0.054549	0	0	0	0	0	0	0	0	0	0	0.712035	0.567382	0	0	0	0	0	0.298871	0
0.063059	0	0	0	0	0	0	0	0	0	0	0.77785	0.656636	0	0	0	0	0	0.346347	0
0.051529	0	0	0	0	0	0	0	0	0	0	0.5895	0.536482	0	0	0	0	0	0.284629	0
0.045764	0	0	0	0	0	0	0	0	0	0	0.464254	0.557147	0	0	0	0	0	0.22665	0
0.076641	0	0	0	0	0	0	0	0	0	0	0.79407	0.759301	0	0	0	0	0	0.380029	0
0.067094	0	0	0	0	0	0	0	0	0	0	0.712277	0.664273	0	0	0	0	0	0.333041	0
0.042094	0	0	0	0	0	0	0	0	0	0	0.456533	0.413906	0	0	0	0	0	0.207608	0
0.043985	0	0	0	0	0	0	0	0	0	0	0.488788	0.434731	0	0	0	0	0	0.218373	0
0.046635	0	0	0	0	0	0	0	0	0	0	0.529644	0.460431	0	0	0	0	0	0.231357	0
0.04818	0	0	0	0	0	0	0	0	0	0	0.558052	0.475224	0	0	0	0	0	0.238862	0
0.049993	0	0	0	0	0	0	0	0	0	0	0.592284	0.495023	0	0	0	0	0	0.247326	0
0.051906	0	0	0	0	0	0	0	0	0	0	0.624909	0.510822	0	0	0	0	0	0.256659	0
0.053341	0	0	0	0	0	0	0	0	0	0	0.655025	0.526621	0	0	0	0	0	0.264437	0
0.055041	0	0	0	0	0	0	0	0	0	0	0.687965	0.542667	0	0	0	0	0	0.272339	0
0.891419	0	0	0	0	0	0	0	0	0	0	12.04849	9.06387	0	0	0	0	0	4.582619	0
0.001965	0	0	0	0	0	0	0	0	0	0	0.026562	0.019982	0	0	0	0	0	0.010103	0

Temperature: 60F

Pollutant Name: Oxides of Nitrogen Humidity: ALL **EMISSION FACTOR**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	1.173	0.155	0	1.17	0.186	0	1.158	0.318	0	1.948	0.379	0	0.559	1.455	0	0.559	1.427	0	0.838
10	1.275	0.173	0	1.271	0.207	0	1.259	0.353	0	2.117	0.418	0	0.608	1.627	0	0.608	1.637	0	0.911
20	1.46	0.204	0	1.456	0.245	0	1.442	0.415	0	2.425	0.488	0	0.696	1.933	0	0.696	2.01	0	1.044
30	1.621	0.23	0	1.617	0.276	0	1.601	0.467	0	2.692	0.547	0	0.773	2.188	0	0.773	2.319	0	1.159
40	1.757	0.251	0	1.752	0.302	0	1.735	0.509	0	2.918	0.594	0	0.837	2.392	0	0.837	2.564	0	1.256
50	1.868	0.267	0	1.863	0.321	0	1.845	0.541	0	3.103	0.629	0	0.89	2.546	0	0.89	2.745	0	1.336
60	1.954	0.277	0	1.949	0.333	0	1.93	0.562	0	3.246	0.654	0	0.932	2.648	0	0.932	2.862	0	1.397
120	2	0.295	0	1.995	0.356	0	1.976	0.599	0	3.323	0.699	0	0.953	2.819	0	0.953	3.025	0	1.43
180	1.953	0.306	0	1.948	0.367	0	1.928	0.62	0	3.243	0.723	0	0.931	2.828	0	0.931	3.031	0	1.396
240	1.889	0.304	0	1.885	0.365	0	1.866	0.616	0	3.138	0.718	0	0.901	2.808	0	0.901	3.01	0	1.351
300	1.811	0.3	0	1.806	0.361	0	1.788	0.609	0	3.008	0.71	0	0.863	2.777	0	0.863	2.979	0	1.295
360	1.716	0.296	0	1.712	0.355	0	1.695	0.599	0	2.851	0.699	0	0.818	2.735	0	0.818	2.936	0	1.227
420	1.607	0.29	0	1.603	0.348	0	1.587	0.587	0	2.669	0.685	0	0.766	2.682	0	0.766	2.883	0	1.149
480	1.482	0.283	0	1.478	0.34	0	1.463	0.573	0	2.461	0.667	0	0.706	2.617	0	0.706	2.818	0	1.059
540	1.341	0.274	0	1.338	0.33	0	1.324	0.556	0	2.227	0.647	0	0.639	2.542	0	0.639	2.742	0	0.959
600	1.185	0.265	0	1.182	0.318	0	1.17	0.537	0	1.968	0.624	0	0.565	2.455	0	0.565	2.656	0	0.847
660	1.013	0.254	0	1.011	0.306	0	1.001	0.515	0	1.683	0.598	0	0.483	2.358	0	0.483	2.558	0	0.724
720	0.826	0.242	0	0.824	0.291	0	0.816	0.49	0	1.372	0.569	0	0.394	2.249	0	0.394	2.449	0	0.591

