

**Appendix B -  
Air Quality Assessment for  
Huntington Beach Downtown Specific Plan  
dated April 13, 2009**

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Air Quality Assessment For:  
**HUNTINGTON BEACH  
DOWNTOWN  
SPECIFIC PLAN  
CITY OF HUNTINGTON BEACH**

Prepared For:  
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April 13, 2009  
Report #08-180

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## 1.0 Existing Air Quality

### 1.1 Project Description

The City of Huntington Beach Downtown Specific Plan (DTSP) project boundary encompasses approximately 336 acres within downtown Huntington Beach. The proposed project includes new zoning designations, increase in allowed floor area ratios (FARs), modified development and design standards, street improvement requirements, and amended design guidelines. No change to the existing Specific Plan boundary is proposed.

The DTSP area extends from the intersection of Goldenwest Street with Pacific Coast Highway and curves along the coastline, including the Huntington Beach Pier, down to Beach Boulevard. The inland boundary of the DTSP area follows the prolongation of Sunrise Drive from Beach Boulevard to Pacific View Avenue where the boundary curves along Huntington Street and Atlanta Avenue. From Atlanta Avenue the boundary flows along Orange Avenue and continues up Lake Street to Palm Avenue where it connects to Main Street and along Pecan Avenue to 6<sup>th</sup> Street. From 6<sup>th</sup> Street and Walnut Avenue to Goldenwest Street and Walnut Avenue, parcels within the first block adjacent to Pacific Coast Highway are included in the DTSP area. All boundary lines follow the centerline of the affected street. The vicinity map is presented in Exhibit 1. The Specific Plan district designations are illustrated in Exhibit 2.

The proposed DTSP amendments update the existing Specific Plan. The DTSP would revise the existing 11 Specific Plan districts by dividing the downtown area into 7 new districts.

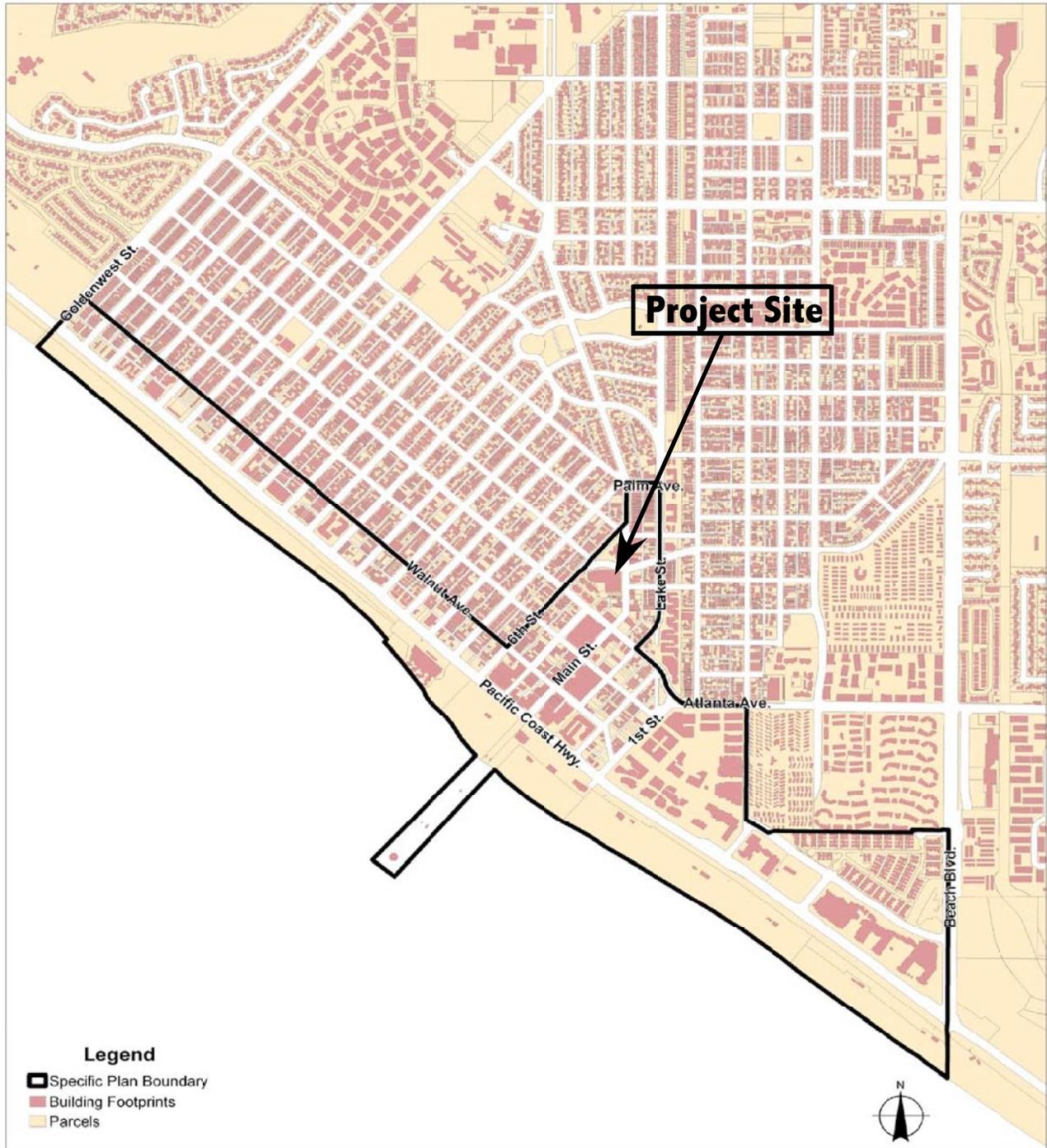
This report analyzes the potential air quality impacts associated with this project. Regional air quality impacts from construction and operation of the proposed project are analyzed, as are potential local air quality impacts.

### 1.2 Local, State, and Federal Air Quality Agencies

The proposed project is located in the South Coast Air Basin (SCAB). The SCAB is comprised of parts of Los Angeles, Riverside and San Bernardino counties and all of Orange County. The basin is bounded on the west by the Pacific Ocean and surrounded on the other sides by mountains. To the north lie the San Gabriel mountains, to the north and east the San Bernardino Mountains, to the southeast the San Jacinto Mountains and to the south the Santa Ana Mountains. The basin forms a low plain and the mountains channel and confine air flow which trap air pollutants.

The primary agencies responsible for regulations to improve air quality in the SCAB are the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). The Southern California Association of Governments (SCAG) is an important partner to the SCAQMD, as it is the designated metropolitan planning authority for the area and produces estimates of anticipated future growth and vehicular travel in the basin which are used for air quality planning. The SCAQMD sets and enforces regulations for non-vehicular sources of air pollution in the basin and works with SCAG to develop and implement Transportation Control Measures (TCM). TCM measures are intended to reduce and improve vehicular travel and associated pollutant emissions.

CARB was established in 1967 by the California Legislature to attain and maintain healthy air quality, conduct research into the causes and solutions to air pollution, and systematically attack

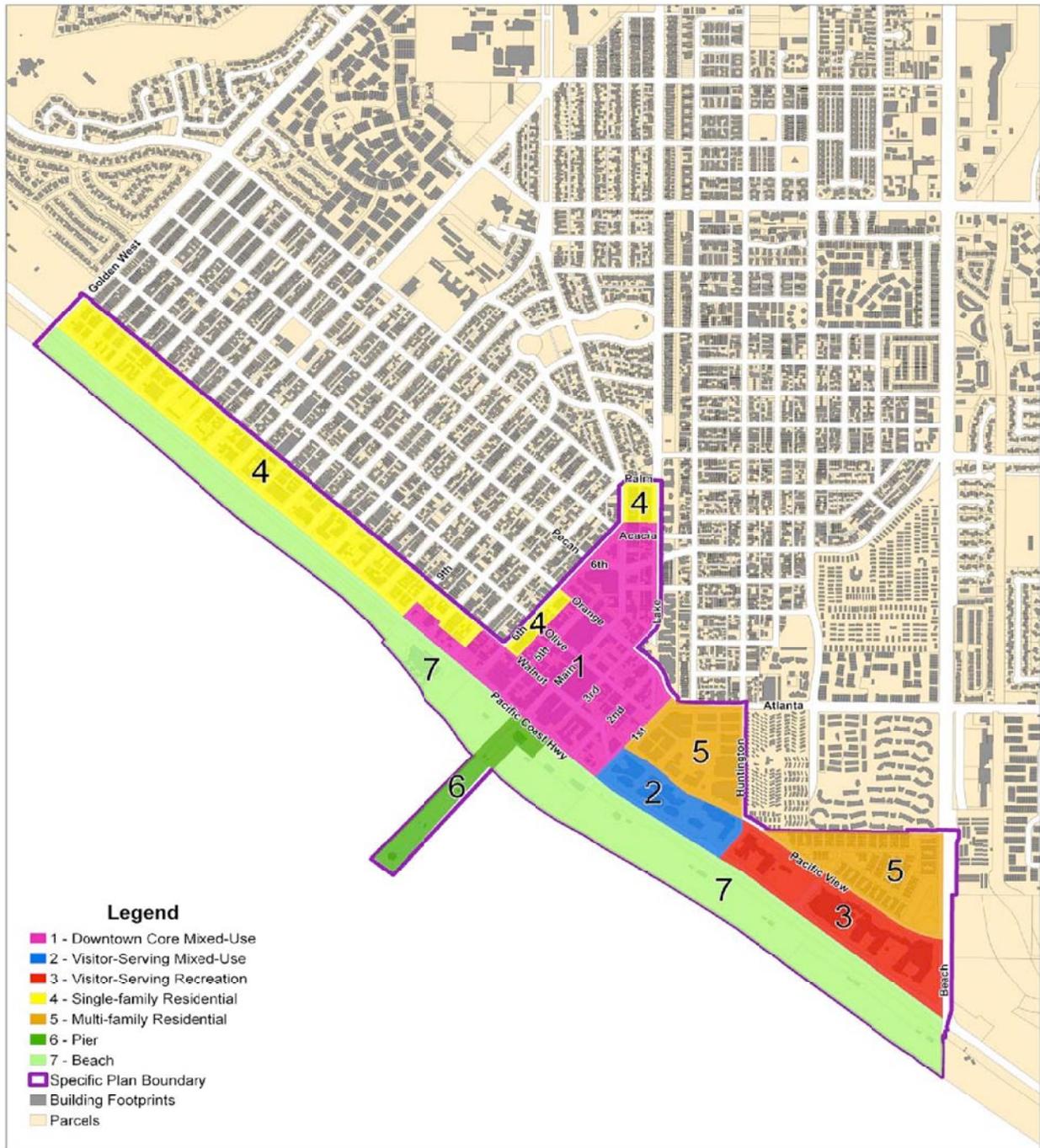


## SPECIFIC PLAN AREA

### HUNTINGTON BEACH DOWNTOWN SPECIFIC PLAN

OCTOBER 8, 2008





- Legend**
- 1 - Downtown Core Mixed-Use
  - 2 - Visitor-Serving Mixed-Use
  - 3 - Visitor-Serving Recreation
  - 4 - Single-family Residential
  - 5 - Multi-family Residential
  - 6 - Pier
  - 7 - Beach
  - Specific Plan Boundary
  - Building Footprints
  - Parcels

**PROPOSED SPECIFIC PLAN DISTRICTS**

**HUNTINGTON BEACH DOWNTOWN SPECIFIC PLAN**



JUNE 13, 2008



the serious problem caused by motor vehicles, which are the major causes of air pollution in the State. CARB sets and enforces emission standards for motor vehicles, fuels, and consumer products. It sets the health based California Ambient Air Quality Standards (CAAQS) and monitors air quality levels throughout the state. The board identifies and sets control measures for toxic air contaminants. The board also performs air quality related research, provides compliance assistance for businesses, and produces education and outreach programs and materials. CARB provides assistance for local air quality districts, such as SCAQMD.

The U.S. Environmental Protection Agency (U.S. EPA) is the primary federal agency for regulating air quality. The EPA implements the provisions of the Federal Clean Air Act (FCAA). This Act establishes national ambient air quality standards (NAAQS) that are applicable nationwide. The EPA designates areas with pollutant concentrations that do not meet the NAAQS as non-attainment areas for each criteria pollutant. States are required by the FCAA to prepare State Implementation Plans (SIP) for designated non-attainment areas. The SIP is required to demonstrate how the areas will attain the NAAQS by the prescribed deadlines and what measures will be required to attain the standards. The EPA also oversees implementation of the prescribed measures. Areas that achieve the NAAQS after a non-attainment designation are redesignated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the NAAQS.

The FCCAA required all air pollution control districts in the state to prepare a plan prior to December 31, 1994 to reduce pollutant concentrations exceeding the CAAQS and ultimately achieve the CAAQS. The districts are required to review and revise these plans every three years. The SCAQMD satisfies this requirement through the publication of an Air Quality Management Plan (AQMP). The AQMP is developed by SCAQMD and SCAG in coordination with local governments and the private sector. The AQMP is incorporated into the SIP by CARB to satisfy the FCAA requirements discussed above. The AQMP is discussed further in Section 1.5.

### **1.3 Criteria Pollutants, Health Effects, and Standards**

Under the Federal Clean Air Act (FCAA), the U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six major pollutants; ozone (O<sub>3</sub>), respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead. These six air pollutants are often referred to as the criteria pollutants. The NAAQS are two tiered: primary, to protect public health, and secondary, to prevent degradation to the environment (i.e., impairment of visibility, damage to vegetation and property).

Under the California Clean Air Act (CCAA), the California Air Resources Board has established California Ambient Air Quality Standards (CAAQS) to protect the health and welfare of Californians. State standards have been established for the six criteria pollutants as well as four additional pollutants; visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Table 1 presents the state and national ambient air quality standards. A brief explanation of each pollutant and their health effects is presented in the following table.

**Table 1  
 Ambient Air Quality Standards**

Pollutant	Averaging Time	State Standards <sup>1,3</sup>	Federal Standards <sup>2</sup>	
			Primary <sup>3,5</sup>	Secondary <sup>3,6</sup>
Ozone (O <sub>3</sub> ) <sup>9</sup>	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	--	--
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.075 ppm (147 µg/m <sup>3</sup> )	Same as Primary
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>8</sup>	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary
	AAM <sup>6</sup>	20 µg/m <sup>3</sup>	--	Same as Primary
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>8</sup>	24 Hour	--	35 µg/m <sup>3</sup>	Same as Primary
	AAM <sup>6</sup>	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	Same as Primary
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	None
	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	None
	8 Hour (Lake Tahoe)*	6 ppm (7 mg/m <sup>3</sup> )	--	--
Nitrogen Dioxide (NO <sub>2</sub> )	AAM <sup>6</sup>	0.030 ppm (56 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary
	1 Hour	0.18 ppm (438 µg/m <sup>3</sup> )	--	--
Sulfur Dioxide (SO <sub>2</sub> )	AAM <sup>6</sup>	--	0.030 ppm (80 µg/m <sup>3</sup> )	--
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (365 µg/m <sup>3</sup> )	--
	3 Hour	--	--	0.5 ppm (1,300 µg/m <sup>3</sup> )
	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	--	--
Lead <sup>7</sup>	30 day Avg.	1.5 µg/m <sup>3</sup>	--	--
	Calendar Quarter	--	1.5 µg/m <sup>3</sup>	Same as Primary
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km -- visibility ≥ 10 miles (0.07 per km -- ≥30 miles for Lake Tahoe)	<b>No Federal Standards</b>	
Sulfates	24 Hour	25 µg/m <sup>3</sup>		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )		
Vinyl Chloride <sup>7</sup>	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )		

- California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded.
- National standards (other than ozone, PM<sub>10</sub>, PM<sub>2.5</sub>, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25° C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- Annual Arithmetic Mean
- The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- On September 21, 2006 EPA revoked the annual 50 µg/m<sup>3</sup> PM<sub>10</sub> standard and lowered the 24-hour PM<sub>2.5</sub> standard from 65 µg/m<sup>3</sup>. Attainment designations are to be issued by November, 2009 with attainment plans due April, 2013.
- On March 12, 2008 EPA lowered the 8-hour Ozone standard to 0.075 ppm from 0.08 ppm. Attainment designations are to be issued by March 2010 with attainment plans due by March, 2013

-- No Standard.

\* Applied only to the Lake Tahoe area.

### **1.3.1 Ozone (O<sub>3</sub>)**

Ozone is a secondary pollutant; it is not directly emitted. Ozone is the result of chemical reactions between volatile organic compounds (VOC) (also referred to as reactive organic gases (ROG)) and nitrogen oxides (NO<sub>x</sub>), which occur only in the presence of bright sunlight. Sunlight and hot weather cause ground-level ozone to form in the air. As a result, it is known as a summertime air pollutant. Ground-level ozone is the primary constituent of smog. Because ozone is formed in the atmosphere, high concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when ozone levels are unhealthy. Numerous scientific studies have linked ground-level ozone exposure to a variety of problems, including:

- lung irritation that can cause inflammation much like a sunburn;
- wheezing, coughing, pain when taking a deep breath, and breathing difficulties during exercise or outdoor activities;
- permanent lung damage to those with repeated exposure to ozone pollution; and
- aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.

Ground-level ozone can have detrimental effects on plants and ecosystems. These effects include:

- interfering with the ability of sensitive plants to produce and store food, making them more susceptible to certain diseases, insects, other pollutants, competition and harsh weather;
- damaging the leaves of trees and other plants, negatively impacting the appearance of urban vegetation, national parks, and recreation areas; and
- reducing crop yields and forest growth, potentially impacting species diversity in ecosystems.

### **1.3.2 Particulate Matter (PM<sub>10</sub> & PM<sub>2.5</sub>)**

Particulate matter includes both aerosols and solid particles of a wide range of size and composition. Of particular concern are those particles smaller than 10 microns in size (PM<sub>10</sub>) and smaller than or equal to 2.5 microns (PM<sub>2.5</sub>). The size of the particulate matter is referenced to the aerodynamic diameter of the particulate. Smaller particulates are of greater concern because they can penetrate deeper into the lungs than large particles.

The principal health effect of airborne particulate matter is on the respiratory system. Short-term exposures to high PM<sub>2.5</sub> levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposures to high PM<sub>2.5</sub> levels are associated with premature mortality and development of chronic respiratory disease. Short-term exposures to high PM<sub>10</sub> levels are associated with hospital admissions for cardiopulmonary diseases,

increased respiratory symptoms and possible premature mortality. The EPA has concluded that available evidence does not suggest an association between long-term exposure to  $PM_{10}$  at current ambient levels and health effects.