Pollutant Name: Nitrous Oxide **EMISSIONS (GRAMS/DAY)**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	MDV NCAT	MDV CAT	MDV DSL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	MHD NCAT
5	0.0103861	0.684838	0	0.01126	0.171851	0	0.011702	0.639495	0	0.019404	0.415698	0	0	0.238196	0	0	0.054894	0	0
10	0.0175845	1.190602	0	0.019054	0.297902	0	0.019817	1.10573	0	0.032847	0.714134	0	0	0.414881	0	0	0.098088	0	0
20	0.0201633	1.405855	0	0.021857	0.353069	0	0.022729	1.301704	0	0.037677	0.834859	0	0	0.493581	0	0	0.120601	0	0
30	0.0240968	1.706101	0	0.026128	0.428123	0	0.027162	1.576695	0	0.04502	1.007273	0	0	0.601368	0	0	0.14977	0	0
40	0.0169166	1.205914	0	0.018335	0.303412	0	0.019065	1.113049	0	0.031607	0.708455	0	0	0.425814	0	0	0.107252	0	0
50	0.0178411	1.272496	0	0.019341	0.319914	0	0.020111	1.173536	0	0.033341	0.744182	0	0	0.449593	0	0	0.113903	0	0
60	0.0135965	0.961798	0	0.014741	0.241786	0	0.015327	0.888166	0	0.02541	0.563722	0	0	0.340673	0	0	0.086521	0	0
120	0.0135872	1.000055	0	0.014732	0.252368	0	0.015321	0.924235	0	0.025397	0.58825	0	0	0.354089	0	0	0.089284	0	0
180	0.0209702	1.639539	0	0.022735	0.411196	0	0.023627	1.511979	0	0.039174	0.96166	0	0	0.56143	0	0	0.141394	0	0
240	0.0168106	1.349972	0	0.018234	0.338943	0	0.018952	1.245048	0	0.031416	0.791514	0	0	0.462024	0	0	0.116376	0	0
300	0.0096	0.79355	0	0.010406	0.199684	0	0.010817	0.733203	0	0.017938	0.466224	0	0	0.272173	0	0	0.068607	0	0
360	0.0090964	0.782969	0	0.009864	0.196365	0	0.010255	0.721164	0	0.017002	0.459001	0	0	0.268056	0	0	0.067617	0	0
420	0.0086592	0.779761	0	0.009389	0.195671	0	0.00976	0.718382	0	0.016179	0.457232	0	0	0.267201	0	0	0.067492	0	0
480	0.0079235	0.755014	0	0.008589	0.189684	0	0.008927	0.695789	0	0.014802	0.441751	0	0	0.258695	0	0	0.065457	0	0
540	0.0071903	0.733106	0	0.007798	0.184635	0	0.008102	0.677088	0	0.013433	0.429738	0	0	0.252004	0	0	0.063875	0	0
600	0.0063538	0.709026	0	0.006889	0.177921	0	0.00716	0.65395	0	0.011871	0.414461	0	0	0.243379	0	0	0.061871	0	0
660	0.0054316	0.679595	0	0.005892	0.171207	0	0.006126	0.627159	0	0.010152	0.397192	0	0	0.233763	0	0	0.059589	0	0
720	0.0044309	0.647784	0	0.004805	0.162888	0	0.004996	0.596987	0	0.00828	0.378103	0	0	0.223059	0	0	0.057075	0	0
Total (grams/day):	0.2306386	18.29797	0	0.250048	4.596618	0	0.259958	16.90336	0	0.430952	10.77345	0	0	6.35998	0	0	1.589665	0	0
Total (lbs/day):	0.0005085	0.04034	0	0.000551	0.010134	0	0.000573	0.037266	0	0.00095	0.023751	0	0	0.014021	0	0	0.003505	0	0

Grand Total (lbs/day): 0.1509239

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
1.036	0	4.103	4.071	0	0.838	1.957	0	1.112	2.576	0	0.292	0.094	0	0.838	1.625	0	0.838	0.729	0
1.562	0	4.46	6.134	0	0.911	2.948	0	1.208	3.881	0	0.318	0.141	0	0.911	2.448	0	0.911	1.098	0
2.484	0	5.109	9.756	0	1.044	4.689	0	1.384	6.173	0	0.364	0.225	0	1.044	3.894	0	1.044	1.746	0
3.236	0	5.671	12.708	0	1.159	6.108	0	1.537	8.041	0	0.404	0.293	0	1.159	5.072	0	1.159	2.274	0
3.816	0	6.147	14.989	0	1.256	7.205	0	1.666	9.484	0	0.438	0.345	0	1.256	5.982	0	1.256	2.683	0
4.226	0	6.536	16.6	0	1.336	7.979	0	1.771	10.503	0	0.466	0.382	0	1.336	6.625	0	1.336	2.971	0
4.466	0	6.838	17.54	0	1.397	8.431	0	1.853	11.097	0	0.487	0.404	0	1.397	7	0	1.397	3.139	0
4.533	0	6.999	17.804	0	1.43	8.557	0	1.897	11.263	0	0.499	0.406	0	1.43	7.106	0	1.43	3.187	0
4.516	0	6.832	17.739	0	1.396	8.526	0	1.851	11.222	0	0.487	0.408	0	1.396	7.08	0	1.396	3.175	0
4.491	0	6.611	17.639	0	1.351	8.478	0	1.791	11.159	0	0.471	0.406	0	1.351	7.04	0	1.351	3.158	0
4.457	0	6.335	17.504	0	1.295	8.413	0	1.717	11.074	0	0.451	0.403	0	1.295	6.987	0	1.295	3.134	0
4.414	0	6.005	17.335	0	1.227	8.332	0	1.627	10.967	0	0.428	0.399	0	1.227	6.919	0	1.227	3.103	0
4.362	0	5.622	17.132	0	1.149	8.234	0	1.523	10.838	0	0.4	0.394	0	1.149	6.838	0	1.149	3.067	0
4.301	0	5.184	16.894	0	1.059	8.12	0	1.405	10.687	0	0.369	0.389	0	1.059	6.743	0	1.059	3.024	0
4.232	0	4.692	16.621	0	0.959	7.988	0	1.271	10.515	0	0.334	0.383	0	0.959	6.634	0	0.959	2.975	0
4.153	0	4.146	16.314	0	0.847	7.841	0	1.123	10.321	0	0.295	0.376	0	0.847	6.511	0	0.847	2.92	0
4.066	0	3.545	15.972	0	0.724	7.677	0	0.961	10.104	0	0.253	0.368	0	0.724	6.375	0	0.724	2.859	0
3.971	0	2.891	15.596	0	0.591	7.496	0	0.783	9.866	0	0.206	0.359	0	0.591	6.225	0	0.591	2.792	0

MHD CAT	MHD DSL	HHD NCAT	HHD CAT	HHD DSL	OBUS NCAT	OBUS CAT	OBUS DSL	UBUS NCAT	UBUS CAT	UBUS DSL	MCY NCAT	MCY CAT	MCY DSL	SBUS NCAT	SBUS CAT	SBUS DSL	MH NCAT	MH CAT	MH DSL
0.019941	0	0	0	0	0	0	0	0	0	0	0.058971	0.019917	0	0	0	0	0	0.091251	0
0.046832	0	0	0	0	0	0	0	0	0	0	0.100034	0.046536	0	0	0	0	0	0.214081	0
0.074577	0	0	0	0	0	0	0	0	0	0	0.11466	0.074361	0	0	0	0	0	0.340887	0
0.104575	0	0	0	0	0	0	0	0	0	0	0.13698	0.10423	0	0	0	0	0	0.477884	0
0.079872	0	0	0	0	0	0	0	0	0	0	0.096187	0.07949	0	0	0	0	0	0.36519	0
0.087744	0	0	0	0	0	0	0	0	0	0	0.101515	0.087309	0	0	0	0	0	0.401147	0
0.067556	0	0	0	0	0	0	0	0	0	0	0.077292	0.067272	0	0	0	0	0	0.308781	0
0.066947	0	0	0	0	0	0	0	0	0	0	0.077322	0.066005	0	0	0	0	0	0.306083	0
0.105413	0	0	0	0	0	0	0	0	0	0	0.119269	0.104836	0	0	0	0	0	0.481947	0
0.086883	0	0	0	0	0	0	0	0	0	0	0.095603	0.086462	0	0	0	0	0	0.3973	0
0.051361	0	0	0	0	0	0	0	0	0	0	0.054529	0.051122	0	0	0	0	0	0.234859	0
0.050866	0	0	0	0	0	0	0	0	0	0	0.051748	0.050615	0	0	0	0	0	0.232536	0
0.051096	0	0	0	0	0	0	0	0	0	0	0.049161	0.050805	0	0	0	0	0	0.233632	0
0.04999	0	0	0	0	0	0	0	0	0	0	0.044998	0.04977	0	0	0	0	0	0.228563	0
0.049329	0	0	0	0	0	0	0	0	0	0	0.040847	0.049143	0	0	0	0	0	0.225506	0
0.048408	0	0	0	0	0	0	0	0	0	0	0.036078	0.048245	0	0	0	0	0	0.221337	0
0.047394	0	0	0	0	0	0	0	0	0	0	0.030941	0.047219	0	0	0	0	0	0.216713	0
0.046308	0	0	0	0	0	0	0	0	0	0	0.025205	0.046085	0	0	0	0	0	0.211731	0
1.135093	0	0	0	0	0	0	0	0	0	0	1.311341	1.129423	0	0	0	0	0	5.189429	0
0.002502	0	0	0	0	0	0	0	0	0	0	0.002891	0.00249	0	0	0	0	0	0.011441	0

Pollutant Name: Carbon Dioxide Temperature: 60F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4776.899	4776.899
5	1313.985	940.5	357.05	940.537	1317.523	1180.496	346.547	1159.149	1318.476	1188.89	350.624	1188.322	1661.584	1622.257	346.656	1619.634	2513.51	2513.51
10	992.919	710.693	357.05	710.777	995.592	892.047	346.547	878.15	996.312	898.39	350.624	898.038	1255.583	1225.865	346.656	1224.064	1672.267	1672.267
15	778.741	557.393	357.05	557.508	780.837	699.628	346.547	690.7	781.402	704.602	350.624	704.395	984.746	961.439	346.656	960.186	1175.484	1175.484
20	633.91	453.728	357.05	453.866	635.617	569.51	346.547	563.943	636.076	573.56	350.624	573.45	801.603	782.63	346.656	781.747	873	873
25	535.572	383.342	357.05	383.494	537.014	481.163	346.547	477.878	537.403	484.584	350.624	484.541	677.251	661.222	346.656	660.59	685.012	685.012
30	469.639	336.15	357.05	336.311	470.904	421.928	346.547	420.173	471.244	424.928	350.624	424.929	593.876	579.82	346.656	579.358	567.895	567.895
35	427.432	305.939	357.05	306.107	428.582	384.008	346.547	383.232	428.892	386.739	350.624	386.768	540.503	527.71	346.656	527.355	497.421	497.421
40	403.761	288.997	357.05	289.168	404.848	362.742	346.547	362.516	405.141	365.322	350.624	365.367	510.571	498.486	346.656	498.192	460.326	460.326
45	395.857	283.339	357.05	283.511	396.922	355.641	346.547	355.598	397.209	358.17	350.624	358.22	500.575	488.728	346.656	488.454	450.085	450.085
50	402.817	288.321	357.05	288.492	403.901	361.894	346.547	361.689	404.193	364.467	350.624	364.513	509.376	497.32	346.656	497.028	464.953	464.953
55	425.434	304.509	357.05	304.677	426.579	382.214	346.547	381.484	426.888	384.931	350.624	384.962	537.977	525.244	346.656	524.894	507.469	507.469
60	466.351	333.796	357.05	333.958	467.607	418.974	346.547	417.295	467.945	421.953	350.624	421.956	589.719	575.761	346.656	575.306	585.19	585.19
65	530.579	379.768	357.05	379.92	532.007	476.677	346.547	473.507	532.392	480.066	350.624	480.026	670.936	655.057	346.656	654.438	712.968	712.968

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
4098	4631.367	4776.899	4776.9	4098	4463.379	4776.9	4776.901	4098	4205.719	0	0	6617.133	6526.543	4776.9	4776.901	4098	4384.923	0
519.721	2086.113	2513.51	2513.51	523.528	1594.521	2513.51	2513.51	1505	1665.018	2513.51	2513.51	3845.36	3827.127	2513.51	2513.51	1505	1931.226	2513.51
519.721	1425.202	1672.268	1672.267	523.528	1141.77	1672.267	1672.267	1505	1531.54	1672.267	1672.267	3165.446	3145.004	1672.267	1672.267	1505	1575.692	1672.267
519.721	1034.912	1175.485	1175.484	523.528	874.406	1175.485	1175.484	1505	1452.716	1175.484	1175.484	2595.958	2576.511	1175.484	1175.484	1505	1365.737	1175.484
519.721	797.27	873	873	523.528	711.611	873	873	1505	1404.722	873	873	2183.16	2165.223	873	873	1505	1237.898	873
519.721	649.579	685.012	685.012	523.528	610.437	685.012	685.012	1505	1374.894	685.012	685.012	2042.684	2024.097	685.012	685.011	1505	1158.449	685.012
519.721	557.568	567.895	567.895	523.528	547.406	567.895	567.895	1505	1356.311	567.895	567.895	1924.234	1905.665	567.895	567.894	1505	1108.952	567.895
519.721	502.201	497.421	497.421	523.528	509.477	497.421	497.421	1505	1345.129	497.421	497.421	1827.808	1809.595	497.421	497.421	1505	1079.167	497.421
519.721	473.058	460.327	460.326	523.528	489.513	460.326	460.326	1505	1339.244	460.326	460.326	1753.407	1735.704	460.326	460.326	1505	1063.49	460.326
519.721	465.012	450.085	450.085	523.528	484.001	450.085	450.085	1505	1337.619	450.085	450.085	1701.03	1683.905	450.085	450.085	1505	1059.162	450.085
519.721	476.693	464.953	464.953	523.528	492.003	464.953	464.953	1505	1339.978	464.953	464.953	1670.679	1654.172	464.953	464.953	1505	1065.446	464.953
519.721	510.096	507.469	507.469	523.528	514.885	507.469	507.469	1505	1346.724	507.469	507.469	1662.352	1646.541	507.469	507.469	1505	1083.414	507.469
519.721	571.156	585.19	585.19	523.528	556.714	585.19	585.19	1505	1359.056	585.19	585.19	1676.05	1661.115	585.19	585.19	1505	1116.261	585.19
519.721	671.542	712.968	712.968	523.528	625.483	712.968	712.968	1505	1379.33	712.968	712.968	1711.772	1698.098	712.968	712.968	1505	1170.264	712.968