$PM_{2.5}$  is directly emitted in combustion exhaust and formed from atmospheric reactions between various gaseous pollutants including nitrogen oxides ( $NO_x$ ) sulfur oxides ( $SO_x$ ) and volatile organic compounds (VOC).  $PM_{10}$  is generally emitted directly as a result of mechanical processes that crush or grind larger particles or the suspension of dusts most typically through construction activities and vehicular travels.  $PM_{2.5}$  can remain suspended in the atmosphere for days and weeks and can be transported long distances.  $PM_{10}$  emissions generally settle out of the atmosphere rapidly and are not readily transported over large distances.

### **1.3.3 Carbon Monoxide (CO)**

Carbon monoxide is a colorless and odorless gas, which in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Carbon monoxide combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High carbon monoxide concentrations can lead to headaches, aggravation of cardiovascular disease, and impairment of central nervous system functions. Carbon monoxide concentrations can vary greatly over comparatively short distances. Relatively high concentrations are typically found near crowded intersections, along heavily used roadways carrying slow-moving traffic, and at or near ground level. Even under the most severe meteorological and traffic conditions, high concentrations of carbon monoxide are limited to locations within a relatively short distance (i.e., up to 600 feet or 185 meters) of heavily traveled roadways. Overall carbon monoxide emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

### **1.3.4 Nitrogen Dioxide ( $NO_2$ )**

Nitrogen gas, normally relatively inert (unreactive), comprises about 80% of the air. At high temperatures (i.e., in the combustion process) and under certain other conditions it can combine with oxygen, forming several different gaseous compounds collectively called nitrogen oxides ( $NO_x$ ). Nitric oxide (NO) and nitrogen dioxide ( $NO_2$ ) are the two most important compounds. Nitric oxide is converted to nitrogen dioxide in the atmosphere. Nitrogen dioxide ( $NO_2$ ) is a red-brown pungent gas. Motor vehicle emissions are the main source of  $NO_x$  in urban areas.

Nitrogen dioxide is toxic to various animals as well as to humans. Its toxicity relates to its ability to form nitric acid with water in the eye, lung, mucus membrane and skin. In animals, long-term exposure to nitrogen oxides increases susceptibility to respiratory infections lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of  $NO_2$  can suffer lung irritation and potentially, lung damage. Epidemiological studies have also shown associations between  $NO_2$  concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

$NO_x$  is a combination of primarily NO and  $NO_2$ . While the NAAQS only addresses  $NO_2$ , NO and the total group of nitrogen oxides is of concern. NO and  $NO_2$  are both precursors in the formation of ozone and secondary particulate matter as discussed in Sections 1.3.1 and 1.3.2.

Because of this and that NO emissions largely convert to NO<sub>2</sub>, NO<sub>x</sub> emissions are typically examined when assessing potential air quality impacts.

### **1.3.5 Sulfur Dioxide (SO<sub>2</sub>)**

Sulfur oxides (SO<sub>x</sub>) constitute a class of compounds of which sulfur dioxide (SO<sub>2</sub>) and sulfur trioxide (SO<sub>3</sub>) are of greatest importance. Ninety-five percent of pollution related SO<sub>x</sub> emissions are in the form of SO<sub>2</sub>. SO<sub>x</sub> emissions are typically examined when assessing potential air quality impacts of SO<sub>2</sub>. Combustion of fossil fuels for generation of electric power is the primary contributor of SO<sub>x</sub> emissions. Industrial processes, such as nonferrous metal smelting, also contribute to SO<sub>x</sub> emissions. SO<sub>x</sub> is also formed during combustion of motor fuels. However, most of the sulfur has been removed from fuels greatly reducing SO<sub>x</sub> emissions from vehicles.

SO<sub>2</sub> combines easily with water vapor, forming aerosols of sulfurous acid (H<sub>2</sub>SO<sub>3</sub>), a colorless, mildly corrosive liquid. This liquid may then combine with oxygen in the air, forming the even more irritating and corrosive sulfuric acid (H<sub>2</sub>SO<sub>4</sub>). Peak levels of SO<sub>2</sub> in the air can cause temporary breathing difficulty for people with asthma who are active outdoors. Longer-term exposures to high levels of SO<sub>2</sub> gas and particles cause respiratory illness and aggravate existing heart disease. SO<sub>2</sub> reacts with other chemicals in the air to form tiny sulfate particles which are measured as PM<sub>2.5</sub>. The health effects of PM<sub>2.5</sub> are discussed in Section 1.3.2.

### **1.3.6 Lead (Pb)**

Lead is a stable compound, which persists and accumulates both in the environment and in animals. In humans, it affects the blood-forming or hematopoietic, the nervous, and the renal systems. In addition, lead has been shown to affect the normal functions of the reproductive, endocrine, hepatic, cardiovascular, immunological, and gastrointestinal systems, although there is significant individual variability in response to lead exposure. Since 1975, lead emissions have been in decline due in part to the introduction of catalyst-equipped vehicles, and decline in production of leaded gasoline. In general, an analysis of lead is limited to projects that emit significant quantities of the pollutant (i.e. lead smelters) and are not applied to transportation projects.

### **1.3.7 Visibility Reducing Particulates**

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. The Statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. A separate standard for visibility-reducing particles that is applicable only in the Lake Tahoe Air Basin is based on reduction in scenic quality.

### **1.3.8 Sulfates(SO<sub>4</sub><sup>2-</sup>)**

Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO<sub>2</sub>) during the combustion process and subsequently

converted to sulfate compounds in the atmosphere. The conversion of SO<sub>2</sub> to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

### **1.3.9 Hydrogen Sulfide (H<sub>2</sub>S)**

Hydrogen sulfide (H<sub>2</sub>S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. It can also be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H<sub>2</sub>S at levels above the standard will result in exposure to a very disagreeable odor. In 1984, an ARB committee concluded that the ambient standard for H<sub>2</sub>S is adequate to protect public health and to significantly reduce odor annoyance.

### **1.3.10 Vinyl Chloride (Chloroethene)**

Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.

## **1.4 South Coast Air Basin Air Quality Attainment Designations**

Based on monitored air pollutant concentrations, the U.S. EPA and CARB designate areas relative to their status in attaining the NAAQS and CAAQS respectively. Table 2 lists the current attainment designations for the SCAB. For the Federal standards, the required attainment date is also shown. The Unclassified designation indicates that the air quality data for the area do not support a designation of attainment or nonattainment.

**Table 2**  
**Designations of Criteria Pollutants for the SCAB**

Pollutant	Federal	State
Ozone (O <sub>3</sub> )	Severe-17 Nonattainment (2021)	Nonattainment
Respirable Particulate Matter (PM <sub>10</sub> )	Serious Nonattainment (2006)	Nonattainment
Fine Particulate Matter (PM <sub>2.5</sub> )	Nonattainment (2015)	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance (2000)	Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment/Maintenance (1995)	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Attainment
Lead	Attainment	Attainment
Visibility Reducing Particles	n/a	Unclassified
Sulfates	n/a	Unclassified
Hydrogen Sulfide	n/a	Attainment
Vinyl Chloride	n/a	Attainment

Table 2 shows that the U.S. EPA has designated SCAB as Severe-17 non-attainment for ozone, serious non-attainment for PM<sub>10</sub>, non-attainment for PM<sub>2.5</sub>, and attainment/maintenance for CO and NO<sub>2</sub>. The basin has been designated by the state as non-attainment for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. For the federal designations, the qualifiers, Severe-17 and Serious, affect the required attainment dates as the federal regulations have different requirements for areas that exceed the standards by greater amounts at the time of attainment/non-attainment designation. The SCAB is designated as in attainment of the Federal SO<sub>2</sub> and lead NAAQS as well as the state CO, NO<sub>2</sub>, SO<sub>2</sub>, lead, hydrogen sulfide, and vinyl chloride CAAQS.

In July 1997, U.S. EPA issued a new ozone NAAQS of 0.08 ppm using an 8-hour averaging time. Implementation of this standard was delayed by several lawsuits. Attainment/non-attainment designations for the new 8-hour ozone standard were issued on April 15, 2004 and became effective on June 15, 2005. The SCAB was designated severe-17 non-attainment, which requires attainment of the Federal Standard by June 15, 2021. As a part of the designation, the EPA announced that the 1-hour ozone standard would be revoked in June of 2005. Thus, the 8-hour ozone standard attainment deadline of 2021 supersedes and replaces the previous 1-hour ozone standard attainment deadline of 2010.

The SCAQMD and CARB are requesting that U.S. EPA change the nonattainment status of the 8-hour ozone standard to extreme, which would extend the attainment date by three years to 2024. This is discussed further in Section 1.5.

On March 12, 2008, U.S. EPA announced that it was lowering the 8-hour average NAAQS for ozone to 0.075 ppm. Attainment/non-attainment designations for the revised standard are to be

issued by March 2009 with attainment plans due by March 2013. Non-attainment areas will be required to meet the standards by deadlines that may vary based on the severity of the problem in the area that will be determined at time of attainment/non-attainment designation.

On April 28, 2005, CARB adopted an 8-hour ozone standard of 0.070 ppm. The California Office of Administrative Law approved the rulemaking and filed it with the Secretary of State on April 17, 2006. The standard became effective on May 17, 2006. California has retained the 1-hour concentration standard of 0.09 ppm. To be redesignated as attainment by the state the basin will need to achieve both the 1-hour and 8-hour ozone standards.

The SCAB was designated as moderate non-attainment of the  $PM_{10}$  standards when the designations were initially made in 1990 with a required attainment date of 1994. In 1993, the basin was redesignated as serious non-attainment with a required attainment date of 2006 because it was apparent that the basin could not meet the  $PM_{10}$  standard by the 1994 deadline. As of 2006, the Basin had met the federal  $PM_{10}$  standards at all monitoring stations except western Riverside where the annual  $PM_{10}$  standard had not been met. However, on September 21, 2006, the U.S. EPA announced that it was revoking the annual  $PM_{10}$  standard as research had indicated that there were no considerable health effects associated with long-term exposure to  $PM_{10}$ . With this change, the basin is technically in attainment of the federal  $PM_{10}$  standards although the redesignation process has not yet begun.

In July 1997, U.S. EPA issued NAAQS for fine particulate matter ( $PM_{2.5}$ ). The  $PM_{2.5}$  standards include an annual standard set at 15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), based on the three-year average of annual mean  $PM_{2.5}$  concentrations and a 24-hour standard of 65  $\mu\text{g}/\text{m}^3$ , based on the three-year average of the 98th percentile of 24-hour concentrations. Implementation of these standards was delayed by several lawsuits. On January 5, 2005, EPA took final action to designate attainment and nonattainment areas under the NAAQS for  $PM_{2.5}$  effective April 5, 2005. The SCAB was designated as non-attainment with an attainment required as soon as possible but no later than 2010. EPA may grant attainment date extensions of up to five years in areas with more severe  $PM_{2.5}$  problems and where emissions control measures are not available or feasible. It is likely that the SCAB will need this additional time to attain the standard.

On September 21, 2006, the U.S. EPA announced that the 24-hour  $PM_{2.5}$  standard was lowered to 35  $\mu\text{g}/\text{m}^3$ . Attainment/non-attainment designations for the revised  $PM_{2.5}$  standard will be made by December of 2009 with an attainment date of April 2015 although an extension of up to five years could be granted by the U.S. EPA.

The Federal attainment deadline for CO was to be December 31, 2000 but at that time the basin still had measured exceedances of the CO NAAQS. The basin was granted an extension to attain the standard and has not had any violations of the federal CO standards since 2002. In March 2005, the South Coast AQMD adopted a CO Redesignation Request and Maintenance Plan. On May 11, 2007, the U.S. EPA announced approval of the Redesignation Request and Maintenance Plan and that, effective June 11, 2007, the SCAB would be re-designated as attainment/maintenance for the federal CO NAAQS. The plan provides for maintenance of the federal CO air quality standard until at least 2015 and commits to revising the Plan in 2013 to ensure maintenance through 2025.

The federal annual NO<sub>2</sub> standard was met for the first time in 1992 and has not been exceeded since. The SCAB was redesignated as attainment for NO<sub>2</sub> in 1998. The basin will remain a maintenance/attainment area until 2018, assuming the NO<sub>2</sub> standard is not exceeded.

Table 2 shows that SCAB is designated as in attainment of the SO<sub>2</sub> and lead NAAQS as well as the state CO, NO<sub>2</sub>, SO<sub>2</sub>, lead, hydrogen sulfide, and vinyl chloride CAAQS. Generally, these pollutants are not considered a concern in the SCAB.

## 1.5 Air Quality Management Plan (AQMP)

As discussed above, the CCAA requires plans to demonstrate attainment of the NAAQS for which an area is designated as nonattainment. Further, the CCAA requires SCAQMD to revise its plan to reduce pollutant concentrations exceeding the CAAQS every three years. In the SCAB, SCAQMD and SCAG, in coordination with local governments and the private sector, develop the Air Quality Management Plan (AQMP) for the air basin to satisfy these requirements. The AQMP is the most important air management document for the basin because it provides the blueprint for meeting state and federal ambient air quality standards.

The 1997 AQMP with the 1999 amendments is the current Federally approved applicable air plan for ozone. The successor 2003 AQMP was adopted locally on August 1, 2003, by the governing board of the SCAQMD. CARB adopted the plan as part of the California State Implementation Plan on October 23, 2003. The PM<sub>10</sub> attainment plan from the 2003 AQMP received final approval from the U.S. EPA on November 14, 2005 with an effective date of December 14, 2005. As of February 14, 2007 the U.S. EPA had not acted on the ozone attainment plan of the 2003 AQMP. On this date, CARB announced that it was rescinding the ozone attainment plan from the 2003 AQMP with the intention to expedite approval of the 2007 AQMP. The 2007 AQMP was adopted by the SCAQMD on June 1, 2007. CARB adopted the plan as a part of the California State Implementation Plan on September 27, 2007. The State Implementation Plan was submitted to the U.S. EPA on November 16, 2007. The U.S. EPA has not taken action on the 2007 AQMP at this time.

The 2007 AQMP was prepared in response to the implementation of the federal PM<sub>2.5</sub> and 8-hour ozone NAAQS. The implementation of the new standards required completion of plan addressing attainment of the 8-hour ozone standard by June of 2007 and completion of a plan addressing the PM<sub>2.5</sub> standard one year later, in April of 2008. SCAQMD determined that it was most prudent to prepare an integrated plan to address both pollutants. The attainment date for the PM<sub>2.5</sub> NAAQS is earlier (i.e., 2015) than the attainment date for the ozone NAAQS (i.e., 2021) and the district felt that delaying a plan for PM<sub>2.5</sub> by a year could jeopardize the basin's ability to attain the standard. Further, development of a plan for ozone would have likely focused on lowering VOC emissions, which would have no effect on PM<sub>2.5</sub> levels. Reductions in NO<sub>x</sub> emissions result in reductions in both ozone and PM<sub>2.5</sub> levels.

The 2007 AQMP demonstrates attainment of the 65 µg/m<sup>3</sup> 24-hour average and 15µg/m<sup>3</sup> annual average PM<sub>2.5</sub> standard by the 2015 deadline. However, it should be noted that in September of 2006, the U.S. EPA lowered the 24-hour PM<sub>2.5</sub> NAAQS to 35 µg/m<sup>3</sup>. An attainment plan for the revised standard will need to be completed by 2013. The deadline for meeting the revised standard will not change (i.e., April 2015) but five year extensions to attain the standard may be granted by the U.S. EPA.

The 2007 AQMP determined that the basin would not be able to achieve the 0.08-ppm 8-hour ozone standard by the 2021 deadline without the use of “black box” measures. “Black box” measures anticipate the development of new technologies or improving existing control technologies that are not well defined at the time the plan is prepared. However, the use of “black box” measures is not allowed for areas with a Severe-17 non-attainment designation. Because of this the SCAQMD and CARB have submitted a request to the U.S. EPA to “bump up” the basin’s classification to Extreme. This will extend the required attainment date to 2024 and allow the use of “black box” measures. The “black box” reductions needed for ozone attainment are estimated to be 190 tons per day (tpd) of NO<sub>x</sub> and 27 tpd. These reductions represent a 17% reduction in 2002 average daily NO<sub>x</sub> emissions and a 3% reduction in 2002 average daily VOC emissions.

It should be noted that on March 12, 2008, the U.S. EPA lowered the 8-hour ozone standard to 0.075 ppm. This effectively lowers the standard 0.009 ppm as 0.084 ppm is considered meeting the 0.08 ppm standard. A plan to attain the revised standard will need to be completed by 2013. Attainment deadlines for the revised standard have not been established and may vary depending on the severity of the exceedances.

Implementation of the 2007 AQMP is based on a series of control measures and strategies that vary by source type (i.e., stationary or mobile) as well as by the pollutant that is being targeted. Short-term and mid-term control measures are defined to achieve the PM<sub>2.5</sub> standard by 2015. These measures are designed to also contribute to reductions in ozone levels. Additional, long-term measures are defined to attain the 8-hour ozone standard by 2024. The measures rely on actions to be taken by several agencies that have statutory authority to implement such measures. Each control measure will be brought for regulatory consideration in a specified time frame. Control measures deemed infeasible will be substituted by other measures to achieve the total emission reduction target for each agency.

The plan focuses on control of sulfur oxides (SO<sub>x</sub>), directly emitted PM<sub>2.5</sub>, and nitrogen oxides (NO<sub>x</sub>) to achieve the PM<sub>2.5</sub> standard. Achieving the 8-hour ozone standard builds upon the PM<sub>2.5</sub> attainment strategy with additional NO<sub>x</sub> and VOC reductions. The control measures in the 2007 AQMP are based on facility modernization, energy efficiency and conservation, good management practices, market incentives/compliance flexibility, area source programs, emission growth management and mobile source programs. In addition, CARB has developed a plan of control strategies for sources controlled by CARB (i.e. on-road and off-road motor vehicles and consumer products). Further, Transportation Control Measures (TCM) defined in SCAG’s Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) are needed to attain the standards.