Incremental Winter

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	4776.9	4776.899	4098.001	4153.271	0	0	0	0	44.012	135.533	5820.026	743.399
2513.51	2545.789	2526.19	230.45	279.459	0	258.098	2513.51	2513.51	1505	1587.104	2513.51	2513.51	1505	2406.219	542.215	1155.561	3142.764	1364.398
1672.267	2545.789	2015.396	197.158	230.874	0	216.179	1672.267	1672.267	1505	1518.618	1672.267	1672.267	1505	1654.472	423.46	865.574	2634.886	1052.168
1175.484	2545.789	1713.754	171.303	197.497	0	186.08	1175.484	1175.484	1505	1478.174	1175.484	1175.484	1505	1210.54	342.483	674.324	2209.494	836.551
873	2545.789	1530.089	151.155	174.913	0	164.558	873	873	1505	1453.548	873	873	1505	940.236	286.241	546.141	1901.145	689.537
685.012	2545.789	1415.944	135.454	160.389	0	149.521	685.012	685.011	1505	1438.244	685.012	685.012	1505	772.247	246.811	459.708	1796.214	601.42
567.895	2545.789	1344.832	123.274	152.295	0	139.646	567.895	567.894	1505	1428.709	567.895	567.895	1505	667.59	219.279	402.072	1707.734	540.673
497.421	2545.789	1302.041	113.935	149.792	0	134.164	497.421	497.421	1505	1422.971	497.421	497.421	1505	604.613	200.577	365.349	1635.707	500.284
460.326	2545.789	1279.518	106.944	152.669	0	132.74	460.327	460.326	1505	1419.952	460.326	460.326	1505	571.465	188.823	344.866	1580.131	476.1
450.085	2545.789	1273.299	101.945	161.315	0	135.439	450.085	450.085	1505	1419.118	450.085	450.085	1505	562.313	182.952	338.152	1541.007	465.922
464.953	2545.789	1282.327	98.692	176.796	0	142.755	464.953	464.953	1505	1420.328	464.953	464.953	1505	575.599	182.528	344.421	1518.336	469.052
507.469	2545.789	1308.142	97.031	201.074	0	155.728	507.469	507.469	1505	1423.79	507.469	507.469	1505	613.593	187.674	364.419	1512.116	486.15
585.19	2545.789	1355.333	96.883	237.42	0	176.168	585.19	585.19	1505	1430.117	585.19	585.19	1505	683.045	199.116	400.573	1522.347	519.373
712.968	2545.789	1432.919	98.242	291.148	0	207.071	712.968	712.968	1505	1440.519	712.968	712.968	1505	797.229	218.342	457.498	1549.031	572.824

Pollutant Name: Methane Temperature: 60F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.917	0.957
5	0.92	0.047	0.019	0.048	0.97	0.055	0.009	0.058	0.943	0.067	0.013	0.068	1.151	0.076	0.009	0.078	0.848	0.061
10	0.687	0.036	0.015	0.036	0.723	0.043	0.007	0.045	0.703	0.052	0.011	0.053	0.852	0.06	0.007	0.061	0.594	0.043
15	0.54	0.028	0.012	0.028	0.567	0.034	0.006	0.036	0.552	0.04	0.008	0.041	0.663	0.047	0.005	0.049	0.441	0.031
20	0.446	0.022	0.01	0.022	0.466	0.028	0.005	0.029	0.455	0.032	0.007	0.032	0.542	0.038	0.004	0.039	0.346	0.024
25	0.384	0.018	0.008	0.018	0.401	0.023	0.004	0.024	0.392	0.027	0.006	0.027	0.462	0.032	0.004	0.033	0.284	0.019
30	0.344	0.015	0.007	0.015	0.358	0.019	0.003	0.021	0.35	0.022	0.005	0.023	0.411	0.027	0.003	0.028	0.244	0.016
35	0.319	0.013	0.006	0.013	0.332	0.017	0.003	0.018	0.325	0.02	0.004	0.02	0.379	0.025	0.003	0.025	0.217	0.014
40	0.305	0.012	0.005	0.012	0.317	0.016	0.003	0.017	0.31	0.018	0.004	0.018	0.361	0.023	0.002	0.023	0.199	0.012
45	0.301	0.011	0.005	0.012	0.313	0.015	0.002	0.016	0.306	0.017	0.004	0.018	0.356	0.022	0.002	0.022	0.187	0.011
50	0.305	0.011	0.005	0.011	0.317	0.015	0.002	0.016	0.311	0.017	0.003	0.017	0.362	0.021	0.002	0.022	0.18	0.011
55	0.32	0.011	0.005	0.012	0.332	0.015	0.002	0.016	0.325	0.018	0.003	0.018	0.38	0.022	0.002	0.023	0.176	0.01
60	0.345	0.012	0.004	0.013	0.36	0.016	0.002	0.018	0.352	0.019	0.003	0.019	0.412	0.024	0.002	0.025	0.175	0.01
65	0.386	0.014	0.004	0.014	0.403	0.018	0.002	0.02	0.394	0.021	0.003	0.022	0.465	0.026	0.002	0.027	0.178	0.011

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
0.147	0.783	0.917	0.962	0.147	0.586	0.917	0.961	0.147	0.276	0	0	0.46	0.454	0.917	0.929	0.147	0.478	0
0.017	0.052	0.848	0.055	0.021	0.04	1.217	0.084	0.02	0.031	3.935	0.453	0.302	0.304	1.217	0.189	0.017	0.091	1.517
0.013	0.037	0.594	0.039	0.016	0.029	0.836	0.06	0.015	0.023	2.617	0.333	0.166	0.169	0.836	0.146	0.013	0.071	1.033
0.011	0.027	0.441	0.029	0.013	0.022	0.606	0.046	0.012	0.018	1.823	0.259	0.079	0.082	0.606	0.119	0.011	0.057	0.741
0.009	0.021	0.346	0.022	0.011	0.017	0.464	0.036	0.01	0.015	1.331	0.211	0.043	0.046	0.464	0.101	0.009	0.048	0.56
0.007	0.017	0.284	0.018	0.009	0.014	0.372	0.03	0.009	0.012	1.016	0.179	0.036	0.038	0.372	0.089	0.007	0.042	0.444
0.006	0.014	0.244	0.015	0.008	0.012	0.313	0.026	0.007	0.011	0.812	0.156	0.029	0.031	0.313	0.081	0.006	0.038	0.368
0.005	0.012	0.217	0.013	0.007	0.01	0.273	0.023	0.006	0.009	0.676	0.14	0.025	0.026	0.273	0.074	0.005	0.035	0.318
0.005	0.011	0.199	0.011	0.006	0.009	0.247	0.021	0.006	0.008	0.586	0.128	0.021	0.023	0.247	0.07	0.005	0.033	0.285
0.004	0.01	0.187	0.01	0.006	0.008	0.229	0.02	0.005	0.008	0.527	0.12	0.02	0.021	0.229	0.066	0.004	0.031	0.263
0.004	0.01	0.18	0.01	0.005	0.008	0.218	0.019	0.005	0.007	0.491	0.115	0.019	0.021	0.218	0.064	0.004	0.03	0.249
0.004	0.009	0.176	0.009	0.005	0.008	0.213	0.019	0.005	0.007	0.473	0.112	0.02	0.022	0.213	0.063	0.004	0.029	0.242
0.004	0.009	0.175	0.009	0.005	0.007	0.212	0.019	0.005	0.007	0.47	0.111	0.023	0.024	0.212	0.062	0.004	0.029	0.241
0.004	0.009	0.178	0.01	0.005	0.008	0.216	0.019	0.005	0.007	0.482	0.113	0.027	0.028	0.216	0.063	0.004	0.029	0.246

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	0.917	0.936	0.147	0.211	0	0	0	0	0.008	0.027	0.375	0.064
0.23	0.067	0.166	0.344	0.267	0	0.301	1.217	0.353	0.045	0.081	1.217	0.097	0.011	0.096	0.512	0.059	0.23	0.08
0.161	0.048	0.117	0.295	0.225	0	0.255	0.836	0.255	0.035	0.061	0.836	0.072	0.008	0.071	0.408	0.045	0.128	0.056
0.118	0.036	0.086	0.262	0.198	0	0.226	0.606	0.195	0.028	0.047	0.606	0.056	0.007	0.055	0.343	0.035	0.062	0.04
0.091	0.028	0.067	0.241	0.18	0	0.207	0.464	0.158	0.023	0.038	0.464	0.046	0.005	0.045	0.3	0.028	0.035	0.031
0.072	0.023	0.053	0.228	0.169	0	0.195	0.372	0.133	0.019	0.032	0.372	0.039	0.005	0.038	0.273	0.023	0.029	0.026
0.06	0.019	0.044	0.222	0.163	0	0.189	0.313	0.116	0.017	0.027	0.313	0.034	0.004	0.033	0.257	0.02	0.024	0.022
0.051	0.016	0.038	0.221	0.16	0	0.187	0.273	0.105	0.015	0.024	0.273	0.03	0.003	0.029	0.249	0.018	0.02	0.019
0.046	0.015	0.033	0.225	0.161	0	0.189	0.247	0.096	0.013	0.022	0.247	0.027	0.003	0.026	0.248	0.016	0.017	0.018
0.042	0.014	0.031	0.235	0.165	0	0.196	0.229	0.091	0.012	0.02	0.229	0.025	0.003	0.024	0.255	0.016	0.016	0.017
0.04	0.013	0.029	0.253	0.173	0	0.208	0.218	0.087	0.011	0.019	0.218	0.024	0.003	0.023	0.269	0.015	0.016	0.017
0.039	0.013	0.028	0.28	0.186	0	0.227	0.213	0.085	0.011	0.018	0.213	0.023	0.003	0.023	0.293	0.016	0.016	0.018
0.038	0.013	0.029	0.322	0.207	0	0.257	0.212	0.085	0.01	0.018	0.212	0.023	0.002	0.022	0.33	0.017	0.018	0.019
0.039	0.014	0.029	0.386	0.239	0	0.303	0.216	0.086	0.01	0.018	0.216	0.024	0.002	0.023	0.389	0.019	0.021	0.022

Pollutant Name: Oxides of Nitrogen Temperature: 60F Relative Humidity: 70%

Speed MPH	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT	LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.35	1.431
5	3.232	0.199	2.027	0.203	3.214	0.314	2.079	0.374	3.179	0.454	2.026	0.459	5.323	0.525	2.091	0.54	1.582	0.288
10	3.398	0.172	1.682	0.177	3.379	0.269	1.725	0.322	3.343	0.389	1.681	0.395	5.597	0.451	1.735	0.466	1.663	0.303
15	3.568	0.152	1.446	0.157	3.549	0.236	1.483	0.285	3.511	0.342	1.445	0.347	5.877	0.396	1.491	0.412	1.743	0.317
20	3.742	0.137	1.288	0.142	3.721	0.212	1.321	0.258	3.681	0.306	1.287	0.312	6.163	0.355	1.328	0.372	1.823	0.332
25	3.918	0.126	1.188	0.131	3.897	0.195	1.219	0.24	3.855	0.28	1.188	0.286	6.454	0.326	1.226	0.342	1.903	0.347
30	4.098	0.118	1.136	0.123	4.076	0.183	1.166	0.227	4.032	0.261	1.136	0.268	6.75	0.304	1.172	0.322	1.983	0.361
35	4.28	0.112	1.126	0.117	4.257	0.175	1.155	0.22	4.211	0.249	1.125	0.255	7.05	0.29	1.161	0.308	2.064	0.376
40	4.464	0.109	1.156	0.114	4.44	0.171	1.186	0.218	4.392	0.241	1.155	0.248	7.353	0.282	1.192	0.301	2.144	0.39
45	4.65	0.107	1.229	0.113	4.624	0.17	1.261	0.22	4.575	0.239	1.229	0.246	7.659	0.279	1.268	0.299	2.224	0.405
50	4.837	0.108	1.355	0.114	4.81	0.173	1.39	0.227	4.759	0.241	1.354	0.249	7.967	0.282	1.398	0.303	2.304	0.42
55	5.024	0.11	1.547	0.117	4.997	0.179	1.587	0.239	4.943	0.249	1.547	0.257	8.276	0.291	1.596	0.313	2.384	0.434
60	5.212	0.115	1.831	0.122	5.184	0.189	1.878	0.258	5.128	0.262	1.83	0.271	8.585	0.307	1.889	0.33	2.465	0.449
65	5.4	0.123	2.245	0.13	5.37	0.205	2.303	0.285	5.313	0.282	2.243	0.291	8.894	0.33	2.315	0.355	2.545	0.463