The 2007 AQMP includes 30 short-term and mid-term stationary and 7 mobile source control measures proposed for implementation by the district that are applicable to sources under their jurisdiction. Nine of these measures were included in the 2003 AQMP and have been updated or revised. Twenty-eight new measures are proposed based on replacement of the District’s long-term reduction measures from the 2003 AQMP with more defined control measures or development of new control measures. Measures include; regulations to reduce VOC emissions from coatings, solvents, petroleum operations, and cutback asphalt; measures to reduce emissions from industrial combustion sources as well as residential and commercial space heaters; a measure to offset potential emission increases due to changes in natural gas

specifications; localized control of PM emission hot spots; regulation of wood burning fireplaces and wood stoves; reductions from under-fired char broilers; reducing urban heat island through lighter colored roofing, and paving materials and tree planting programs; energy efficiency and conservation programs; and emission reduction from new or redevelopment projects through regulations that will establish mitigation options to be implemented in such project. The specific measures are discussed in Chapter 4 and presented in detail in Appendix IV-A of the 2007 AQMP.

The TCMs defined in the RTP and RTIP fall into three categories, High Occupancy Vehicle measures, Transit and System Management Measures and Information-based Transportation Strategies. The High Occupancy Vehicle (HOV) Strategy attempts to reduce the proportion of commute trips made by single occupancy vehicles which constitute 72% of all home work trips according to the 2000 U.S. Census. Specific measures include new HOV lanes on existing and new facilities, HOV to HOV bypasses and High Occupancy Toll (HOT) lanes. The Transit and Systems Management Strategy incentivize the use of transit, alternative transportation modes (e.g., pedestrian and bicycles), and increases in average vehicle occupancy by facilitating vanpools, smart shuttles and similar strategies. Systems management measures include grade separation and traffic signal synchronization projects. The information-based Transportation Strategy relies primarily on the innovative provision of information in a manner that successfully influences the ways in which individuals use the regional transportation system. Providing ride matching to increase ride-sharing and carpool trips and providing near real-time estimates of congestion in an effort to influence persons to defer traveling to a less congested period are examples of the strategy.

In addition to District's measures and SCAG's TCMs, the Final 2007 AQMP includes additional short- and mid-term control measures aimed at reducing emissions from sources that are primarily under state and federal jurisdiction including on-road and off-road mobile sources, and consumer products. Measures committed to be enacted by CARB include (1) improvements to the smog check program, (2) cleaner in-use heavy duty truck emission regulations, (3) increased regulations on goods movement sources including ships, harbor craft, and port trucks, (4) regulations for cleaner in-use off-road equipment including agricultural equipment, (5) various measures to reduce evaporative VOC emissions from fuel storage and dispensing, (6) tightened emission standards and product reformulation for consumer products that emit VOC's, and (7) reductions in emissions from pesticide applications.

Four long-term "black box" control approaches are presented in the 2007 AQMP. These measures include (1) further reductions from on-road sources by retiring or retrofitting older high-emitting vehicles and accelerated penetration of very low and zero emission vehicles, (2) increased inspection and maintenance (I/M) programs for heavy-duty diesel trucks, (3) further reductions from off-road mobile sources through accelerated turn-over of existing equipment, retrofitting existing equipment and new engine emission standards, and (4) further reductions from consumer product VOC emissions.

The 2007 AQMP identifies four contingency measures that would need to be implemented if milestone emission targets are not met or if the standards are not attained by the required date. While implementation of these measures is expected to reduce emissions, there are issues that limit the viability of these measures as AQMP control measures. These issues include the availability of District resources to implement and enforce the measure, cost-effectiveness of the

measure, potential adverse environmental impacts, effectiveness of emission reductions, and availability of methods to quantify emission reductions.

## 1.6 Climate

The climate in and around the project area, as with all of Southern California, is controlled largely by the strength and position of the subtropical high pressure cell over the Pacific Ocean. It maintains moderate temperatures and comfortable humidity, and limits precipitation to a few storms during the winter "wet" season. Temperatures are normally mild, excepting the summer months, which commonly bring substantially higher temperatures. In all portions of the basin, temperatures well above 100 degrees Fahrenheit (F). have been recorded in recent years. The annual average temperature in the basin is approximately 62 degrees F.

Winds in the project area are usually driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes. At night, the wind generally slows and reverses direction traveling towards the sea. Wind direction will be altered by local canyons, with wind tending to flow parallel to the canyons. During the transition period from one wind pattern to the other, the dominant wind direction rotates into the south and causes a minor wind direction maximum from the south. The frequency of calm winds (less than 2 miles per hour) is less than 10 percent. Therefore, there is little stagnation in the project vicinity, especially during busy daytime traffic hours.

Southern California frequently has temperature inversions, which inhibit the dispersion of pollutants. Inversions may be either ground based or elevated. Ground based inversions, sometimes referred to as radiation inversions, are most severe during clear, cold, early winter mornings. Under conditions of a ground-based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur locally to major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Below the elevated inversion, dispersion is not restricted. Mixing heights for elevated inversions are lower in the summer and more persistent. This low summer inversion puts a lid over the South Coast Air Basin (SCAB) and is responsible for the high levels of ozone observed during summer months in the air basin.

## 1.7 Monitored Air Quality

Air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates for the SCAB have been made for existing emissions ("2007 Air Quality Management Plan", June 2007). The data indicate that on-road (e.g.; automobiles, busses and trucks) and off-road (e.g.; trains, ships, and construction equipment) mobile sources are the major source of current emissions in the SCAB. Mobile sources account for approximately 64% of VOC emissions, 92% of NO<sub>x</sub> emissions, 39% of direct PM<sub>2.5</sub> emissions, 59% of SO<sub>x</sub> emissions and 98% of CO emissions. Area sources (e.g., architectural coatings, residential water heaters, and consumer products) account for approximately 30% of VOC emissions and 32% of direct PM<sub>2.5</sub> emissions. Point sources (e.g., chemical manufacturing, petroleum production, and electric utilities) account for approximately 38% of SO<sub>x</sub> emissions. Entrained road dust account for approximately 20% of direct PM<sub>2.5</sub> emissions

The SCAQMD has divided the SCAB into 38 air-monitoring areas with a designated ambient air monitoring station in most areas. The project is in the North Coastal Orange County area. There are no designated monitoring stations for this area. The Costa Mesa monitoring station is the designated station for SRA 18. This station is located on Mesa Verde Drive approximately 4 miles west of the project site. The data collected at the Costa Mesa station are considered representative of the air quality experienced in the vicinity of the project. The air pollutants measured at the Costa Mesa station include ozone, carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and nitrogen dioxide (NO<sub>2</sub>). Particulates are not monitored at the Costa Mesa Station. The nearest station where particulates are monitored is the Anaheim station which is located approximately 12 miles to the northeast of the project site. Pollutants monitored at the Anaheim Station include PM<sub>10</sub> and PM<sub>2.5</sub>. The air quality data monitored from 2005 to 2007 are presented in Table 3. The air quality data monitored were obtained from the CARB air quality data website ([www.arb.ca.gov/adam/](http://www.arb.ca.gov/adam/)).

**Table 3**  
**Air Quality Levels Measured at the Costa Mesa/Anaheim Monitoring Stations**

Pollutant	California Standard	National Standard	Year	% Msrd. <sup>1</sup>	Max. Level	Days State Standard Exceeded <sup>2</sup>	Days National Standard Exceeded <sup>2</sup>
<b>Ozone</b> 1 Hour Average	0.09 ppm	None	2007	92	0.082	0	0
			2006	99	0.074	0	0
			2005	90	0.085	0	0
<b>Ozone</b> 8 Hour Average	0.070 ppm	0.08 ppm <sup>4</sup>	2007	92	0.072	2	0
			2006	99	0.062	0	0
			2005	90	0.072	2	0
<b>CO</b> 1 Hour Average	20 ppm	35 ppm	2007	95	4.5	0	0
			2006	98	3.5	0	0
			2005	96	4.7	0	0
<b>CO</b> 8 Hour Average	9.0 ppm	9 ppm	2007	95	3.1	0	0
			2006	98	3.0	0	0
			2005	96	3.2	0	0
<b>NO<sub>2</sub></b> 1 Hour Average	0.25 ppm	None	2007	98	0.086	0	n/a
			2006	99	0.114	0	n/a
			2005	97	0.089	0	n/a
<b>NO<sub>2</sub></b> AAM <sup>3</sup>	None	0.053 ppm	2007	98	0.020	n/a	No
			2006	99	0.020	n/a	No
			2005	97	0.021	n/a	No
<b>SO<sub>2</sub></b> 24 Hour Average	0.04 ppm	0.14 ppm	2007	94	0.004	0	0
			2006	92	0.005	0	0
			2005	94	0.008	0	0
<b>SO<sub>2</sub></b> AAM <sup>3</sup>	None	0.030 ppm	2007	94	0.001	n/a	No
			2006	92	0.001	n/a	No
			2005	94	0.001	n/a	No

(Table 3 Continued on Next Page)

**Table 3 (continued)**  
**Air Quality Levels Measured at the Costa Mesa/Anaheim Monitoring Stations**

Pollutant	California Standard	National Standard	Year	% Msrd. <sup>1</sup>	Max. Level	Days State Standard Exceeded <sup>2</sup>	Days National Standard Exceeded <sup>2</sup>
<b>Respirable Particulates</b> PM <sub>10</sub> 24 Hour Average	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	2007	93	74	0	0
			2006	75	75	1/--	0
			2005	90	41	0	0
<b>Respirable Particulates</b> PM <sub>10</sub> <sup>4</sup> AAM <sup>3</sup>	20 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	2007	93	23	Yes	No
			2006	75	21	Yes	No
			2005	90	18	Yes	No
<b>Fine Particulates</b> PM <sub>2.5</sub> <sup>4</sup> 24 Hour Average	None	65 µg/m <sup>3</sup>	2007	47	34.3	n/a	0
			2006	84	46.9	n/a	0
			2005	92	35.3	n/a	0
<b>Fine Particulates</b> PM <sub>2.5</sub> AAM <sup>3</sup>	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	2007	47	--	--	--
			2006	84	--	--	--
			2005	92	10.6	0	0

1. Percent of year where high pollutant levels were expected that measurements were made.
  2. For annual averaging times a yes or no response is given if the annual average concentration exceeded the applicable standard. For the PM<sub>10</sub> 24-hour standard, daily monitoring is not performed. The first number shown in Days State Standard Exceeded column is the actual number of days measured that State standard was exceeded. The second number shows the number of days the standard would be expected to be exceeded if measurements were taken every day.
  3. Annual Arithmetic Mean
  4. On September 21, 2006 U.S. EPA announced that it was revoking the annual average PM<sub>10</sub> standard and lowering the 24-hour PM<sub>2.5</sub> standard to 35 µg/m<sup>3</sup>. The previous standards are presented, as the new standards are not fully implemented at this time.
  5. On March 12, U.S. EPA announced that it was revising the 8-hour Ozone standard from 0.08 ppm to 0.075 ppm. The previous standard is presented, as the new standard has not been fully implemented at this time.
- Data Not Reported  
 n/a – no applicable standard  
 Source: CARB Air Quality Data Statistics web site [www.arb.ca.gov/adam/](http://www.arb.ca.gov/adam/) accessed 12/10/08

The Costa Mesa monitoring data presented in Table 3 show that ozone is the air pollutant of primary concern in the project area. The Federal and State 1-hour standard was not exceeded in the last three years. The federal 8-hour standard was exceeded 2 days each year in 2005 and 2007. There does not seem to be a trend towards lower maximum levels or the number of days exceeding the state and federal ozone standards.

Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) is another air pollutant of primary concern in the area. The state 24 hour standard for PM<sub>10</sub> has been exceeded at the Anaheim monitoring station only 1 day between 2005 and 2007, but the federal standard for PM<sub>10</sub> was not exceeded. The annual average PM<sub>10</sub> concentrations have exceeded the state standards for the past three years, while the federal annual PM<sub>10</sub> standard was not exceeded. The federal annual PM<sub>2.5</sub> standard was also not exceeded in the last three years. There appears to be a trend toward fewer days of exceedances,

but not the maximum levels for both  $PM_{10}$  and  $PM_{2.5}$ . Particulate levels in the area are due to natural sources, grading operations and motor vehicles.

Carbon monoxide (CO) is another important pollutant that is due mainly to motor vehicles. Currently, CO levels in the project region are in compliance with the state and federal 1-hour and 8-hour standards. High levels of CO commonly occur near major roadways and freeways. CO may potentially be a continual problem in the future for areas next to freeways and other major roadways.

The monitored data shown in Table 3 show that other than ozone and  $PM_{10}$  exceedances as mentioned above, no State or Federal standards were exceeded for the remaining criteria pollutants.

## 2.0 Potential Air Quality Impacts

Air quality impacts are usually divided into short term and long term. Short-term impacts are usually the result of construction or grading operations. Long-term impacts are associated with the built out condition of the proposed project.

### 2.1 Thresholds of Significance

#### 2.1.1 Regional Air Quality

In their "1993 CEQA Air Quality Handbook", the SCAQMD has established significance thresholds to assess the impact of project related air pollutant emissions. Table 4 presents these significance thresholds. There are separate thresholds for short-term construction and long-term operational emissions. A project with daily emission rates below these thresholds is considered to have a less than significant effect on air quality. It should be noted the thresholds recommended by the SCAQMD are very low and subject to controversy. It is up to the individual lead agencies to determine if the SCAQMD thresholds are appropriate for their projects.

**Table 4**  
**SCAQMD Regional Pollutant Emission Thresholds of Significance**

	Pollutant Emissions (lbs/day)					
	CO	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>x</sub>
<i>Construction</i>	550	75	100	150	55	150
<i>Operation</i>	550	55	55	150	55	150

#### 2.1.2 Local Air Quality

The SCAQMD has developed a methodology to assess the localized impacts of emissions from within a project site (SCAQMD, Draft Localized Significance Threshold Methodology, June 19, 2003). SCAQMD recommends, but does not require, comparing projects to localized significance thresholds (LSTs). The methodology document for the LST analysis states that "This methodology is guidance and is **VOLUNTARY**." [Emphasis shown as in the SCAQMD document.] The LST's were developed to analyze the significance of potential local air quality impacts of projects and provides screening tables for smaller projects of 5 acres or less, in which emissions may be less than the mass daily emission thresholds analyzed above. The SCAQMD also recommends project-specific air quality modeling (which is presented in the following sections) for larger projects.

An LST analysis is not warranted for this type of project since the project (approximately 336 acres) substantially exceeds the size of project that the LST protocol addresses and too little information is known about construction schedules for the site to conduct a worthwhile analysis. However, given the size and location of the project, it is expected that dispersion analysis, if information was available to conduct such an analysis, would confirm that the project will have a significant short-term localized impact for some of the primary pollutants. Therefore, the proposed project will likely have a significant impact on local air quality during construction.

## 2.2 Short-Term Impacts

Temporary impacts will result from project construction activities. Air pollutants will be emitted by construction equipment and fugitive dust will be generated during demolition of the existing improvements as well as during grading and excavation of the site.

### 2.2.1 Construction Emission Calculation Methodology

Emissions during the primary phases of construction were calculated using URBEMIS2007 program (version 9.2.4). URBEMIS is a computer program generated by the California Air Resources Board (CARB) that calculates emissions for construction and operation of development projects. For on-road vehicular emissions, the URBEMIS model utilizes the EMFAC2007 emission rates that have also been developed by CARB.

Fugitive dust emissions associated with construction activities for large development projects are estimated by the U.S. Environmental Protection Agency (USEPA) (according to the 1993 CEQA Handbook, emission factor for disturbed soil is 26.4 pounds of PM<sub>10</sub> per day per acre, or 0.40 tons of PM<sub>10</sub> per month per acre). If water or other soil stabilizers are used to control dust as required by SCAQMD Rule 403, the emissions can be substantially reduced (i.e., by 50+ percent depending on dust control application type and frequency). The PM<sub>10</sub> calculations include a 61% reduction from watering (see Appendices for URBEMIS assumptions and output).

### 2.2.2 Construction Activities

#### Grading

The proposed DTSP area encompasses approximately 336 acres. The maximum development potential of the project includes approximately 213,467 square feet of retail, 92,332 square feet of restaurant, 92,784 square feet of office, 30,000 square feet of cultural facilities, 648 residential units, and 235-room hotel land uses. This maximum buildout does not take into account unique constraints on individual parcels. The buildout will occur over time in response to market demand, and thus it is unknown when complete buildout will occur. The traffic study shows a buildout year of 2030. Therefore, the construction timeframe of the project is assumed to occur between 2010 and 2030. The activities for which emissions have been calculated and the activity levels during each of these activities are described in the following paragraphs. Output files from URBEMIS showing the detailed data used to calculate the emissions are presented in the appendix. Since little specific information is available regarding the equipment that will be used for construction, the URBEMIS defaults have generally been used for this analysis.

Utilizing the URBEMIS v9.2.4 default calculations, PM<sub>10</sub> and PM<sub>2.5</sub> emissions were calculated. It should be noted that the impact due to particulates from grading activities is very localized. Additionally, this material is inert silicates, rather than the complex organic particulate matter released from combustion sources which are more harmful to health. In some cases, grading may be near existing development. Care should be taken to minimize the generation of dust. Common practice, which is usually required by regulation, for minimizing dust generation is watering before, during and after grading. Without watering, PM<sub>10</sub> and PM<sub>2.5</sub> emission generation would be doubled.

*Mass Site Grading* is the grading of the entire project site. This work may occur simultaneously with other construction phases. Equipment used in the URBEMIS default assumption include

(1) excavator, (1) grader, (1) dozer, (3) scrapers, (3) tractors/loaders/backhoes, and (1) water truck. A major component of the grading emissions is the particulate matter generated by grading activities. If water or other soil stabilizers are used to control dust as required by SCAQMD Rule 403, the emissions can be substantially reduced (i.e., by 50+ percent depending on dust control application type and frequency). The particulate matter calculations include a 61% reduction from watering (see Appendices for URBEMIS assumptions and output).

*Building Construction* is the phase of construction when the building are erected. Building construction emissions were calculated for the portion of construction with the greatest amount of activity that will result in the highest emissions. Equipment used in the URBEMIS default assumption include (1) crane, (3) forklifts, (1) generator set, (1) welder, and (3) tractors/loaders/backhoes.

*Asphalt Paving* generates diesel engine exhaust emissions from the paving equipment and asphalt material haul trucks, as well as fugitive ROG emissions from the asphalt itself. Asphalt emissions were estimated utilizing URBEMISv9.2.4 default assumptions. The equipment required during asphalt paving would include: (1) paver, (2) rollers and (2) paving equipment.