LHD1 DSL	LHD1 ALL	LHD2 NCAT	LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL	OBUS NCAT	OBUS CAT	OBUS DSL	OBUS ALL	UBUS NCAT
75.051	17.212	1.35	1.441	75.051	35.434	1.35	1.44	75.051	63.371	0	0	117.359	115.753	1.35	1.375	75.051	43.913	0
4.251	1.139	1.582	0.287	4.927	2.431	2.374	0.658	6.368	5.463	17.222	5.376	20.66	20.451	2.374	2.352	5.591	4.222	3.147
3.526	0.995	1.663	0.302	4.088	2.051	2.494	0.691	5.283	4.556	18.095	5.649	14.543	14.421	2.494	2.472	4.639	3.723	3.307
3.031	0.9	1.743	0.316	3.514	1.794	2.614	0.724	4.541	3.937	18.968	5.921	10.645	10.581	2.614	2.591	3.988	3.397	3.466
2.7	0.841	1.823	0.331	3.13	1.624	2.734	0.758	4.045	3.525	19.841	6.194	8.965	8.927	2.734	2.71	3.552	3.196	3.626
2.492	0.808	1.903	0.345	2.889	1.521	2.855	0.791	3.733	3.268	20.714	6.466	8.424	8.398	2.855	2.829	3.278	3.088	3.786
2.383	0.796	1.983	0.36	2.762	1.47	2.975	0.824	3.57	3.136	21.587	6.739	7.983	7.967	2.975	2.949	3.134	3.056	3.945
2.361	0.803	2.064	0.374	2.737	1.466	3.095	0.858	3.537	3.114	22.46	7.012	7.641	7.633	3.095	3.068	3.106	3.09	4.105
2.424	0.828	2.144	0.389	2.81	1.508	3.216	0.891	3.631	3.198	23.333	7.284	7.399	7.398	3.216	3.187	3.188	3.188	4.264
2.578	0.873	2.224	0.404	2.989	1.598	3.336	0.924	3.862	3.398	24.206	7.557	7.256	7.261	3.336	3.306	3.391	3.355	4.424
2.841	0.94	2.304	0.418	3.294	1.747	3.456	0.958	4.257	3.735	25.079	7.829	7.213	7.222	3.456	3.426	3.738	3.606	4.583
3.245	1.039	2.384	0.433	3.761	1.971	3.577	0.991	4.861	4.249	25.952	8.102	7.269	7.281	3.577	3.545	4.268	3.962	4.743
3.839	1.177	2.465	0.447	4.451	2.297	3.697	1.024	5.752	5.004	26.825	8.374	7.424	7.438	3.697	3.664	5.05	4.464	4.902
4.707	1.375	2.545	0.462	5.457	2.77	3.817	1.058	7.051	6.103	27.698	8.647	7.679	7.693	3.817	3.783	6.192	5.174	5.062

UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL	MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT	ALL DSL	ALL ALL
0	0	0	0	0	0	0	1.35	1.389	75.051	69.054	0	0	0	0	0.012	0.041	103.729	11.139
2.603	23.486	10.806	1.027	1.242	0	1.149	2.374	2.224	19.068	17.698	2.374	0.671	9.174	1.589	1.67	0.331	16.978	2.121
2.735	17.965	8.718	1.077	1.149	0	1.117	2.494	2.337	15.819	14.724	2.494	0.705	7.611	1.453	1.753	0.29	12.14	1.567
2.867	14.446	7.416	1.127	1.079	0	1.1	2.614	2.45	13.599	12.693	2.614	0.739	6.543	1.371	1.838	0.259	9.046	1.21
2.999	12.212	6.618	1.179	1.029	0	1.094	2.734	2.562	12.113	11.337	2.734	0.773	5.828	1.326	1.925	0.237	7.669	1.043
3.131	10.853	6.164	1.23	0.996	0	1.098	2.855	2.675	11.178	10.489	2.855	0.807	5.378	1.309	2.013	0.22	7.189	0.977
3.263	10.139	5.964	1.283	0.977	0	1.11	2.975	2.788	10.689	10.048	2.975	0.841	5.143	1.315	2.102	0.209	6.819	0.928
3.395	9.958	5.973	1.336	0.972	0	1.131	3.095	2.9	10.591	9.967	3.095	0.875	5.095	1.341	2.192	0.202	6.556	0.894
3.527	10.282	6.181	1.389	0.98	0	1.158	3.216	3.013	10.873	10.235	3.216	0.909	5.231	1.387	2.283	0.198	6.398	0.875
3.659	11.161	6.606	1.442	1	0	1.193	3.336	3.126	11.565	10.881	3.336	0.943	5.564	1.453	2.374	0.197	6.347	0.869
3.791	12.736	7.305	1.496	1.033	0	1.235	3.456	3.239	12.746	11.975	3.456	0.977	6.132	1.545	2.466	0.2	6.411	0.879
3.923	15.278	8.383	1.549	1.081	0	1.285	3.577	3.351	14.556	13.647	3.577	1.011	7.003	1.668	2.558	0.206	6.601	0.906
4.055	19.267	10.031	1.602	1.145	0	1.344	3.697	3.464	17.223	16.106	3.697	1.045	8.286	1.836	2.65	0.216	6.935	0.951
4.187	25.544	12.576	1.654	1.23	0	1.415	3.817	3.577	21.115	19.69	3.817	1.079	10.159	2.066	2.741	0.231	7.446	1.019

Incremental Winter

Vehicle Miles Traveled: 31,510

VEHICLE PERCENTAGES

Vehicle Type	Percent	Non-catalyst	Catalyst	Diesel
Light Auto	46.0%	0.2%	99.8%	0.0%
Light Truck < 3,750 lbs	10.0%	1.0%	96.0%	3.0%
Light Truck 3,751-5,750	21.0%	0.5%	99.5%	0.0%
Medium Truck 5,751-8,500	11.5%	0.9%	99.1%	0.0%
Lite-Heavy 8,501-10,000	2.1%	0.0%	81.0%	19.0%
Lite-Heavy 10,001-14,000	0.7%	0.0%	57.1%	42.9%
Med-Heavy 14,001-33,000	1.0%	0.0%	20.0%	80.0%
Heavy-Heavy 33,001-60,000	1.8%	0.0%	0.0%	100.0%
Line Haul > 60,000 lbs	0.1%	0.0%	0.0%	100.0%
Urban Bus	0.0%	0.0%	0.0%	0.0%
Motorcycle	4.3%	48.8%	51.2%	0.0%
School Bus	0.1%	0.0%	0.0%	100.0%
Motorhome	1.4%	0.0%	92.9%	7.1%

CO2 EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	469.639	336.15	357.05
Light Truck < 3,750 lbs	LDT1	470.904	421.928	346.547
Light Truck 3,751-5,750	LDT2	471.244	424.928	350.624
Medium Truck 5,751-8,500	MDV	593.876	579.82	346.656
Lite-Heavy 8,501-10,000	LHDT1	567.895	567.895	519.721
Lite-Heavy 10,001-14,000	LHDT2	567.895	567.895	523.528
Med-Heavy 14,001-33,000	MHDT	567.895	567.895	1505
Heavy-Heavy 33,001-60,000	HHDT	567.895	567.895	1924.234
Line Haul > 60,000 lbs	LHV	567.895	567.894	1505
Urban Bus	UB	567.895	567.895	2545.789
Motorcycle	MCY	123.274	152.295	0
School Bus	SBUS	567.895	567.894	1505
Motorhome	MH	567.895	567.895	1505

METHANE EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	0.344	0.015	0.007
Light Truck < 3,750 lbs	LDT1	0.358	0.019	0.003
Light Truck 3,751-5,750	LDT2	0.35	0.022	0.005
Medium Truck 5,751-8,500	MDV	0.411	0.027	0.003
Lite-Heavy 8,501-10,000	LHDT1	0.244	0.016	0.006
Lite-Heavy 10,001-14,000	LHDT2	0.244	0.015	0.008
Med-Heavy 14,001-33,000	MHDT	0.313	0.026	0.007
Heavy-Heavy 33,001-60,000	HHDT	0.812	0.156	0.029
Line Haul > 60,000 lbs	LHV	0.313	0.081	0.006
Urban Bus	UB	0.368	0.06	0.019
Motorcycle	MCY	0.222	0.163	0
School Bus	SBUS	0.313	0.116	0.017
Motorhome	MH	0.313	0.034	0.004

NOx EMISSION FACTORS (grams/mile)

Vehicle Type	EMFAC Type	Non-catalyst	Catalyst	Diesel
Light Auto	LDA	4.098	0.118	1.136
Light Truck < 3,750 lbs	LDT1	4.076	0.183	1.166
Light Truck 3,751-5,750	LDT2	4.032	0.261	1.136
Medium Truck 5,751-8,500	MDV	6.75	0.304	1.172
Lite-Heavy 8,501-10,000	LHDT1	1.983	0.361	2.383
Lite-Heavy 10,001-14,000	LHDT2	1.983	0.36	2.762
Med-Heavy 14,001-33,000	MHDT	2.975	0.824	3.57
Heavy-Heavy 33,001-60,000	HHDT	21.587	6.739	7.983
Line Haul > 60,000 lbs	LHV	2.975	2.949	3.134
Urban Bus	UB	3.945	3.263	10.139
Motorcycle	MCY	1.283	0.977	0
School Bus	SBUS	2.975	2.788	10.689
Motorhome	MH	2.975	0.841	5.143

CO2 EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	13,614.61	4,862,667.54	0.00
Light Truck < 3,750 lbs	14,838.35	1,276,329.09	32,759.44
Light Truck 3,751-5,750	15,591.51	2,797,762.30	0.00
Medium Truck 5,751-8,500	19,368.20	2,082,177.63	0.00
Lite-Heavy 8,501-10,000	0.00	304,386.54	343,908.29
Lite-Heavy 10,001-14,000	0.00	71,524.57	49,539.13
Med-Heavy 14,001-33,000	0.00	35,789.13	379,384.49
Heavy-Heavy 33,001-60,000	0.00	0.00	1,091,398.82
Line Haul > 60,000 lbs	0.00	0.00	47,423.06
Urban Bus	0.00	0.00	0.00
Motorcycle	81,510.37	105,651.86	0.00
School Bus	0.00	0.00	47,423.06
Motorhome	0.00	232,736.71	47,138.52
Total (grams)	144,923.03	11,769,025.38	2,038,974.82
Total (pounds)	319.50	25,946.26	4,495.17

Total CO2 Running Emissions (pounds): 30,760.93

METHANE EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	9.97	216.99	0.00
Light Truck < 3,750 lbs	11.28	57.47	0.28
Light Truck 3,751-5,750	11.58	144.85	0.00
Medium Truck 5,751-8,500	13.40	96.96	0.00
Lite-Heavy 8,501-10,000	0.00	8.58	0.75
Lite-Heavy 10,001-14,000	0.00	1.89	0.76
Med-Heavy 14,001-33,000	0.00	1.64	1.76
Heavy-Heavy 33,001-60,000	0.00	0.00	16.45
Line Haul > 60,000 lbs	0.00	0.00	0.19
Urban Bus	0.00	0.00	0.00
Motorcycle	146.79	113.08	0.00
School Bus	0.00	0.00	0.54
Motorhome	0.00	13.93	0.13
Total (grams)	193.03	655.39	20.86
Total (pounds)	0.43	1.44	0.05

Total Methane Running Emissions (pounds): 1.92

N2O EMISSIONS (grams)

Vehicle Type	Non-catalyst	Catalyst	Diesel
Light Auto	5.79	83.18	0.00
Light Truck < 3,750 lbs	6.26	26.98	5.37
Light Truck 3,751-5,750	6.50	83.74	0.00
Medium Truck 5,751-8,500	10.73	53.20	0.00
Lite-Heavy 8,501-10,000	0.00	9.43	14.60
Lite-Heavy 10,001-14,000	0.00	2.21	12.74
Med-Heavy 14,001-33,000	0.00	2.53	43.85
Heavy-Heavy 33,001-60,000	0.00	0.00	220.64
Line Haul > 60,000 lbs	0.00	0.00	4.81
Urban Bus	0.00	0.00	0.00
Motorcycle	41.34	33.03	0.00
School Bus	0.00	0.00	16.41
Motorhome	0.00	16.80	7.85
Total (grams)	70.62	311.09	326.28
Total (pounds)	0.16	0.69	0.72

Total N2O Running Emissions (pounds): 1.56

N_2O/NOx Ratio		
N_2O (mg km^{-1})	NOx (mg km^{-1})	N_2O/NOx Ratio
20	700	0.029
30	650	0.046
12	340	0.035
13	250	0.052
12	260	0.046
13	215	0.060
9	140	0.064
15	160	0.094
0.5	35	0.014
2	35	0.057
23	1300	0.018
22	800	0.028
40	1700	0.024
35	950	0.037
80	1700	0.047
120	1200	0.100
35	1400	0.025
43	1000	0.043
18	600	0.030
20	420	0.048
25	550	0.045
25	500	0.050
12	150	0.080
15	150	0.100
4	110	0.036
5	85	0.059
	Average	0.04873

Source: California Air Resources Board: Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging, 2005

GREENHOUSE GAS EMISSIONS RESULTING FROM ELECTRICITY USE

Residential

Input	2,320	Dwelling Units	15,892,000	Annual Energy Usage (kWh)
	6,850.00	Avg Annual Energy Usage Rate (kWh/DU)[1]		
Output	6,334.14	CO2 Emissions (mtpy)	0.88	CO2 produced per kWh (lbs)[2]
	0.06	N2O Emissions (mtpy)	0.000008	N2O produced per kWh (lbs)[2]
	0.26	CH4 Emissions (mtpy)	0.000036	CH4 produced per kWh (lbs)[2]

Retail

Input	174,000	SF Retail Space	2,357,700	Annual Energy Usage (kWh)
	13.55	Avg Annual Energy Usage Rate (kWh/SF)[1]		
Output	939.72	CO2 Emissions (mtpy)	0.88	CO2 produced per kWh (lbs)[2]
	0.01	N2O Emissions (mtpy)	0.000008	N2O produced per kWh (lbs)[2]
	0.04	CH4 Emissions (mtpy)	0.000036	CH4 produced per kWh (lbs)[2]

[1]Source: SCAQMD CEQA Handbook, 1993
[2]Source: EPA eGRID 2006, WECC California Subregion
mtpy= metric tons per year