*Architectural Coatings* include painting exterior and interior walls as well as coatings applied to windows and window casings. ROGs are emitted from these coatings as well as the solvents used in cleanup of the coatings. The amount of ROGs that are emitted is dependant on the specific coating being used and its VOC content. For this project, only low-VOC paint is assumed to be utilized. Architectural coating emissions were estimated utilizing URBEMISv9.2.4 default assumptions. The data used to calculate painting emissions are included in the appendix.

*Grading/Building Construction/Paving/Architectural Coating* is the grading and construction of the buildings described above with the addition of paving and painting activities that may occur simultaneously. URBEMIS defaults were used to estimate the construction emissions.

### **2.2.3 Construction Emissions**

Table 5 presents the results of the total emissions calculations for the construction activities discussed above. These emissions represent the highest level of emissions during construction, if all construction phases would occur simultaneously. This is a reasonable assumption for this type of project since it is likely that development of different areas will be started at different times, and it is possible to have construction in all of the different phases going on at the same time. Construction emissions were calculated for years 2010 through 2030. Construction emissions are projected to decrease in future years (as projected by EMFAC2007), and therefore, emissions during 2010 are the highest and are presented below as a worst case scenario. The projected emissions are compared to the Significance Thresholds described in Section 2.1.1. A worksheet showing the specific data used to calculate the construction emissions is presented in the appendix.

**Table 5  
 Peak Construction Emissions**

Activity	ROG	Pollutant Emissions (lbs/day)				
		NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<i>Emissions Per Day (Pounds Per Day)</i>						
Site Grading/Construction Equip.	6.0	46.4	26.2	0.0	25.2	7.2
Building/Construction Equip.	15.4	103.7	149.3	0.2	29.0	10.3
Architectural Coating	3.0	0.0	0.1	0.0	0.0	0.0
Asphalt Paving/Construction Equip.	3.1	18.1	10.8	0.0	1.6	1.4
<b>Total Construction Emissions</b>	<b>27.5</b>	<b><u>168.3</u></b>	<b>186.4</b>	<b>0.2</b>	<b>55.8</b>	<b>19.0</b>
<i>SCQAMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>

NOTE: Emissions include mitigation.

The projected construction emissions for NO<sub>x</sub> are above the significance thresholds established by the SCAQMD. In general, the primary source of NO<sub>x</sub> emissions would be from grading and building construction equipment. The construction emissions associated with the DTSP Update are considered to be significant, and therefore, mitigation measures for short-term construction are recommended to the greatest extent possible. Mitigation measures are recommended in Section 3.0.

**2.2.4 Diesel Particulate Matter Emissions During Construction**

In 1998, the California Air Resources Board (ARB) identified particulate matter from diesel-fueled engines (Diesel Particulate Matter or DPM) as a Toxic Air Contaminant (TAC). It is assumed that the majority of the heavy construction equipment utilized during construction would be diesel fueled and emit DPM. Impacts from toxic substances are related to cumulative exposure and are assessed over a 70-year period. Cancer risk is expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance over a 70-year lifetime (California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Guide to Health Risk Assessment.) Grading for a project, when the peak diesel exhaust emissions would occur, is expected to take approximately 6 months with all construction expected to occur intermittently between 2010 and 2030. Because of the relatively short duration of construction compared to a 70-year lifespan, diesel emissions resulting from the construction activities associated with the DTSP Update are not expected to result in a significant impact.

## 2.3 Long Term Impacts

### 2.3.1 Air Quality Impacts Near Intersections Affected by Traffic Generated by The Project

To assess local air quality impacts, the significance thresholds are compared relative to the State Ambient Air Quality Standards. Because the area is in attainment of the CO state standards, exceedances of these standards, 20 ppm for 1-hour carbon monoxide (CO) concentration levels, and 9 ppm for 8-hour CO concentration levels, result in a significant local air quality impact. Since the air basin has reached attainment of the CO air quality standards, CO analysis is no longer required by the SCAQMD.

In the past, local air quality around intersections is considered a potential issue at intersections with a Level of Service (LOS) of D or worse. The air basin is now in attainment for the CO standards and exceedances of the CO standards should not be expected, even from local intersections with LOS worse than D. The City of Huntington Beach and CALTRANS Methodologies consider LOS D to be the upper limit of satisfactory operations. Mitigation is required for any intersections where project traffic causes the LOS to deteriorate from LOS D to LOS E or F. The traffic analysis prepared by Kimley-Horn and Associates concludes that only three intersections in the study area will continue to operate at an LOS D or worse with and without the proposed project for cumulative conditions (2030).

CO modeling was originally performed at four intersections considered to be the worst-case intersections in the South Coast Air Basin as part of the 2003 AQMP to demonstrate attainment of the federal CO standards. This CO modeling is included in the EPA approved 2005 SCAB CO Redesignation Request. The four intersections included, Wilshire at Veteran, Sunset at Highland, La Cienega at Century, and Long Beach at Imperial. The highest peak a.m. traffic volume was 8,062 (occurred at Wilshire and Veteran), while the highest peak p.m. volume was 8,674 (occurred at La Cienega and Century). Since these intersections have the highest peak volumes in the entire SCAB which includes Los Angeles and Orange Counties, they will be used for comparison with the intersections in the project area. Table 4-10 of Appendix V, Section 4 of the 2005 SCAB CO Redesignation Request shows that the modeled 1-hour average concentrations at these four intersections for 2002 conditions are below the 8-hour standard of 9 ppm. The highest modeled 1-hour average concentration of 4.6 ppm took place at the Wilshire and Veteran intersection.

The traffic study prepared for the project indicates that none of the local street intersections in the project area has peak hour traffic volumes that exceed those at the intersections modeled in the AQMP. In 2030, the highest peak p.m. traffic volume of 5,128 is projected to occur at the Pacific Coast Highway and Warner Avenue intersection with LOS "E" with project. This peak volume is lower than the peak volumes at the four intersection modeled in the AQMP. As a result, the project is not projected to result in a significant local air quality impact.

The project does not create a significant impact, and as a result, local air pollutant concentrations would not be expected to approach the ambient air quality concentration standards due to local traffic. An exceedance of the standards would be required for a significant impact to occur. Therefore, the project will not result in a local air quality impact.

### 2.3.2 Project Emissions Calculation Methodology

Air pollutant emissions due to the project were calculated using the URBEMIS2007 program (version 9.4.2). The program was set to calculate emissions for the DTSP development potential identified. Default URBEMIS2007 variables were used for the calculations except the trip generation rate. The project's land uses, daily trip generation, and trip rates were obtained from the traffic study prepared by Kimley-Horn and Associates, Inc., revised December 19, 2008. The proposed DTSP entails a maximum development potential of approximately 213,467 square feet of retail, 92,332 square feet of restaurant, 92,784 square feet of office, 30,000 square feet of cultural facilities, 648 residential units, and 235-room hotel land uses. These data are shown in the appendix. The project's daily trip generation is projected to be 13,397.

URBEMIS2007 calculates maximum daily emissions for the summertime and wintertime periods. The results presented below are from the highest seasonal emissions, which are the winter emissions. Output files from the URBEMIS2007 program are presented in the appendix and provide the emissions for each season independently.

### 2.3.3 Project Operational Emissions

The primary source of regional emissions generated by the proposed project will be from motor vehicles. Other emissions from the project site will be generated from the combustion of natural gas for water and space heating, the use of landscaping equipment, and architectural coatings during maintenance. Table 6 presents the results of the URBEMIS2007 model showing the maximum daily air pollutant emissions projected for existing Specific Plan and the proposed DTSP in 2030. The specific data utilized in calculating the emissions are provided in the appendix.

**Table 6**  
**Net Increase in Emissions**

Source	ROG	NOx	CO	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
<b><i>Proposed DTSP - 2030</i></b>						
Area Source Emissions	39.3	12.1	16.7	0.0	0.1	0.1
Operational (vehicle) Emissions	38.8	38.0	419.7	1.3	217.2	42.1
Total Net Increase in Emissions:	<u>78</u>	50	436	1	<u>217</u>	42
<i>SCQAMD Thresholds</i>	55	55	550	150	150	55

NOTE: Underlined data indicate exceedances.

Table 6 shows that the total project net increase in emissions are above the SCAQMD Thresholds, specifically for ROG and PM<sub>2.5</sub>. Since the project emissions are above the significance thresholds, the project will result in significant regional air quality impacts. Long-term mitigation measures are recommended in Section 3.0.

Table 7 compares the net increase in emissions due to the project to the projected basin wide emissions from the 2007 AQMP. This comparison shows that the project represents a very small fraction of the total regional emissions. The project net increase represents, at most, just above 4 hundredths of a percent of the total regional emissions.

**Table 7**  
**Comparison of Project Emissions with SCAB Emissions**

	Pollutant Emissions (tons/day)					
	CO	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>x</sub>
Project Net Increase in Emissions	0.04	0.03	0.22	0.00	0.11	0.02
2023 South Coast Air Basin*	2,147	95	539	508	318	102
Emissions as Percentage of Basin	0.0018%	0.0263%	0.0405%	0.0001%	0.0342%	0.0207%

\* Source: 2007 AQMP Table 3-5A except PM<sub>10</sub> from 2003 AQMP Tables 3-5A and 3-5B

**2.3.4 Potential Health Issues Associated With Project Air Emissions**

As shown previously in Table 7, this project would add to levels of ROG and PM<sub>10</sub> that are above thresholds set by the SCAQMD to avoid adverse health impacts. As a result, the project's added emissions would contribute to the adverse health effects from exposure to ROG and PM<sub>10</sub>.

ROG and NO<sub>2</sub> are generally considered on a regional basis because these two pollutants are converted into ground level ozone in the presence of sunlight. Ozone can limit the ability to take a deep breath, and may cause coughing, throat irritation, and breathing discomfort. Ozone may also lower resistance to respiratory disease (such as pneumonia), damage lung tissue, and aggravate chronic lung disease (such as asthma or bronchitis). Children and those with pre-existing lung problems are sensitive to the health effects of ozone. Even healthy adults involved in moderate or strenuous outdoor activities can experience the unhealthy effects of ozone.

Particles in the air such as PM<sub>10</sub> and PM<sub>2.5</sub> can cause or aggravate health problems and may be linked with heart and lung diseases. The health effects of exposure to PM<sub>10</sub> range from minor effects, such as nose and throat irritation, to more serious effects such as aggravation of existing respiratory and cardiovascular disease. Fine particulate matter may bypass the body's defense mechanisms and become embedded in the deepest recesses of the lung, and can disrupt cellular processes. NO<sub>2</sub> can irritate the nose throat, and lungs, especially in people with asthma, and lowers resistance to respiratory infection.

The project represents a very small percentage of the total criteria pollutant emissions in the South Coast Air Basin. Therefore, the increased risk of adverse health effects from project construction and operations air emissions would also be relatively small.

**2.4 Compliance with Air Quality Planning**

The following sections deal with the major air planning requirements for this project. Specifically, consistency of the project with the AQMP is addressed. As discussed below, consistency with the AQMP is a requirement of the California Environmental Quality Act (CEQA).

**2.4.1 Consistency with AQMP**

An EIR must discuss any inconsistencies between the proposed project and applicable GPs and regional plans (California Environmental Quality Act (CEQA) guidelines (Section 15125)). Regional plans that apply to the proposed project include the South Coast Air Quality

Management Plan (AQMP). In this regard, this section will discuss any inconsistencies between the proposed project with the AQMP.

The purpose of the consistency discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-maker determines that the project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD's CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the plan if it furthers one or more policies and does not obstruct other policies. The Handbook identifies two key indicators of consistency:

- (1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (except as provided for CO in Section 9.4 for relocating CO hot spots).
- (2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

#### **Criterion 1 - Increase in the Frequency or Severity of Violations?**

Based on the air quality modeling analysis contained in this report, there will not be significant short-term construction and long-term operational impacts due to the project based on the SCAQMD thresholds of significance. Emissions generated during construction will not be in excess of SCAQMD's threshold criteria, and therefore, it is unlikely that short-term construction activities will increase the frequency or severity of existing air quality violations due to required compliance with SCAQMD Rules and Regulations.

The proposed project will increase regional emissions, and will increase regional emissions by an amount greater than the SCAQMD thresholds (Refer to Section 2.3.3). However, the consistency criteria pertains to local air quality impacts, rather than regional emissions, as defined by the SCAQMD. The SCAQMD has identified CO as the best indicator pollutant for determining whether air quality violations would occur, as a CO hot-spot is most directly related to increase in traffic. Nevertheless, the air basin is now in attainment for the CO standards and exceedances of the CO standards are not expected, and local air quality impact modeling is no longer performed (refer to Section 2.3.1). Local air pollutant concentrations would not be expected to exceed the ambient air quality concentration standards due to local traffic, with or without the project. Because the project is not projected to impact the local air quality, the project is found to be consistent with the AQMP for the first criterion.

## **Criterion 2 - Exceed Assumptions in the AQMP?**

Consistency with the AQMP assumptions is determined by performing an analysis of the project with the assumptions in the AQMP. Thus, the emphasis of this criterion is to insure that the analyses conducted for the project are based on the same forecasts as the AQMP. The Regional Comprehensive Plan and Guide (RCP&G) consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA.

Since the SCAG forecasts are not detailed, the test for consistency of this project is not specific. The AQMP assumptions are based upon projections from local general plans. Projects that are consistent with the local general plan are consistent with the AQMP assumptions. Although the proposed DTSP land use designations have not changed significantly from the existing Specific Plan (or existing General Plan), the proposed land uses are more intensive. The City of Huntington Beach Land Use Database Description indicates that the existing Specific Plan generates 49,621 daily trips. The proposed DTSP will add 13,397 daily trips, or about a 21% increase in daily trips over the existing Specific Plan. As such, the change in the project traffic is not accounted for in the existing Specific Plan, and thus the AQMP. The project must be considered inconsistent with the AQMP because of this increase in traffic. Therefore, the second criterion is not met for consistency with the AQMP.

## 3.0 Mitigation Measures

### 3.1 Short-Term Impacts

NO<sub>x</sub> emissions associated with the construction of the project were shown to exceed the threshold of significance. Mitigation is recommended to the greatest extent possible.

#### 3.1.1 Particulate Emission (PM-10) Control

AQ-1: Comply with Rules 402 and 403. For construction associated with the DTSP Update, the applicants shall be required to comply with regional rules, which will assist in reducing short-term air pollutant emissions. Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Two options are presented in Rule 403; monitoring of particulate concentrations or active control. Monitoring involves a sampling network around the project with no additional control measures unless specified concentrations are exceeded. The active control option does not require any monitoring, but requires that a list of measures be implemented starting with the first day of construction.

Rule 403 requires that “No person conducting active operations without utilizing the applicable best available control measures of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.” The measures from the SCAQMD’s Table 1 of Rule 403 are presented in Table 8. The applicable measures presented in Table 1 are required to be implemented by Rule 403.

SCAQMD Rule 403 requires that “Large Projects” implement additional measures. A Large Project is defined as “any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic meters (5,000 cubic yards) for more than three times during the most recent 365 day period. The DTSP area is 336 acres, but individual projects through implementation of the DTSP Update would likely not be over 50 acres even if two or three projects were developing at the same time. However, if combined grading area associated with any of the individual projects within the DTSP Update were over 50 acres at any time, then it would be considered a Large Project under Rule 403. In this case, grading would be required to implement the applicable actions specified in Table 2 of the Rule. Table 2 from Rule 403 is presented below as Table 9.

As a Large Operation, a project will also be required to:

- Submit a fully executed Large Operation Notification (SCAQMD Form 403N) to the District’s Executive Officer within 7 days of qualifying as a large operation;
- Include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;
- Maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such

records available to the Executive Officer upon request.

- Install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities.
- Identify a dust control supervisor that is employed by or contracted with the property owner or developer, is on the site or available on-site within 30 minutes during working hours, has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements, and has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class
- Notify the District's Executive Officer in writing within 30 days after the site no longer qualifies as a large operation

SCAQMD Rule 403 also requires that the construction activities “shall not cause or allow PM<sub>10</sub> levels exceed 50 micrograms per cubic meter when determined by simultaneous sampling, as the difference between upwind and down wind sample.” Large Projects that cannot meet this performance standard are required to implement the applicable actions specified in Table 3 of Rule 403. Table 3 from Rule 403 is presented below as Table 10. Rather than perform monitoring to determine conformance with the performance standard, which will not reduce PM<sub>10</sub> emissions, the project shall implement all applicable measures presented in Table 10 (Rule 403 Table 3) regardless of conformance with the Rule 403 performance standard. This potentially results in a higher reduction of particulate emissions than if these measures were implemented only after being determined to be required by monitoring.

Further, SCAQMD Rule 403 requires that that the project shall not “allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation.” All track-out from an active operation is required to be removed at the conclusion of each workday or evening shift. Any active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk materials must utilize at least one of the measures listed in Table 11 at each vehicle egress from the site to a paved public road.

**Table 8  
 Required Best Available Control Measures (Rule 403 Table 1)**

Source Category		Control Measure	Guidance
<b>Backfilling</b>			
01-1	Stabilize backfill material when not actively handling; and	<ul style="list-style-type: none"> <li>• Mix backfill soil with water prior to moving</li> <li>• Dedicate water truck or high capacity hose to backfilling equipment</li> <li>• Empty loader bucket slowly so that no dust plumes are generated</li> <li>• Minimize drop height from loader bucket</li> </ul>	
01-2	Stabilize backfill material during handling; and		
01-3	Stabilize soil at completion of activity.		
<b>Clearing and Grubbing</b>			
02-1	Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and	<ul style="list-style-type: none"> <li>• Maintain live perennial vegetation where possible</li> <li>• Apply water in sufficient quantity to prevent generation of dust plumes</li> </ul>	
02-2	Stabilize soil during clearing and grubbing activities; and		
02-3	Stabilize soil immediately after clearing and grubbing activities.		
<b>Clearing Forms</b>			
03-1	Use water spray to clear forms; or	<ul style="list-style-type: none"> <li>• Use of high pressure air to clear forms may cause exceedance of Rule requirements</li> </ul>	
03-2	Use sweeping and water spray to clear forms; or		
03-3	Use vacuum system to clear forms.		
<b>Crushing</b>			
04-1	Stabilize surface soils prior to operation of support equipment; and	<ul style="list-style-type: none"> <li>• Follow permit conditions for crushing equipment</li> <li>• Pre-water material prior to loading into crusher</li> <li>• Monitor crusher emissions opacity</li> <li>• Apply water to crushed material to prevent dust plumes</li> </ul>	
04-2	Stabilize material after crushing.		
<b>Cut and Fill</b>			
05-1	Pre-water soils prior to cut and fill activities; and	<ul style="list-style-type: none"> <li>• For large sites, pre-water with sprinklers or water trucks and allow time for penetration</li> <li>• Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts</li> </ul>	
05-2	Stabilize soil during and after cut and fill activities.		

**Table 8 (Continued)**  
**Required Best Available Control Measures (Rule 403 Table 1)**

Source Category	Control Measure	Guidance
<b>Demolition – Mechanical/Manual</b>		
06-1	Stabilize wind erodible surfaces to reduce dust; and	<ul style="list-style-type: none"> <li>• Apply water in sufficient quantities to prevent the generation of visible dust plumes</li> </ul>
06-2	Stabilize surface soil where support equipment and vehicles will operate; and	
06-3	Stabilize loose soil and demolition debris; and	
06-4	Comply with AQMD Rule 1403.	
<b>Disturbed Soil</b>		
07-1	Stabilize disturbed soil throughout the construction site; and	<ul style="list-style-type: none"> <li>• Limit vehicular traffic and disturbances on soils where possible</li> <li>• If interior block walls are planned, install as early as possible</li> <li>• Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes</li> </ul>
07-02	Stabilize disturbed soil between structures	
<b>Earth-Moving Activities</b>		
08-1	Pre-apply water to depth of proposed cuts; and	<ul style="list-style-type: none"> <li>• Grade each project phase separately, timed to coincide with construction phase</li> <li>• Upwind fencing can prevent material movement on site</li> <li>• Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes</li> </ul>
08-2	Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and	
08-3	Stabilize soils once earth-moving activities are complete.	
<b>Importing/Exporting of Bulk Materials</b>		
09-1	Stabilize material while loading to reduce fugitive dust emissions; and	<ul style="list-style-type: none"> <li>• Use tarps or other suitable enclosures on haul trucks</li> <li>• Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage</li> <li>• Comply with track-out prevention/mitigation requirements</li> <li>• Provide water while loading and unloading to reduce visible dust plumes</li> </ul>
09-2	Maintain at least six inches of freeboard on haul vehicles; and	
09-3	Stabilize material while transporting to reduce fugitive dust emissions; and	
09-4	Stabilize material while unloading to reduce fugitive dust emissions; and	
09-5	Comply with Vehicle Code Section 23114.	

**Table 8 (Continued)**  
**Required Best Available Control Measures (Rule 403 Table 1)**

Source Category		Control Measure	Guidance
<b>Landscaping</b>			
10-1	Stabilize soils, materials, slopes		<ul style="list-style-type: none"> <li>• Apply water to materials to stabilize Maintain materials in a crusted condition</li> <li>• Maintain effective cover over materials</li> <li>• Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes</li> <li>• Hydroseed prior to rain season</li> </ul>
<b>Road Shoulder Maintenance</b>			
11-1	Apply water to unpaved shoulders prior to clearing; and		<ul style="list-style-type: none"> <li>• Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs</li> </ul>
11-2	Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.		<ul style="list-style-type: none"> <li>• Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs</li> </ul>
<b>Screening</b>			
12-1	Pre-water material prior to screening; and		<ul style="list-style-type: none"> <li>• Dedicate water truck or high capacity hose to screening operation</li> </ul>
12-2	Limit fugitive dust emissions to opacity and plume length standards; and		<ul style="list-style-type: none"> <li>• Drop material through the screen slowly and minimize drop height</li> </ul>
12-3	Stabilize material immediately after screening.		<ul style="list-style-type: none"> <li>• Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point</li> </ul>
<b>Staging Areas</b>			
13-1	Stabilize staging areas during use; and		<ul style="list-style-type: none"> <li>• Limit size of staging area</li> </ul>
13-2	Stabilize staging area soils at project completion.		<ul style="list-style-type: none"> <li>• Limit vehicle speeds to 15 miles per hour</li> <li>• Limit number and size of staging area entrances/exists</li> </ul>
<b>Stockpiles/ Bulk Material Handling</b>			
14-1	Stabilize stockpiled materials.		<ul style="list-style-type: none"> <li>• Add or remove material from the downwind portion of the storage pile</li> </ul>
14-2	Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.		<ul style="list-style-type: none"> <li>• Maintain storage piles to avoid steep sides or faces</li> </ul>

**Table 8 (Continued)**  
**Required Best Available Control Measures (Rule 403 Table 1)**

Source Category	Control Measure	Guidance
<b>Traffic Areas for Construction Activities</b>		
15-1	Stabilize all off-road traffic and parking areas; and	<ul style="list-style-type: none"> <li>• Apply gravel/paving to all haul routes as soon as possible to all future roadway areas</li> <li>• Barriers can be used to ensure vehicles are only used on established parking areas/haul routes</li> </ul>
15-2	Stabilize all haul routes; and	
15-3	Direct construction traffic over established haul routes.	
<b>Trenching</b>		
16-1	Stabilize surface soils where trencher or excavator and support equipment will operate; and	<ul style="list-style-type: none"> <li>• Pre-watering of soils prior to trenching is an effective preventive measure.</li> <li>• For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching</li> <li>• Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment</li> </ul>
16.2	Stabilize soils at the completion of trenching activities.	
<b>Truck Loading</b>		
17-1	Pre-water material prior to loading; and	<ul style="list-style-type: none"> <li>• Empty loader bucket such that no visible dust plumes are created</li> <li>• Ensure that the loader bucket is close to the truck to minimize drop height while loading</li> </ul>
17.2	Ensure that freeboard exceeds six inches (CVC 23114)	
<b>Turf Overseeding</b>		
18-1	Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and	<ul style="list-style-type: none"> <li>• Haul waste material immediately off-site</li> </ul>
18-2	Cover haul vehicles prior to exiting the site.	

**Table 8 (Continued)**  
**Required Best Available Control Measures (Rule 403 Table 1)**

Source Category	Control Measure	Guidance
<b>Unpaved Roads/Parking Lots</b>		
19-1	Stabilize soils to meet the applicable performance standards; and	<ul style="list-style-type: none"> <li>Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements</li> </ul>
19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
<b>Vacant Land</b>		
20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

**Table 9  
 Dust Control Measures for Large Operations (Rule 403 Table 2)**

<b>Fugitive Dust Source Category</b>	<b>Control Actions</b>
<b>Earth-moving (except construction cutting and filling areas, and mining operations)</b>	
(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
<b>Earth-moving: Construction fill areas:</b>	
(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.
<b>Earth-moving: Construction cut areas and mining operations:</b>	
(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
<b>Disturbed surface areas (except completed grading areas)</b>	
(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
<b>Disturbed surface areas: Completed grading areas</b>	
(2c)	Apply chemical stabilizers within five working days of grading completion; OR
(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.

**Table 9 (Continued)**  
**Dust Control Measures for Large Operations (Rule 403 Table 2)**

Fugitive Dust Source Category	Control Actions
<b>Inactive disturbed surface areas</b>	
(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.
<b>Unpaved Roads</b>	
(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
<b>Open storage piles</b>	
(5a)	Apply chemical stabilizers; OR
(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
(5c)	Install temporary coverings; OR
(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
<b>All Categories</b>	
(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

**Table 10**  
**Contingency Control Measures for Large Operations (Rule 403 Table 3)**

<b>Fugitive Dust Source Category</b>	<b>Control Actions</b>
<b>Earth-moving</b>	
(1A)	Cease all active operations; OR
(2A)	Apply water to soil not more than 15 minutes prior to moving such soil.
<b>Disturbed surface areas</b>	
(0B)	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
(1B)	Apply chemical stabilizers prior to wind event; OR
(2B)	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
(3B)	Take the actions specified in Table 2, Item (3c); OR
(4B)	Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
<b>Unpaved Roads</b>	
(1C)	Apply chemical stabilizers prior to wind event; OR
(2C)	Apply water twice per hour during active operation; OR
(3C)	Stop all vehicular traffic.
<b>Open Storage Piles</b>	
(1D)	Apply water twice per hour; OR
(2D)	Install temporary coverings.
<b>Paved Road Track-Out</b>	
(1E)	Cover all haul vehicles; OR
(2E)	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
<b>All Categories</b>	
(1F)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

**Table 11**  
**Track Out Control Options**

- 
- (A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 20 feet wide and 50 feet long.
- (B) Pave the surface extending at least 100 feet and a width of at least 20 feet wide.
- (C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
- (D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
- (E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified items (A) through (D) above.
- 

### **3.1.2 Construction Equipment Emission Control**

While Measure AQ-1 above addresses particulate emissions from construction activities, NOx generated by construction equipment will also exceed SCAQMD thresholds. The generation of NOx emission is almost entirely due to engine combustion in construction equipment and employee commuting. The measure below addresses the emission.

AQ-2: Reduce construction equipment emissions by implementing the following measures. They shall be included in grading and improvement plans specifications for implementation by contractors. Some additional gains in particulate emission control will also be realized from the implementation of these measures.

- Use low emission mobile construction equipment. The property owner/developer shall comply with CARB requirements for heavy construction equipment.
- Maintain construction equipment engines by keeping them tuned.
- Use low sulfur fuel for stationary construction equipment. This is required by SCAQMD Rules 431.1 and 431.2.
- Utilize existing power sources (i.e., power poles) when available. This measure would minimize the use of higher polluting gas or diesel generators.
- Configure construction parking to minimize traffic interference.
- Minimize obstruction of through-traffic lanes. Construction should be planned so that lane closures on existing streets are kept to a minimum.
- Schedule construction operations affecting traffic for off-peak hours to the best extent when possible.
- Develop a traffic plan to minimize traffic flow interference from construction activities (the plan may include advance public notice of routing, use of public transportation and satellite parking areas with a shuttle service.)
- Prohibit truck idling in excess of five minutes.
- Use emulsified diesel fuels, and equip construction equipment with oxidation catalysts particulate traps, and other verified/certified technologies.

- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Schedule construction activities that affect traffic flow on the arterial system to off-peak hour to the extent practicable.
- Reroute construction trucks away from congested streets or sensitive receptor areas, and appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM<sub>10</sub> generation.
- Suspend all excavating and grading operations when wind speeds (as instantaneous gust) exceed 25 mph.

## 3.2 Long-Term Impacts

### 3.2.1 Regional Emissions

ROG and PM<sub>10</sub> emissions associated with the operation of the project were shown to exceed the threshold of significance. Mitigation is required.

AQ-3 Implement Measures Recommended in SCAQMD's CEQA Handbook and the URBEMISv9.2.4 Model. The applicant shall reduce operation-related emissions through implementation of practices identified in SCAQMD's CEQA Handbook and URBEMIS. SCAQMD's CEQA Handbook includes several measures that can be used to minimize emissions associated with residential projects. In addition, the URBEMISv9.2.4 model identifies several measures, some of which overlap those in the CEQA Handbook. The following measures, based on these sources, shall be implemented by the property applicant to reduce criteria pollutant emissions from projects associated with the DTSP Update.

Additionally, support and compliance with the AQMP for the basin is the most important measure to achieve this goal. The AQMP includes improvement of mass transit facilities and implementation of vehicular usage reduction programs. Additionally, energy conservation measures are included.

#### Transportation Demand Management (TDM) Measures

1. Provide adequate ingress and egress at all entrances to public facilities to minimize vehicle idling at curbsides. Presumably, this measure would improve traffic flow into and out of the parking lot. The air quality benefits are incalculable because more specific data is required.
2. Provide dedicated turn lanes as appropriate and provide roadway improvements at heavily congested roadways. Again, the areas where this measure would be applicable are the intersections in and near the project area. Presumably, these measures would improve traffic flow. Emissions would drop as a result of the higher traffic speeds, but to an unknown extent.
3. Synchronize traffic signals. The areas where this measure would be applicable are roadway intersections within the project area. This measure would be more effective if the roadways beyond the project limits are synchronized as well. The air quality benefits are incalculable because more specific data is required.
4. Ensure that sidewalks and pedestrian paths are installed throughout the project area.

### Energy Efficient Measures

5. Improve thermal integrity of the buildings and reduce thermal load with automated time clocks or occupant sensors. Reducing the need to heat or cool structures by improving thermal integrity will result in a reduced expenditure of energy and a reduction in pollutant emissions. The air quality benefit is unknown.
6. Install energy efficient street lighting.
7. Capture waste heat and reemploy it in nonresidential buildings. This measure is applicable to the commercial buildings in the project.
8. Provide lighter color roofing and road materials and tree planning programs to comply with the AQMP Miscellaneous Sources MSC-01 measure. This measure reduces the need for cooling energy in the summer.
9. Introduce window glazing, wall insulation, and efficient ventilation methods.
10. Install low-emission water heaters, and use built-in, energy-efficient appliances.

## 4.0 Unavoidable Significant Impacts

### 4.1 Short-Term Impacts

The analysis demonstrates that the project will result in a significant short-term air quality impact, specifically for NO<sub>x</sub> emissions. Mitigation will reduce NO<sub>x</sub> emissions, but not to the point that they will fall under the SCAQMD's thresholds. Therefore, construction emissions of NO<sub>x</sub> will exceed the SCAQMD thresholds even after mitigation, and short-term construction air quality impacts will be significant. PM<sub>10</sub> and PM<sub>2.5</sub> emissions, if mitigated to the greatest extent possible, would be reduced to less than significant.

### 4.2 Long-Term Impacts

The long term regional air quality impacts due to the proposed project with the recommended measures above will be reduced to an extent. (The reduction in emissions with mitigation would be marginal between 5% and 10% at best). However, the ROG and PM<sub>10</sub> emissions would continue to exceed the SCAQMD thresholds and be considered significant and unavoidable.

# Appendix

## **URBEMIS Output Files**

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\Environmental Svcs\Desktop\URBEMIS\_PROJECTS\HB DTSP 2030 rev.urb924

Project Name: Huntington Beach DTSP-2030

Project Location: Orange County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2009 TOTALS (lbs/day unmitigated)	21.43	121.84	160.22	0.16	333.68	7.47	341.14	69.78	6.85	76.63	23,014.77
2009 TOTALS (lbs/day mitigated)	21.43	121.84	160.22	0.16	23.13	7.47	30.60	4.93	6.85	11.78	23,014.77
2010 TOTALS (lbs/day unmitigated)	20.19	113.93	151.43	0.16	333.68	6.98	340.65	69.78	6.40	76.18	23,011.14
2010 TOTALS (lbs/day mitigated)	20.19	113.93	151.43	0.16	23.13	6.98	30.11	4.93	6.40	11.33	23,011.14
2011 TOTALS (lbs/day unmitigated)	18.99	105.96	143.16	0.16	333.68	6.58	340.26	69.78	6.03	75.81	23,008.45
2011 TOTALS (lbs/day mitigated)	18.99	105.96	143.16	0.16	23.13	6.58	29.71	4.93	6.03	10.96	23,008.45
2012 TOTALS (lbs/day unmitigated)	17.88	98.21	135.32	0.16	333.68	6.03	339.70	69.78	5.52	75.30	23,006.70
2012 TOTALS (lbs/day mitigated)	17.88	98.21	135.32	0.16	23.13	6.03	29.16	4.93	5.52	10.45	23,006.70
2013 TOTALS (lbs/day unmitigated)	16.78	90.86	127.87	0.16	333.68	5.50	339.18	69.78	5.03	74.82	23,005.80
2013 TOTALS (lbs/day mitigated)	16.78	90.86	127.87	0.16	23.13	5.50	28.63	4.93	5.03	9.96	23,005.80
2014 TOTALS (lbs/day unmitigated)	15.79	83.70	121.18	0.16	333.68	4.96	338.63	69.78	4.53	74.31	23,004.94
2014 TOTALS (lbs/day mitigated)	15.79	83.70	121.18	0.16	23.13	4.96	28.09	4.93	4.53	9.46	23,004.94
2015 TOTALS (lbs/day unmitigated)	14.81	76.25	114.84	0.16	333.68	4.56	338.23	69.78	4.16	73.95	23,004.31
2015 TOTALS (lbs/day mitigated)	14.81	76.25	114.84	0.16	23.13	4.56	27.69	4.93	4.16	9.09	23,004.31
2016 TOTALS (lbs/day unmitigated)	13.94	69.66	109.34	0.16	333.68	4.09	337.76	69.78	3.73	73.51	23,003.12
2016 TOTALS (lbs/day mitigated)	13.94	69.66	109.34	0.16	23.13	4.09	27.22	4.93	3.73	8.66	23,003.12
2017 TOTALS (lbs/day unmitigated)	13.16	63.70	104.16	0.16	333.68	3.70	337.38	69.78	3.38	73.16	23,002.36
2017 TOTALS (lbs/day mitigated)	13.16	63.70	104.16	0.16	23.13	3.70	26.84	4.93	3.38	8.31	23,002.36
2018 TOTALS (lbs/day unmitigated)	12.37	58.25	99.36	0.16	333.68	3.33	337.00	69.78	3.03	72.82	23,001.85
2018 TOTALS (lbs/day mitigated)	12.37	58.25	99.36	0.16	23.13	3.33	26.46	4.93	3.03	7.96	23,001.85
2019 TOTALS (lbs/day unmitigated)	11.68	53.31	94.91	0.16	333.68	2.98	336.65	69.78	2.71	72.49	23,001.54
2019 TOTALS (lbs/day mitigated)	11.68	53.31	94.91	0.16	23.13	2.98	26.11	4.93	2.71	7.64	23,001.54
2020 TOTALS (lbs/day unmitigated)	11.04	48.95	90.86	0.16	333.68	2.74	336.41	69.78	2.49	72.27	23,001.27
2020 TOTALS (lbs/day mitigated)	11.04	48.95	90.86	0.16	23.13	2.74	25.87	4.93	2.49	7.42	23,001.27
2021 TOTALS (lbs/day unmitigated)	10.46	45.85	77.50	0.16	333.68	2.66	336.34	69.78	2.42	72.20	22,999.39
2021 TOTALS (lbs/day mitigated)	10.46	45.85	77.50	0.16	23.13	2.66	25.79	4.93	2.42	7.35	22,999.39
2022 TOTALS (lbs/day unmitigated)	10.46	45.85	77.50	0.16	333.68	2.66	336.34	69.78	2.42	72.20	22,999.39
2022 TOTALS (lbs/day mitigated)	10.46	45.85	77.50	0.16	23.13	2.66	25.79	4.93	2.42	7.35	22,999.39
2023 TOTALS (lbs/day unmitigated)	10.46	45.85	77.50	0.16	333.68	2.66	336.34	69.78	2.42	72.20	22,999.39
2023 TOTALS (lbs/day mitigated)	10.46	45.85	77.50	0.16	23.13	2.66	25.79	4.93	2.42	7.35	22,999.39