GREENHOUSE GAS EMISSIONS RESULTING FROM NATURAL GAS USE

Residential

Input	2,320	Dwelling Units	111,680,160	Annual NG Usage (CF)	
	4,011.50	Avg Monthly NG Rate (CF/DU)[1]	NG Emission Factors		
			CO2:	0.12	lb/CF
			N2O:	2.2E-06	lb/CF
Output	6,078.84	CO2 Emissions (mtpy)	CH4:	2.3E-06	lb/CF
	0.11	N2O Emissions (mtpy)			
	0.12	CH4 Emissions (mtpy)			

Retail

Input	174,000	SF Retail Space	6,055,200	Annual NG Usage (CF)	
	2.90	Avg Monthly NG Rate (CF/SF)[1]	NG Emission Factors		
			CO2:	0.12	lb/CF
			N2O:	2.2E-06	lb/CF
Output	329.59	CO2 Emissions (mtpy)	CH4:	2.3E-06	lb/CF
	0.01	N2O Emissions (mtpy)			
	0.01	CH4 Emissions (mtpy)			

[1]Source: SCAQMD CEQA Handbook, 1993
mtpy= metric tons per year

GREENHOUSE GAS EMISSIONS RESULTING FROM WATER USE

Residential

Input	2,320	Dwelling Units	464,000,000	Annual Water Usage (gal)
	200,000.00	Avg Annual Water Usage Rate (gal/DU)[1]	3,944,000	Resulting Electricity Use (kWh)
			0.0085	Water Embodied Energy (kWh/gal)[3]
Output	1,571.98	CO2 Emissions (mtpy)	0.88	CO2 produced per kWh (lbs)[2]
	0.01	N2O Emissions (mtpy)	0.000008	N2O produced per kWh (lbs)[2]
	0.06	CH4 Emissions (mtpy)	0.000036	CH4 produced per kWh (lbs)[2]

Retail

Input	174,000	Square Feet Retail Space	1,218,000	Annual Water Usage (gal)
	7.00	Avg Annual Water Usage Rate (gal/SF)[1]	10,353	Resulting Electricity Use (kWh)
			0.0085	Water Embodied Energy (kWh/gal)[3]
Output	4.13	CO2 Emissions (mtpy)	0.88	CO2 produced per kWh (lbs)[2]
	0.00	N2O Emissions (mtpy)	0.000008	N2O produced per kWh (lbs)[2]
	0.00	CH4 Emissions (mtpy)	0.000036	CH4 produced per kWh (lbs)[2]

[1]Source: American Water Works Association Commercial and Institutional End Uses of Water

[2]Source: EPA eGRID 2006, WECC California Subregion

[3]Demand Response Research Center: Water Supply Related Electricity Demand in California, 2006

mtpy= metric tons per year

GREENHOUSE GAS EMISSIONS RESULTING FROM ELECTRICITY USE

Residential

Input	286	Dwelling Units	1,959,100	Annual Energy Usage (kWh)
	6,850.00	Avg Annual Energy Usage Rate (kWh/DU)[1]		
Output	780.85	CO2 Emissions (mtpy)	0.88	CO2 produced per kWh (lbs)[2]
	0.01	N2O Emissions (mtpy)	0.000008	N2O produced per kWh (lbs)[2]
	0.03	CH4 Emissions (mtpy)	0.000036	CH4 produced per kWh (lbs)[2]

Retail

Input	76,000	SF Retail Space	1,029,800	Annual Energy Usage (kWh)
	13.55	Avg Annual Energy Usage Rate (kWh/SF)[1]		
Output	410.45	CO2 Emissions (mtpy)	0.88	CO2 produced per kWh (lbs)[2]
	0.00	N2O Emissions (mtpy)	0.000008	N2O produced per kWh (lbs)[2]
	0.02	CH4 Emissions (mtpy)	0.000036	CH4 produced per kWh (lbs)[2]

[1]Source: SCAQMD CEQA Handbook, 1993
[2]Source: EPA eGRID 2006, WECC California Subregion
mtpy= metric tons per year

GREENHOUSE GAS EMISSIONS RESULTING FROM NATURAL GAS USE

Residential

Input	286	Dwelling Units	13,767,468	Annual NG Usage (CF)	
	4,011.50	Avg Monthly NG Rate (CF/DU)[1]	NG Emission Factors		
			CO2:	0.12	lb/CF
			N2O:	2.2E-06	lb/CF
Output	749.37	CO2 Emissions (mtpy)	CH4:	2.3E-06	lb/CF
	0.01	N2O Emissions (mtpy)			
	0.01	CH4 Emissions (mtpy)			

Retail

Input	76,000	SF Retail Space	2,644,800	Annual NG Usage (CF)	
	2.90	Avg Monthly NG Rate (CF/SF)[1]	NG Emission Factors		
			CO2:	0.12	lb/CF
			N2O:	2.2E-06	lb/CF
Output	143.96	CO2 Emissions (mtpy)	CH4:	2.3E-06	lb/CF
	0.00	N2O Emissions (mtpy)			
	0.00	CH4 Emissions (mtpy)			

[1]Source: SCAQMD CEQA Handbook, 1993
mtpy= metric tons per year

GREENHOUSE GAS EMISSIONS RESULTING FROM WATER USE

Residential

Input	286	Dwelling Units	57,200,000	Annual Water Usage (gal)
	200,000.00	Avg Annual Water Usage Rate (gal/DU)[1]	486,200	Resulting Electricity Use (kWh)
			0.0085	Water Embodied Energy (kWh/gal)[3]
Output	193.79	CO2 Emissions (mtpy)	0.88	CO2 produced per kWh (lbs)[2]
	0.00	N2O Emissions (mtpy)	0.000008	N2O produced per kWh (lbs)[2]
	0.01	CH4 Emissions (mtpy)	0.000036	CH4 produced per kWh (lbs)[2]

Retail

Input	76,000	Square Feet Retail Space	532,000	Annual Water Usage (gal)
	7.00	Avg Annual Water Usage Rate (gal/SF)[1]	4,522	Resulting Electricity Use (kWh)
			0.0085	Water Embodied Energy (kWh/gal)[3]
Output	1.80	CO2 Emissions (mtpy)	0.88	CO2 produced per kWh (lbs)[2]
	0.00	N2O Emissions (mtpy)	0.000008	N2O produced per kWh (lbs)[2]
	0.00	CH4 Emissions (mtpy)	0.000036	CH4 produced per kWh (lbs)[2]

[1]Source: American Water Works Association Commercial and Institutional End Uses of Water

[2]Source: EPA eGRID 2006, WECC California Subregion

[3]Demand Response Research Center: Water Supply Related Electricity Demand in California, 2006

mtpy= metric tons per year