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Paving Worker Trips	0.04	0.08	1.32	0.00	0.01	0.00	0.01	0.00	0.01	0.01	155.61
Building 06/01/2009-06/01/2030	9.36	57.32	123.16	0.15	0.66	3.20	3.86	0.23	2.92	3.16	17,392.94
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28
Building Vendor Trips	2.21	27.36	19.99	0.05	0.17	1.12	1.29	0.06	1.03	1.09	4,713.21
Building Worker Trips	2.78	5.25	88.54	0.11	0.49	0.27	0.76	0.18	0.23	0.41	10,420.44
Fine Grading 03/01/2009-03/01/2030	6.02	46.41	26.18	0.00	333.01	2.71	335.72	69.55	2.49	72.04	4,181.74
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	5.96	46.30	24.33	0.00	0.00	2.70	2.70	0.00	2.49	2.49	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.06	0.11	1.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.85
Time Slice 9/1/2009-12/31/2009 Active Days: 88	<b>21.43</b>	<b>121.84</b>	<b>160.22</b>	<b>0.16</b>	<b>333.68</b>	<b>7.47</b>	<b>341.14</b>	<b>69.78</b>	<b>6.85</b>	<b>76.63</b>	<b>23,014.77</b>
Asphalt 06/03/2009-06/03/2030	3.08	18.11	10.82	0.00	0.01	1.56	1.56	0.00	1.43	1.43	1,432.64
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.02	17.99	9.48	0.00	0.00	1.55	1.55	0.00	1.43	1.43	1,272.41
Paving On Road Diesel	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.04	0.08	1.32	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Building 06/01/2009-06/01/2030	9.36	57.32	123.16	0.15	0.66	3.20	3.86	0.23	2.92	3.16	17,392.94
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28
Building Vendor Trips	2.21	27.36	19.99	0.05	0.17	1.12	1.29	0.06	1.03	1.09	4,713.21
Building Worker Trips	2.78	5.25	88.54	0.11	0.49	0.27	0.76	0.18	0.23	0.41	10,420.44
Coating 09/01/2009-09/01/2030	2.96	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	6.02	46.41	26.18	0.00	333.01	2.71	335.72	69.55	2.49	72.04	4,181.74
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	5.96	46.30	24.33	0.00	0.00	2.70	2.70	0.00	2.49	2.49	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.06	0.11	1.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.85
Time Slice 1/1/2010-12/31/2010 Active Days: 261	<b>20.19</b>	<b>113.93</b>	<b>151.43</b>	<b>0.16</b>	<b>333.68</b>	<b>6.98</b>	<b>340.65</b>	<b>69.78</b>	<b>6.40</b>	<b>76.18</b>	<b>23,011.14</b>
Asphalt 06/03/2009-06/03/2030	2.90	17.23	10.62	0.00	0.01	1.51	1.51	0.00	1.39	1.39	1,432.59
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.86	17.13	9.38	0.00	0.00	1.50	1.50	0.00	1.38	1.38	1,272.41
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.04	0.07	1.23	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.56
Building 06/01/2009-06/01/2030	8.68	53.01	115.40	0.15	0.66	2.95	3.60	0.23	2.69	2.92	17,389.44
Building Off Road Diesel	4.08	23.31	14.31	0.00	0.00	1.67	1.67	0.00	1.54	1.54	2,259.28
Building Vendor Trips	2.06	24.89	18.68	0.05	0.17	1.01	1.17	0.06	0.92	0.98	4,713.07
Building Worker Trips	2.54	4.81	82.41	0.11	0.49	0.27	0.76	0.18	0.23	0.41	10,417.08
Coating 09/01/2009-09/01/2030	2.96	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	5.65	43.69	25.35	0.00	333.01	2.53	335.54	69.55	2.32	71.87	4,181.67
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	5.59	43.59	23.62	0.00	0.00	2.52	2.52	0.00	2.32	2.32	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.10	1.72	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.78
Time Slice 1/3/2011-12/30/2011 Active Days: 260	<b>18.99</b>	<b>105.96</b>	<b>143.16</b>	<b>0.16</b>	<b>333.68</b>	<b>6.58</b>	<b>340.26</b>	<b>69.78</b>	<b>6.03</b>	<b>75.81</b>	<b>23,008.45</b>
Asphalt 06/03/2009-06/03/2030	2.74	16.40	10.42	0.00	0.01	1.45	1.46	0.00	1.34	1.34	1,432.55
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.70	16.30	9.26	0.00	0.00	1.45	1.45	0.00	1.33	1.33	1,272.41
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.03	0.07	1.15	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.52
Building 06/01/2009-06/01/2030	8.00	48.63	108.16	0.15	0.66	2.76	3.41	0.23	2.51	2.74	17,386.83
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	1.90	22.38	17.38	0.05	0.17	0.90	1.06	0.06	0.82	0.88	4,712.99
Building Worker Trips	2.33	4.40	76.83	0.11	0.49	0.28	0.78	0.18	0.24	0.42	10,414.56
Coating 09/01/2009-09/01/2030	2.96	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	5.29	40.93	24.53	0.00	333.01	2.37	335.38	69.55	2.18	71.73	4,181.62
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	5.24	40.84	22.92	0.00	0.00	2.37	2.37	0.00	2.18	2.18	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.09	1.61	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.72
Time Slice 1/2/2012-12/31/2012 Active Days: 261	<b>17.88</b>	<b>98.21</b>	<b>135.32</b>	<b>0.16</b>	<b>333.68</b>	<b>6.03</b>	<b>339.70</b>	<b>69.78</b>	<b>5.52</b>	<b>75.30</b>	<b>23,006.70</b>
Asphalt 06/03/2009-06/03/2030	2.60	15.57	10.25	0.00	0.01	1.37	1.38	0.00	1.26	1.27	1,432.52
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.55	15.48	9.17	0.00	0.00	1.37	1.37	0.00	1.26	1.26	1,272.41
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.03	0.06	1.07	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.49
Building 06/01/2009-06/01/2030	7.34	44.37	101.22	0.15	0.66	2.50	3.16	0.23	2.27	2.51	17,385.15

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Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	1.74	19.93	16.09	0.05	0.17	0.79	0.96	0.06	0.73	0.78	4,713.06
Building Worker Trips	2.12	4.02	71.50	0.11	0.49	0.28	0.78	0.18	0.24	0.42	10,412.81
Coating 09/01/2009-09/01/2030	2.96	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	4.98	38.27	23.80	0.00	333.01	2.15	335.16	69.55	1.98	71.53	4,181.58
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	4.93	38.19	22.31	0.00	0.00	2.15	2.15	0.00	1.98	1.98	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.08	1.49	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.69
Time Slice 1/1/2013-12/31/2013 Active	<u>16.78</u>	<u>90.86</u>	<u>127.87</u>	<u>0.16</u>	<u>333.68</u>	<u>5.50</u>	<u>339.18</u>	<u>69.78</u>	<u>5.03</u>	<u>74.82</u>	<u>23,005.80</u>
Davs: 261											
Asphalt 06/03/2009-06/03/2030	2.43	14.77	10.09	0.00	0.01	1.28	1.29	0.00	1.18	1.18	1,432.51
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.40	14.70	9.09	0.00	0.00	1.28	1.28	0.00	1.18	1.18	1,272.41
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.03	0.05	0.99	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.48
Building 06/01/2009-06/01/2030	6.70	40.28	94.62	0.15	0.66	2.25	2.90	0.23	2.04	2.27	17,384.28
Building Off Road Diesel	3.19	19.04	13.34	0.00	0.00	1.26	1.26	0.00	1.16	1.16	2,259.28
Building Vendor Trips	1.59	17.57	14.83	0.05	0.17	0.70	0.86	0.06	0.64	0.69	4,713.25
Building Worker Trips	1.92	3.68	66.45	0.11	0.49	0.29	0.78	0.18	0.24	0.42	10,411.75
Coating 09/01/2009-09/01/2030	2.96	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	4.69	35.81	23.12	0.00	333.01	1.97	334.98	69.55	1.81	71.36	4,181.56
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	4.65	35.73	21.73	0.00	0.00	1.96	1.96	0.00	1.81	1.81	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.08	1.39	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.67
Time Slice 1/1/2014-12/31/2014 Active	<u>15.79</u>	<u>83.70</u>	<u>121.18</u>	<u>0.16</u>	<u>333.68</u>	<u>4.96</u>	<u>338.63</u>	<u>69.78</u>	<u>4.53</u>	<u>74.31</u>	<u>23,004.94</u>
Davs: 261											
Asphalt 06/03/2009-06/03/2030	2.30	14.01	9.95	0.00	0.01	1.20	1.21	0.00	1.11	1.11	1,432.49
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.27	13.94	9.01	0.00	0.00	1.20	1.20	0.00	1.10	1.10	1,272.41
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.03	0.05	0.92	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.46
Building 06/01/2009-06/01/2030	6.13	36.40	88.68	0.15	0.66	2.00	2.66	0.23	1.81	2.05	17,383.46
Building Off Road Diesel	2.93	17.65	13.06	0.00	0.00	1.11	1.11	0.00	1.02	1.02	2,259.28
Building Vendor Trips	1.44	15.38	13.67	0.05	0.17	0.61	0.77	0.06	0.55	0.61	4,713.40
Building Worker Trips	1.77	3.37	61.94	0.11	0.49	0.29	0.78	0.18	0.24	0.42	10,410.78
Coating 09/01/2009-09/01/2030	2.96	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	4.40	33.29	22.51	0.00	333.01	1.75	334.76	69.55	1.61	71.16	4,181.54
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	4.36	33.22	21.22	0.00	0.00	1.75	1.75	0.00	1.61	1.61	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.29	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.65
Time Slice 1/1/2015-12/31/2015 Active	<u>14.81</u>	<u>76.25</u>	<u>114.84</u>	<u>0.16</u>	<u>333.68</u>	<u>4.56</u>	<u>338.23</u>	<u>69.78</u>	<u>4.16</u>	<u>73.95</u>	<u>23,004.31</u>
Davs: 261											
Asphalt 06/03/2009-06/03/2030	2.16	13.14	9.80	0.00	0.01	1.11	1.12	0.00	1.02	1.03	1,432.48
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.12	13.07	8.93	0.00	0.00	1.11	1.11	0.00	1.02	1.02	1,272.41
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.02	0.05	0.86	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.45
Building 06/01/2009-06/01/2030	5.61	32.67	83.06	0.15	0.66	1.84	2.50	0.23	1.67	1.90	17,382.86
Building Off Road Diesel	2.69	16.17	12.80	0.00	0.00	1.03	1.03	0.00	0.94	0.94	2,259.28
Building Vendor Trips	1.30	13.39	12.59	0.05	0.17	0.53	0.70	0.06	0.48	0.54	4,713.61
Building Worker Trips	1.62	3.11	57.67	0.11	0.49	0.29	0.78	0.18	0.24	0.42	10,409.97
Coating 09/01/2009-09/01/2030	2.96	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	4.09	30.44	21.94	0.00	333.01	1.60	334.61	69.55	1.47	71.02	4,181.52
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	4.05	30.38	20.73	0.00	0.00	1.59	1.59	0.00	1.47	1.47	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	1.21	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.63
Time Slice 1/1/2016-12/30/2016 Active	<u>13.94</u>	<u>69.66</u>	<u>109.34</u>	<u>0.16</u>	<u>333.68</u>	<u>4.09</u>	<u>337.76</u>	<u>69.78</u>	<u>3.73</u>	<u>73.51</u>	<u>23,003.12</u>
Davs: 261											
Asphalt 06/03/2009-06/03/2030	2.01	12.29	9.68	0.00	0.01	1.02	1.03	0.00	0.94	0.94	1,432.46
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.98	12.24	8.87	0.00	0.00	1.02	1.02	0.00	0.93	0.93	1,272.41
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.02	0.04	0.80	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.43



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Paving Worker Trips	0.02	0.03	0.61	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.39
Building 06/01/2009-06/01/2030	3.63	20.40	61.69	0.15	0.66	1.11	1.77	0.23	0.99	1.23	17,379.95
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	0.88	7.84	9.05	0.05	0.17	0.32	0.48	0.06	0.29	0.34	4,714.42
Building Worker Trips	1.05	2.06	40.61	0.11	0.49	0.30	0.79	0.18	0.25	0.43	10,406.25
Coating 09/01/2009-09/01/2030	2.96	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	2.91	19.12	19.88	0.00	333.01	0.89	333.90	69.55	0.82	70.37	4,181.44
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.02	0.04	0.85	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.55
Time Slice 1/1/2021-12/31/2021 Active	<u>10.46</u>	<u>45.85</u>	<u>77.50</u>	<u>0.16</u>	<u>333.68</u>	<u>2.66</u>	<u>336.34</u>	<u>69.78</u>	<u>2.42</u>	<u>72.20</u>	<u>22,999.39</u>
Days: 261											
Asphalt 06/03/2009-06/03/2030	1.53	9.41	9.09	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.39
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.01	0.02	0.44	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.36
Building 06/01/2009-06/01/2030	3.07	17.32	48.73	0.15	0.66	1.04	1.69	0.23	0.93	1.16	17,378.17
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	0.66	5.39	7.05	0.04	0.17	0.23	0.40	0.06	0.21	0.26	4,715.04
Building Worker Trips	0.69	1.44	29.66	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,403.85
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	2.91	19.11	19.66	0.00	333.01	0.89	333.90	69.55	0.82	70.37	4,181.39
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.03	0.62	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.50
Time Slice 1/3/2022-12/30/2022 Active	<u>10.46</u>	<u>45.85</u>	<u>77.50</u>	<u>0.16</u>	<u>333.68</u>	<u>2.66</u>	<u>336.34</u>	<u>69.78</u>	<u>2.42</u>	<u>72.20</u>	<u>22,999.39</u>
Days: 260											
Asphalt 06/03/2009-06/03/2030	1.53	9.41	9.09	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.39
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.01	0.02	0.44	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.36
Building 06/01/2009-06/01/2030	3.07	17.32	48.73	0.15	0.66	1.04	1.69	0.23	0.93	1.16	17,378.17
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	0.66	5.39	7.05	0.04	0.17	0.23	0.40	0.06	0.21	0.26	4,715.04
Building Worker Trips	0.69	1.44	29.66	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,403.85
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	2.91	19.11	19.66	0.00	333.01	0.89	333.90	69.55	0.82	70.37	4,181.39
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.03	0.62	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.50
Time Slice 1/2/2023-12/29/2023 Active	<u>10.46</u>	<u>45.85</u>	<u>77.50</u>	<u>0.16</u>	<u>333.68</u>	<u>2.66</u>	<u>336.34</u>	<u>69.78</u>	<u>2.42</u>	<u>72.20</u>	<u>22,999.39</u>
Days: 260											
Asphalt 06/03/2009-06/03/2030	1.53	9.41	9.09	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.39
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.01	0.02	0.44	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.36
Building 06/01/2009-06/01/2030	3.07	17.32	48.73	0.15	0.66	1.04	1.69	0.23	0.93	1.16	17,378.17
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	0.66	5.39	7.05	0.04	0.17	0.23	0.40	0.06	0.21	0.26	4,715.04
Building Worker Trips	0.69	1.44	29.66	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,403.85
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	2.91	19.11	19.66	0.00	333.01	0.89	333.90	69.55	0.82	70.37	4,181.39
Fine Grading Dust	0.00	0.00	0.00	0.00	333.00	0.00	333.00	69.54	0.00	69.54	0.00
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.03	0.62	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.50
Time Slice 1/1/2024-12/31/2024 Active	<u>10.46</u>	<u>45.85</u>	<u>77.50</u>	<u>0.16</u>	<u>333.68</u>	<u>2.66</u>	<u>336.34</u>	<u>69.78</u>	<u>2.42</u>	<u>72.20</u>	<u>22,999.39</u>
Days: 262											
Asphalt 06/03/2009-06/03/2030	1.53	9.41	9.09	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.39
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41





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Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Time Slice 6/4/2030-8/30/2030 Active	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Days: 64												
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44

Phase Assumptions

Phase: Fine Grading 3/1/2009 - 3/1/2030 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 66.61

Maximum Daily Acreage Disturbed: 16.65

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 6/3/2009 - 6/3/2030 - Default Paving Description

Acres to be Paved: 16.65

Off-Road Equipment:

- 1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
- 2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 6/1/2009 - 6/1/2030 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day
- 3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- 3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 9/1/2009 - 9/1/2030 - Default Architectural Coating Description

- Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
- Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
- Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
- Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
- Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
- Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 3/2/2009-5/29/2009 Active	6.02	46.41	26.18	0.00	22.47	2.71	25.18	4.69	2.49	7.19	4,181.74
Days: 65											
Fine Grading 03/01/2009-03/01/2030	6.02	46.41	26.18	0.00	22.47	2.71	25.18	4.69	2.49	7.19	4,181.74
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	5.96	46.30	24.33	0.00	0.00	2.70	2.70	0.00	2.49	2.49	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.06	0.11	1.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.85
Time Slice 6/1/2009-6/2/2009 Active Days:	15.39	103.73	149.34	0.16	23.12	5.91	29.04	4.93	5.42	10.34	21,574.67
2											
Building 06/01/2009-06/01/2030	9.36	57.32	123.16	0.15	0.66	3.20	3.86	0.23	2.92	3.16	17,392.94
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28
Building Vendor Trips	2.21	27.36	19.99	0.05	0.17	1.12	1.29	0.06	1.03	1.09	4,713.21
Building Worker Trips	2.78	5.25	88.54	0.11	0.49	0.27	0.76	0.18	0.23	0.41	10,420.44
Fine Grading 03/01/2009-03/01/2030	6.02	46.41	26.18	0.00	22.47	2.71	25.18	4.69	2.49	7.19	4,181.74
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	5.96	46.30	24.33	0.00	0.00	2.70	2.70	0.00	2.49	2.49	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.06	0.11	1.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.85
Time Slice 6/3/2009-8/31/2009 Active	18.46	121.84	160.16	0.16	23.13	7.47	30.60	4.93	6.85	11.78	23,007.31
Days: 64											
Asphalt 06/03/2009-06/03/2030	3.08	18.11	10.82	0.00	0.01	1.56	1.56	0.00	1.43	1.43	1,432.64
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.02	17.99	9.48	0.00	0.00	1.55	1.55	0.00	1.43	1.43	1,272.41

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Paving On Road Diesel	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.04	0.08	1.32	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	155.61
Building 06/01/2009-06/01/2030	9.36	57.32	123.16	0.15	0.66	3.20	3.86	0.23	2.92	3.16	17,392.94	
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28	
Building Vendor Trips	2.21	27.36	19.99	0.05	0.17	1.12	1.29	0.06	1.03	1.09	4,713.21	
Building Worker Trips	2.78	5.25	88.54	0.11	0.49	0.27	0.76	0.18	0.23	0.41	10,420.44	
Fine Grading 03/01/2009-03/01/2030	6.02	46.41	26.18	0.00	22.47	2.71	25.18	4.69	2.49	7.19	4,181.74	
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00	
Fine Grading Off Road Diesel	5.96	46.30	24.33	0.00	0.00	2.70	2.70	0.00	2.49	2.49	3,963.89	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fine Grading Worker Trips	0.06	0.11	1.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.85	
Time Slice 9/1/2009-12/31/2009 Active	<b>21.43</b>	<b>121.84</b>	<b>160.22</b>	<b>0.16</b>	<b>23.13</b>	<b>7.47</b>	<b>30.60</b>	<b>4.93</b>	<b>6.85</b>	<b>11.78</b>	<b>23,014.77</b>	
Davs: 88												
Asphalt 06/03/2009-06/03/2030	3.08	18.11	10.82	0.00	0.01	1.56	1.56	0.00	1.43	1.43	1,432.64	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	3.02	17.99	9.48	0.00	0.00	1.55	1.55	0.00	1.43	1.43	1,272.41	
Paving On Road Diesel	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.04	0.08	1.32	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61	
Building 06/01/2009-06/01/2030	9.36	57.32	123.16	0.15	0.66	3.20	3.86	0.23	2.92	3.16	17,392.94	
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28	
Building Vendor Trips	2.21	27.36	19.99	0.05	0.17	1.12	1.29	0.06	1.03	1.09	4,713.21	
Building Worker Trips	2.78	5.25	88.54	0.11	0.49	0.27	0.76	0.18	0.23	0.41	10,420.44	
Coating 09/01/2009-09/01/2030	2.96	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45	
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45	
Fine Grading 03/01/2009-03/01/2030	6.02	46.41	26.18	0.00	22.47	2.71	25.18	4.69	2.49	7.19	4,181.74	
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00	
Fine Grading Off Road Diesel	5.96	46.30	24.33	0.00	0.00	2.70	2.70	0.00	2.49	2.49	3,963.89	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fine Grading Worker Trips	0.06	0.11	1.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.85	
Time Slice 1/1/2010-12/31/2010 Active	<b>20.19</b>	<b>113.93</b>	<b>151.43</b>	<b>0.16</b>	<b>23.13</b>	<b>6.98</b>	<b>30.11</b>	<b>4.93</b>	<b>6.40</b>	<b>11.33</b>	<b>23,011.14</b>	
Davs: 261												
Asphalt 06/03/2009-06/03/2030	2.90	17.23	10.62	0.00	0.01	1.51	1.51	0.00	1.39	1.39	1,432.59	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	2.86	17.13	9.38	0.00	0.00	1.50	1.50	0.00	1.38	1.38	1,272.41	
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.04	0.07	1.23	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.56	
Building 06/01/2009-06/01/2030	8.68	53.01	115.40	0.15	0.66	2.95	3.60	0.23	2.69	2.92	17,389.44	
Building Off Road Diesel	4.08	23.31	14.31	0.00	0.00	1.67	1.67	0.00	1.54	1.54	2,259.28	
Building Vendor Trips	2.06	24.89	18.68	0.05	0.17	1.01	1.17	0.06	0.92	0.98	4,713.07	
Building Worker Trips	2.54	4.81	82.41	0.11	0.49	0.27	0.76	0.18	0.23	0.41	10,417.08	
Coating 09/01/2009-09/01/2030	2.96	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45	
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45	
Fine Grading 03/01/2009-03/01/2030	5.65	43.69	25.35	0.00	22.47	2.53	24.99	4.69	2.32	7.02	4,181.67	
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00	
Fine Grading Off Road Diesel	5.59	43.59	23.62	0.00	0.00	2.52	2.52	0.00	2.32	2.32	3,963.89	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fine Grading Worker Trips	0.05	0.10	1.72	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.78	
Time Slice 1/3/2011-12/30/2011 Active	<b>18.99</b>	<b>105.96</b>	<b>143.16</b>	<b>0.16</b>	<b>23.13</b>	<b>6.58</b>	<b>29.71</b>	<b>4.93</b>	<b>6.03</b>	<b>10.96</b>	<b>23,008.45</b>	
Davs: 260												
Asphalt 06/03/2009-06/03/2030	2.74	16.40	10.42	0.00	0.01	1.45	1.46	0.00	1.34	1.34	1,432.55	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	2.70	16.30	9.26	0.00	0.00	1.45	1.45	0.00	1.33	1.33	1,272.41	
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.03	0.07	1.15	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.52	
Building 06/01/2009-06/01/2030	8.00	48.63	108.16	0.15	0.66	2.76	3.41	0.23	2.51	2.74	17,386.83	
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28	
Building Vendor Trips	1.90	22.38	17.38	0.05	0.17	0.90	1.06	0.06	0.82	0.88	4,712.99	
Building Worker Trips	2.33	4.40	76.83	0.11	0.49	0.28	0.78	0.18	0.24	0.42	10,414.56	
Coating 09/01/2009-09/01/2030	2.96	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45	
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45	
Fine Grading 03/01/2009-03/01/2030	5.29	40.93	24.53	0.00	22.47	2.37	24.84	4.69	2.18	6.88	4,181.62	
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00	
Fine Grading Off Road Diesel	5.24	40.84	22.92	0.00	0.00	2.37	2.37	0.00	2.18	2.18	3,963.89	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fine Grading Worker Trips	0.05	0.09	1.61	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.72	
Time Slice 1/2/2012-12/31/2012 Active	<b>17.88</b>	<b>98.21</b>	<b>135.32</b>	<b>0.16</b>	<b>23.13</b>	<b>6.03</b>	<b>29.16</b>	<b>4.93</b>	<b>5.52</b>	<b>10.45</b>	<b>23,006.70</b>	
Davs: 261												
Asphalt 06/03/2009-06/03/2030	2.60	15.57	10.25	0.00	0.01	1.37	1.38	0.00	1.26	1.27	1,432.52	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	2.55	15.48	9.17	0.00	0.00	1.37	1.37	0.00	1.26	1.26	1,272.41	
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.03	0.06	1.07	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.49	



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Paving Worker Trips	0.02	0.04	0.80	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.43
Building 06/01/2009-06/01/2030	5.14	29.53	78.19	0.15	0.66	1.63	2.29	0.23	1.47	1.71	17,381.72
Building Off Road Diesel	2.47	14.84	12.61	0.00	0.00	0.88	0.88	0.00	0.81	0.81	2,259.28
Building Vendor Trips	1.18	11.82	11.70	0.05	0.17	0.47	0.63	0.06	0.43	0.48	4,713.73
Building Worker Trips	1.49	2.87	53.88	0.11	0.49	0.29	0.78	0.18	0.24	0.42	10,408.71
Coating 09/01/2009-09/01/2030	2.96	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	3.83	27.84	21.44	0.00	22.47	1.43	23.90	4.69	1.32	6.01	4,181.49
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	3.80	27.78	20.31	0.00	0.00	1.43	1.43	0.00	1.31	1.31	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	1.13	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.60
<b>Time Slice 1/2/2017-12/29/2017 Active</b>	<b>13.16</b>	<b>63.70</b>	<b>104.16</b>	<b>0.16</b>	<b>23.13</b>	<b>3.70</b>	<b>26.84</b>	<b>4.93</b>	<b>3.38</b>	<b>8.31</b>	<b>23,002.36</b>
Davs: 260											
Asphalt 06/03/2009-06/03/2030	1.89	11.52	9.56	0.00	0.01	0.94	0.95	0.00	0.87	0.87	1,432.45
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.86	11.46	8.80	0.00	0.00	0.94	0.94	0.00	0.86	0.86	1,272.41
Paving On Road Diesel	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.02	0.04	0.75	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.42
Building 06/01/2009-06/01/2030	4.70	26.81	73.60	0.15	0.66	1.48	2.14	0.23	1.33	1.57	17,380.99
Building Off Road Diesel	2.25	13.62	12.45	0.00	0.00	0.77	0.77	0.00	0.71	0.71	2,259.28
Building Vendor Trips	1.09	10.56	10.93	0.05	0.17	0.42	0.59	0.06	0.38	0.44	4,713.89
Building Worker Trips	1.36	2.63	50.23	0.11	0.49	0.29	0.78	0.18	0.24	0.42	10,407.82
Coating 09/01/2009-09/01/2030	2.96	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.45
Fine Grading 03/01/2009-03/01/2030	3.60	25.37	20.96	0.00	22.47	1.28	23.75	4.69	1.18	5.87	4,181.47
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	3.58	25.32	19.91	0.00	0.00	1.28	1.28	0.00	1.17	1.17	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.05	1.05	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.58
<b>Time Slice 1/1/2018-12/31/2018 Active</b>	<b>12.37</b>	<b>58.25</b>	<b>99.36</b>	<b>0.16</b>	<b>23.13</b>	<b>3.33</b>	<b>26.46</b>	<b>4.93</b>	<b>3.03</b>	<b>7.96</b>	<b>23,001.85</b>
Davs: 261											
Asphalt 06/03/2009-06/03/2030	1.78	10.77	9.47	0.00	0.01	0.86	0.87	0.00	0.79	0.80	1,432.44
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.75	10.72	8.76	0.00	0.00	0.86	0.86	0.00	0.79	0.79	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.02	0.04	0.70	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.41
Building 06/01/2009-06/01/2030	4.30	24.38	69.30	0.15	0.66	1.34	1.99	0.23	1.20	1.44	17,380.50
Building Off Road Diesel	2.03	12.45	12.26	0.00	0.00	0.67	0.67	0.00	0.62	0.62	2,259.28
Building Vendor Trips	1.01	9.50	10.24	0.05	0.17	0.38	0.54	0.06	0.35	0.40	4,714.07
Building Worker Trips	1.25	2.43	46.80	0.11	0.49	0.29	0.78	0.18	0.24	0.42	10,407.15
Coating 09/01/2009-09/01/2030	2.96	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	3.33	23.10	20.56	0.00	22.47	1.13	23.60	4.69	1.04	5.73	4,181.46
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	3.30	23.05	19.58	0.00	0.00	1.12	1.12	0.00	1.03	1.03	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.05	0.98	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.57
<b>Time Slice 1/1/2019-12/31/2019 Active</b>	<b>11.68</b>	<b>53.31</b>	<b>94.91</b>	<b>0.16</b>	<b>23.13</b>	<b>2.98</b>	<b>26.11</b>	<b>4.93</b>	<b>2.71</b>	<b>7.64</b>	<b>23,001.54</b>
Davs: 261											
Asphalt 06/03/2009-06/03/2030	1.65	10.08	9.34	0.00	0.01	0.78	0.79	0.00	0.72	0.72	1,432.43
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.63	10.04	8.69	0.00	0.00	0.78	0.78	0.00	0.72	0.72	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.02	0.03	0.65	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.40
Building 06/01/2009-06/01/2030	3.97	22.22	65.36	0.15	0.66	1.20	1.86	0.23	1.08	1.31	17,380.21
Building Off Road Diesel	1.88	11.39	12.14	0.00	0.00	0.57	0.57	0.00	0.52	0.52	2,259.28
Building Vendor Trips	0.94	8.60	9.61	0.05	0.17	0.35	0.51	0.06	0.31	0.37	4,714.25
Building Worker Trips	1.15	2.23	43.61	0.11	0.49	0.29	0.78	0.18	0.24	0.42	10,406.68
Coating 09/01/2009-09/01/2030	2.96	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	3.10	21.00	20.19	0.00	22.47	0.99	23.46	4.69	0.91	5.61	4,181.45
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	3.08	20.96	19.28	0.00	0.00	0.99	0.99	0.00	0.91	0.91	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.02	0.05	0.91	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.56
<b>Time Slice 1/1/2020-12/31/2020 Active</b>	<b>11.04</b>	<b>48.95</b>	<b>90.86</b>	<b>0.16</b>	<b>23.13</b>	<b>2.74</b>	<b>25.87</b>	<b>4.93</b>	<b>2.49</b>	<b>7.42</b>	<b>23,001.27</b>
Davs: 262											
Asphalt 06/03/2009-06/03/2030	1.53	9.42	9.26	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.43
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41



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Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.01	0.02	0.44	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.36
Building 06/01/2009-06/01/2030	3.07	17.32	48.73	0.15	0.66	1.04	1.69	0.23	0.93	1.16	17,378.17
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	0.66	5.39	7.05	0.04	0.17	0.23	0.40	0.06	0.21	0.26	4,715.04
Building Worker Trips	0.69	1.44	29.66	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,403.85
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	2.91	19.11	19.66	0.00	22.47	0.89	23.36	4.69	0.82	5.51	4,181.39
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.03	0.62	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.50
Time Slice 1/1/2025-12/31/2025 Active Days: 261	<u>10.46</u>	<u>45.85</u>	<u>77.50</u>	<u>0.16</u>	<u>23.13</u>	<u>2.66</u>	<u>25.79</u>	<u>4.93</u>	<u>2.42</u>	<u>7.35</u>	<u>22,999.39</u>
Asphalt 06/03/2009-06/03/2030	1.53	9.41	9.09	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.39
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.01	0.02	0.44	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.36
Building 06/01/2009-06/01/2030	3.07	17.32	48.73	0.15	0.66	1.04	1.69	0.23	0.93	1.16	17,378.17
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	0.66	5.39	7.05	0.04	0.17	0.23	0.40	0.06	0.21	0.26	4,715.04
Building Worker Trips	0.69	1.44	29.66	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,403.85
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	2.91	19.11	19.66	0.00	22.47	0.89	23.36	4.69	0.82	5.51	4,181.39
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.03	0.62	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.50
Time Slice 1/1/2026-12/31/2026 Active Days: 261	<u>10.17</u>	<u>44.67</u>	<u>70.48</u>	<u>0.16</u>	<u>23.13</u>	<u>2.63</u>	<u>25.77</u>	<u>4.93</u>	<u>2.39</u>	<u>7.32</u>	<u>22,998.60</u>
Asphalt 06/03/2009-06/03/2030	1.52	9.41	9.00	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.37
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.01	0.02	0.36	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.34
Building 06/01/2009-06/01/2030	2.78	16.16	41.93	0.15	0.66	1.01	1.67	0.23	0.90	1.13	17,377.42
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	0.58	4.55	6.08	0.04	0.17	0.20	0.37	0.06	0.18	0.24	4,715.44
Building Worker Trips	0.50	1.12	23.82	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,402.70
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	2.90	19.10	19.53	0.00	22.47	0.89	23.36	4.69	0.82	5.51	4,181.37
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.50	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.48
Time Slice 1/1/2027-12/31/2027 Active Days: 261	<u>10.17</u>	<u>44.67</u>	<u>70.48</u>	<u>0.16</u>	<u>23.13</u>	<u>2.63</u>	<u>25.77</u>	<u>4.93</u>	<u>2.39</u>	<u>7.32</u>	<u>22,998.60</u>
Asphalt 06/03/2009-06/03/2030	1.52	9.41	9.00	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.37
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62
Paving Worker Trips	0.01	0.02	0.36	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.34
Building 06/01/2009-06/01/2030	2.78	16.16	41.93	0.15	0.66	1.01	1.67	0.23	0.90	1.13	17,377.42
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	0.58	4.55	6.08	0.04	0.17	0.20	0.37	0.06	0.18	0.24	4,715.44
Building Worker Trips	0.50	1.12	23.82	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,402.70
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Fine Grading 03/01/2009-03/01/2030	2.90	19.10	19.53	0.00	22.47	0.89	23.36	4.69	0.82	5.51	4,181.37
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.01	0.02	0.50	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.48
Time Slice 1/3/2028-12/29/2028 Active Days: 260	<u>10.17</u>	<u>44.67</u>	<u>70.48</u>	<u>0.16</u>	<u>23.13</u>	<u>2.63</u>	<u>25.77</u>	<u>4.93</u>	<u>2.39</u>	<u>7.32</u>	<u>22,998.60</u>
Asphalt 06/03/2009-06/03/2030	1.52	9.41	9.00	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.37

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Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41	
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.01	0.02	0.36	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.34	
Building 06/01/2009-06/01/2030	2.78	16.16	41.93	0.15	0.66	1.01	1.67	0.23	0.90	1.13	17,377.42	
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28	
Building Vendor Trips	0.58	4.55	6.08	0.04	0.17	0.20	0.37	0.06	0.18	0.24	4,715.44	
Building Worker Trips	0.50	1.12	23.82	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,402.70	
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	
Fine Grading 03/01/2009-03/01/2030	2.90	19.10	19.53	0.00	22.47	0.89	23.36	4.69	0.82	5.51	4,181.37	
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00	
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fine Grading Worker Trips	0.01	0.02	0.50	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.48	
Time Slice 1/1/2029-12/31/2029 Active Days: 261	<u>10.17</u>	<u>44.67</u>	<u>70.48</u>	<u>0.16</u>	<u>23.13</u>	<u>2.63</u>	<u>25.77</u>	<u>4.93</u>	<u>2.39</u>	<u>7.32</u>	<u>22,998.60</u>	
Asphalt 06/03/2009-06/03/2030	1.52	9.41	9.00	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.37	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41	
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.01	0.02	0.36	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.34	
Building 06/01/2009-06/01/2030	2.78	16.16	41.93	0.15	0.66	1.01	1.67	0.23	0.90	1.13	17,377.42	
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28	
Building Vendor Trips	0.58	4.55	6.08	0.04	0.17	0.20	0.37	0.06	0.18	0.24	4,715.44	
Building Worker Trips	0.50	1.12	23.82	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,402.70	
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	
Fine Grading 03/01/2009-03/01/2030	2.90	19.10	19.53	0.00	22.47	0.89	23.36	4.69	0.82	5.51	4,181.37	
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00	
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fine Grading Worker Trips	0.01	0.02	0.50	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.48	
Time Slice 1/1/2030-3/1/2030 Active Days: 44	<u>10.17</u>	<u>44.67</u>	<u>70.48</u>	<u>0.16</u>	<u>23.13</u>	<u>2.63</u>	<u>25.77</u>	<u>4.93</u>	<u>2.39</u>	<u>7.32</u>	<u>22,998.60</u>	
Asphalt 06/03/2009-06/03/2030	1.52	9.41	9.00	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.37	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41	
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.01	0.02	0.36	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.34	
Building 06/01/2009-06/01/2030	2.78	16.16	41.93	0.15	0.66	1.01	1.67	0.23	0.90	1.13	17,377.42	
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28	
Building Vendor Trips	0.58	4.55	6.08	0.04	0.17	0.20	0.37	0.06	0.18	0.24	4,715.44	
Building Worker Trips	0.50	1.12	23.82	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,402.70	
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	
Fine Grading 03/01/2009-03/01/2030	2.90	19.10	19.53	0.00	22.47	0.89	23.36	4.69	0.82	5.51	4,181.37	
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00	
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fine Grading Worker Trips	0.01	0.02	0.50	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.48	
Time Slice 3/4/2030-5/31/2030 Active Days: 65	<u>7.27</u>	<u>25.57</u>	<u>50.95</u>	<u>0.16</u>	<u>0.66</u>	<u>1.74</u>	<u>2.41</u>	<u>0.24</u>	<u>1.57</u>	<u>1.81</u>	<u>18,817.23</u>	
Asphalt 06/03/2009-06/03/2030	1.52	9.41	9.00	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.37	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41	
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.01	0.02	0.36	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.34	
Building 06/01/2009-06/01/2030	2.78	16.16	41.93	0.15	0.66	1.01	1.67	0.23	0.90	1.13	17,377.42	
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28	
Building Vendor Trips	0.58	4.55	6.08	0.04	0.17	0.20	0.37	0.06	0.18	0.24	4,715.44	
Building Worker Trips	0.50	1.12	23.82	0.11	0.49	0.31	0.80	0.18	0.26	0.44	10,402.70	
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44	
Fine Grading 03/01/2009-03/01/2030	2.90	19.10	19.53	0.00	22.47	0.89	23.36	4.69	0.82	5.51	4,181.37	
Fine Grading Dust	0.00	0.00	0.00	0.00	22.46	0.00	22.46	4.69	0.00	4.69	0.00	
Fine Grading Off Road Diesel	2.89	19.08	19.04	0.00	0.00	0.89	0.89	0.00	0.82	0.82	3,963.89	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fine Grading Worker Trips	0.01	0.02	0.50	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.48	
Time Slice 6/3/2030-6/3/2030 Active Days: 1	<u>4.49</u>	<u>9.41</u>	<u>9.02</u>	<u>0.00</u>	<u>0.01</u>	<u>0.73</u>	<u>0.74</u>	<u>0.00</u>	<u>0.67</u>	<u>0.68</u>	<u>1,439.81</u>	
Asphalt 06/03/2009-06/03/2030	1.52	9.41	9.00	0.00	0.01	0.73	0.74	0.00	0.67	0.68	1,432.37	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	1.51	9.38	8.65	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,272.41	
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	
Paving Worker Trips	0.01	0.02	0.36	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.34	

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Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Time Slice 6/4/2030-8/30/2030 Active Days: 64	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Coating 09/01/2009-09/01/2030	2.96	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44
Architectural Coating	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.44

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 3/1/2009 - 3/1/2030 - Default Mass Site Grading/Excavation Description

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stabilizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

**Area Source Unmitigated Detail Report:**

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.90	11.94	7.40	0.00	0.02	0.02	14,815.69
Hearth - No Summer Emissions							
Landscape	0.74	0.12	9.27	0.00	0.03	0.03	16.85
Consumer Products	33.24						
Architectural Coatings	4.43						
<b>TOTALS (lbs/day, unmitigated)</b>	<b>39.31</b>	<b>12.06</b>	<b>16.67</b>	<b>0.00</b>	<b>0.05</b>	<b>0.05</b>	<b>14,832.54</b>

**Area Source Mitigated Detail Report:**

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.72	9.55	5.92	0.00	0.02	0.02	11,852.56
Hearth - No Summer Emissions							
Landscape	0.74	0.12	9.27	0.00	0.03	0.03	16.85
Consumer Products	33.24						
Architectural Coatings	3.99						
<b>TOTALS (lbs/day, mitigated)</b>	<b>38.69</b>	<b>9.67</b>	<b>15.19</b>	<b>0.00</b>	<b>0.05</b>	<b>0.05</b>	<b>11,869.41</b>

Area Source Mitigation Measures Selected

Mitigation Description	Percent Reduction
Residential Increase Energy Efficiency Beyond Title 24	20.00
Commercial Increase Energy Efficiency Beyond Title 24	20.00
Industrial Increase Energy Efficiency Beyond Title 24	20.00
For Residential Interior Use Low VOC Coating	10.00
For Residential Exterior Use Low VOC Coating	10.00
For Nonresidential Interior Use Low VOC Coating	10.00
For Nonresidential Exterior Use Low VOC Coating	10.00

Area Source Changes to Defaults

**Operational Unmitigated Detail Report:**

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Condo/townhouse general	9.21	7.50	85.72	0.26	43.05	8.36	25,987.27
Quality restaurant	22.23	23.70	259.38	0.82	135.33	26.22	81,078.39

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Hotel	3.54	3.01	32.82	0.10	17.16	3.32	10,275.16
General office building	2.30	2.19	24.48	0.08	12.58	2.44	7,559.38
Live Theater	0.64	0.72	7.80	0.02	4.09	0.79	2,446.16
Museum	0.85	0.87	9.46	0.03	4.95	0.96	2,965.04
<b>TOTALS (lbs/day, unmitigated)</b>	<b>38.77</b>	<b>37.99</b>	<b>419.66</b>	<b>1.31</b>	<b>217.16</b>	<b>42.09</b>	<b>130,311.40</b>

Operational Settings:

Does not include correction for passby trips  
 Does not include double counting adjustment for internal trips  
 Analysis Year: 2030 Temperature (F): 80 Season: Summer  
 Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	40.50	3.81	dwelling units	648.00	2,468.88	24,942.60
Quality resturant		27.91	1000 sq ft	305.79	8,534.60	78,450.03
Hotel		4.66	rooms	235.00	1,095.10	9,946.25
General office building		7.72	1000 sq ft	92.78	716.26	7,289.75
Live Theater		176.00	acres	1.50	264.00	2,368.87
Museum		16.00	1000 sq ft	20.00	320.00	2,871.36
					13,398.84	125,868.86

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.1	0.0	100.0	0.0
Light Truck < 3750 lbs	7.0	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.1	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.4	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.9	0.0	78.9	21.1
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.4	33.3	66.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commuter	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Quality resturant	8.0	4.0	88.0
Hotel	5.0	2.5	92.5
General office building	35.0	17.5	47.5
Live Theater	2.0	1.0	97.0
Museum	2.0	1.0	97.0

Operational Changes to Defaults

Combined Winter Emissions Reports (Pounds/Day)

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Project Name: Huntington Beach DTSP-2030

Project Location: Orange County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	21.43	121.84	160.22	0.16	333.68	7.47	341.14	69.78	6.85	76.63	23,014.77
2009 TOTALS (lbs/day mitigated)	21.43	121.84	160.22	0.16	23.13	7.47	30.60	4.93	6.85	11.78	23,014.77
2010 TOTALS (lbs/day unmitigated)	20.19	113.93	151.43	0.16	333.68	6.98	340.65	69.78	6.40	76.18	23,011.14
2010 TOTALS (lbs/day mitigated)	20.19	113.93	151.43	0.16	23.13	6.98	30.11	4.93	6.40	11.33	23,011.14
2011 TOTALS (lbs/day unmitigated)	18.99	105.96	143.16	0.16	333.68	6.58	340.26	69.78	6.03	75.81	23,008.45
2011 TOTALS (lbs/day mitigated)	18.99	105.96	143.16	0.16	23.13	6.58	29.71	4.93	6.03	10.96	23,008.45
2012 TOTALS (lbs/day unmitigated)	17.88	98.21	135.32	0.16	333.68	6.03	339.70	69.78	5.52	75.30	23,006.70
2012 TOTALS (lbs/day mitigated)	17.88	98.21	135.32	0.16	23.13	6.03	29.16	4.93	5.52	10.45	23,006.70
2013 TOTALS (lbs/day unmitigated)	16.78	90.86	127.87	0.16	333.68	5.50	339.18	69.78	5.03	74.82	23,005.80
2013 TOTALS (lbs/day mitigated)	16.78	90.86	127.87	0.16	23.13	5.50	28.63	4.93	5.03	9.96	23,005.80
2014 TOTALS (lbs/day unmitigated)	15.79	83.70	121.18	0.16	333.68	4.96	338.63	69.78	4.53	74.31	23,004.94
2014 TOTALS (lbs/day mitigated)	15.79	83.70	121.18	0.16	23.13	4.96	28.09	4.93	4.53	9.46	23,004.94
2015 TOTALS (lbs/day unmitigated)	14.81	76.25	114.84	0.16	333.68	4.56	338.23	69.78	4.16	73.95	23,004.31
2015 TOTALS (lbs/day mitigated)	14.81	76.25	114.84	0.16	23.13	4.56	27.69	4.93	4.16	9.09	23,004.31
2016 TOTALS (lbs/day unmitigated)	13.94	69.66	109.34	0.16	333.68	4.09	337.76	69.78	3.73	73.51	23,003.12
2016 TOTALS (lbs/day mitigated)	13.94	69.66	109.34	0.16	23.13	4.09	27.22	4.93	3.73	8.66	23,003.12
2017 TOTALS (lbs/day unmitigated)	13.16	63.70	104.16	0.16	333.68	3.70	337.38	69.78	3.38	73.16	23,002.36
2017 TOTALS (lbs/day mitigated)	13.16	63.70	104.16	0.16	23.13	3.70	26.84	4.93	3.38	8.31	23,002.36
2018 TOTALS (lbs/day unmitigated)	12.37	58.25	99.36	0.16	333.68	3.33	337.00	69.78	3.03	72.82	23,001.85
2018 TOTALS (lbs/day mitigated)	12.37	58.25	99.36	0.16	23.13	3.33	26.46	4.93	3.03	7.96	23,001.85
2019 TOTALS (lbs/day unmitigated)	11.68	53.31	94.91	0.16	333.68	2.98	336.65	69.78	2.71	72.49	23,001.54
2019 TOTALS (lbs/day mitigated)	11.68	53.31	94.91	0.16	23.13	2.98	26.11	4.93	2.71	7.64	23,001.54
2020 TOTALS (lbs/day unmitigated)	11.04	48.95	90.86	0.16	333.68	2.74	336.41	69.78	2.49	72.27	23,001.27
2020 TOTALS (lbs/day mitigated)	11.04	48.95	90.86	0.16	23.13	2.74	25.87	4.93	2.49	7.42	23,001.27
2021 TOTALS (lbs/day unmitigated)	10.46	45.85	77.50	0.16	333.68	2.66	336.34	69.78	2.42	72.20	22,999.39
2021 TOTALS (lbs/day mitigated)	10.46	45.85	77.50	0.16	23.13	2.66	25.79	4.93	2.42	7.35	22,999.39
2022 TOTALS (lbs/day unmitigated)	10.46	45.85	77.50	0.16	333.68	2.66	336.34	69.78	2.42	72.20	22,999.39
2022 TOTALS (lbs/day mitigated)	10.46	45.85	77.50	0.16	23.13	2.66	25.79	4.93	2.42	7.35	22,999.39
2023 TOTALS (lbs/day unmitigated)	10.46	45.85	77.50	0.16	333.68	2.66	336.34	69.78	2.42	72.20	22,999.39
2023 TOTALS (lbs/day mitigated)	10.46	45.85	77.50	0.16	23.13	2.66	25.79	4.93	2.42	7.35	22,999.39
2024 TOTALS (lbs/day unmitigated)	10.46	45.85	77.50	0.16	333.68	2.66	336.34	69.78	2.42	72.20	22,999.39
2024 TOTALS (lbs/day mitigated)	10.46	45.85	77.50	0.16	23.13	2.66	25.79	4.93	2.42	7.35	22,999.39
2025 TOTALS (lbs/day unmitigated)	10.46	45.85	77.50	0.16	333.68	2.66	336.34	69.78	2.42	72.20	22,999.39
2025 TOTALS (lbs/day mitigated)	10.46	45.85	77.50	0.16	23.13	2.66	25.79	4.93	2.42	7.35	22,999.39
2026 TOTALS (lbs/day unmitigated)	10.17	44.67	70.48	0.16	333.68	2.63	336.31	69.78	2.39	72.18	22,998.60
2026 TOTALS (lbs/day mitigated)	10.17	44.67	70.48	0.16	23.13	2.63	25.77	4.93	2.39	7.32	22,998.60
2027 TOTALS (lbs/day unmitigated)	10.17	44.67	70.48	0.16	333.68	2.63	336.31	69.78	2.39	72.18	22,998.60
2027 TOTALS (lbs/day mitigated)	10.17	44.67	70.48	0.16	23.13	2.63	25.77	4.93	2.39	7.32	22,998.60
2028 TOTALS (lbs/day unmitigated)	10.17	44.67	70.48	0.16	333.68	2.63	336.31	69.78	2.39	72.18	22,998.60
2028 TOTALS (lbs/day mitigated)	10.17	44.67	70.48	0.16	23.13	2.63	25.77	4.93	2.39	7.32	22,998.60
2029 TOTALS (lbs/day unmitigated)	10.17	44.67	70.48	0.16	333.68	2.63	336.31	69.78	2.39	72.18	22,998.60
2029 TOTALS (lbs/day mitigated)	10.17	44.67	70.48	0.16	23.13	2.63	25.77	4.93	2.39	7.32	22,998.60
2030 TOTALS (lbs/day unmitigated)	10.17	44.67	70.48	0.16	333.68	2.63	336.31	69.78	2.39	72.18	22,998.60

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 2030 TOTALS (lbs/day mitigated) 10.17 44.67 70.48 0.16 23.13 2.63 25.77 4.93 2.39 7.32 22,998.60

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	140.07	19.64	288.58	0.78	43.61	41.98	25,202.25
TOTALS (lbs/day, mitigated)	139.45	17.25	287.10	0.78	43.61	41.98	22,239.12
Percent Reduction	0.44	12.17	0.51	0.00	0.00	0.00	11.76

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	41.68	45.56	392.35	1.09	217.16	42.09	117,579.52

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	181.75	65.20	680.93	1.87	260.77	84.07	142,781.77

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.90	11.94	7.40	0.00	0.02	0.02	14,815.69
Hearth	101.50	7.70	281.18	0.78	43.59	41.96	10,386.56
Landscaping - No Winter Emissions							
Consumer Products	33.24						
Architectural Coatings	4.43						
<b>TOTALS (lbs/day, unmitigated)</b>	<b>140.07</b>	<b>19.64</b>	<b>288.58</b>	<b>0.78</b>	<b>43.61</b>	<b>41.98</b>	<b>25,202.25</b>

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.72	9.55	5.92	0.00	0.02	0.02	11,852.56
Hearth	101.50	7.70	281.18	0.78	43.59	41.96	10,386.56
Landscaping - No Winter Emissions							
Consumer Products	33.24						
Architectural Coatings	3.99						
<b>TOTALS (lbs/day, mitigated)</b>	<b>139.45</b>	<b>17.25</b>	<b>287.10</b>	<b>0.78</b>	<b>43.61</b>	<b>41.98</b>	<b>22,239.12</b>

Area Source Mitigation Measures Selected

<u>Mitigation Description</u>	<u>Percent Reduction</u>
Residential Increase Energy Efficiency Beyond Title 24	20.00
Commercial Increase Energy Efficiency Beyond Title 24	20.00
Industrial Increase Energy Efficiency Beyond Title 24	20.00
For Residential Interior Use Low VOC Coating	10.00
For Residential Exterior Use Low VOC Coating	10.00
For Nonresidential Interior Use Low VOC Coating	10.00
For Nonresidential Exterior Use Low VOC Coating	10.00

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Condo/townhouse general	9.09	9.01	79.94	0.22	43.05	8.36	23,464.28
Quality restaurant	24.95	28.42	242.73	0.68	135.33	26.22	73,143.01
Hotel	3.53	3.61	30.74	0.09	17.16	3.32	9,269.08

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General office building	2.44	2.62	22.77	0.06	12.58	2.44	6,822.01
Live Theater	0.74	0.86	7.31	0.02	4.09	0.79	2,206.54
Museum	0.93	1.04	8.86	0.02	4.95	0.96	2,674.60
<b>TOTALS (lbs/day, unmitigated)</b>	<b>41.68</b>	<b>45.56</b>	<b>392.35</b>	<b>1.09</b>	<b>217.16</b>	<b>42.09</b>	<b>117,579.52</b>

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 60 Season: Winter

Erfac: Version : Erfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	40.50	3.81	dwelling units	648.00	2,468.88	24,942.60
Quality restaurant		27.91	1000 sq ft	305.79	8,534.60	78,450.03
Hotel		4.66	rooms	235.00	1,095.10	9,946.25
General office building		7.72	1000 sq ft	92.78	716.26	7,289.75
Live Theater		176.00	acres	1.50	264.00	2,368.87
Museum		16.00	1000 sq ft	20.00	320.00	2,871.36
					<b>13,398.84</b>	<b>125,868.86</b>

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.1	0.0	100.0	0.0
Light Truck < 3750 lbs	7.0	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.1	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.4	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.9	0.0	78.9	21.1
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.4	33.3	66.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commuter	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Quality restaurant	8.0	4.0	88.0
Hotel	5.0	2.5	92.5
General office building	35.0	17.5	47.5
Live Theater	2.0	1.0	97.0
Museum	2.0	1.0	97.0

Operational Changes to Defaults

