5.3 AIR QUALITY

This section evaluates short-term (construction) and long-term (operational) impacts to air quality that would potentially occur as a result of implementation of the proposed Plan. Impacts are evaluated for their significance based on the South Coast Air Quality Management District's (SCAQMD) enumerated environmental thresholds. Mitigation measures required to reduce impacts are recommended as appropriate. Technical information related to the analysis below is contained in *Appendix E* of this EIR. Impacts associated with greenhouse gases and global climate change are discussed within Section 5.8, *Global Climate Change*.

5.3.1 Existing Setting

Existing Regional Meteorological Conditions

Southern California's weather patterns are largely the result of a semi-permanent high pressure system which lies to the west. The semi-permanent Pacific high pressure system, coupled with daytime heating, typically produces an onshore sea breeze during the daytime. At night, an offshore breeze is typically caused by radiational cooling of the land. Southern California is divided into several geographical air basins. The Plan area is located within the Coastal section of the South Coast Air Basin (SCAB). SCAB is the nation's second largest urban area and California's largest metropolitan region. It includes the southern two-thirds of Los Angeles County, all of Orange County, and western, urbanized portions of Riverside and San Bernardino counties.

Malibu's climate is classified as dry summer subtropic or Mediterranean. Regions within this climate zone are characterized by hot, dry summers with relatively cool, moist winters. In addition to the semi-permanent Pacific High Pressure Cell (Pacific High), Malibu's climate is also controlled by the cold water California Current. The summer climate is strongly influenced by stable air flowing out of the Pacific High to the west. During the Malibu winter the Pacific High migrates south putting the City on the fringe of the influence of a low pressure cell. The combined effect of these meteorological and oceanographic systems is a tempering of local weather such that extremes of wind, temperature and precipitation are relatively uncommon.

Skies are mostly clear from mid-summer through autumn. Heavy cloud cover and fog occur primarily during spring and early summer when stratus clouds associated with the marine layer move in from the west. Malibu experiences an average high of approximately 66 degrees Fahrenheit (°F) and an average low of approximately 56°F.

Annual average rainfall is 13.5 inches, with the majority of precipitation occurring from November to March. Prevailing winds along the Malibu coast are westerly and northwesterly. During the fall, Santa Ana winds reverse the prevailing air flow and bring dry, hot gusts to the area.

Air quality in the South Coast Air Basin, in which the Plan area is located, is affected not only by the emission sources located within the region, but also to a large extent by three natural factors or combinations of (a) terrain; (b) a dominant on-shore flow; and (c) atmospheric inversion. The first of these factors, terrain, is static but plays a significant role by placing a natural barrier to emission dispersion north and east of the metropolitan Los Angeles area.

The second factor, air flow, provides the driving mechanism for both air pollution transport and dispersion. Within the region, air flow is predominantly on-shore. Air pollution, under such conditions, is driven toward a natural terrain barrier (i.e., mountains, etc.). The effect of this second factor can be seen as a gradual degradation of air quality from coastal to inland areas. Malibu is typical of some of the South Coast Air Basin's best air quality areas because of its location along the coast, upwind from most mobile and stationary sources. The greatest air-flow related impacts can be seen in the San Gabriel Valley and near Riverside at the foot of the San Gabriel Mountains.

The third factor which affects air quality involves atmospheric inversions which limit dispersion of air pollution on a vertical scale. Two types of temperature inversions (warmer air on top of colder air) are created in the Malibu Coastal area: subsidence and radiational (surface). The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low-pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but is most evident during the summer months. The more rapid cooling of air near the ground at night, especially during winter, forms surface inversions. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed. The primary air pollutant of concern during the subsidence inversions is ozone, while carbon monoxide and nitrogen oxides are of greatest concern during winter inversions.

Air Quality Characteristics

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological

conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed sensitive receptors (further defined below) are the most serious hazards of existing air quality conditions in the area.

Primary criteria pollutants are emitted directly from a source (e.g., an automobile) into the atmosphere; these include carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2) and particulates.[1] Reactive organic compounds (ROC) (also known as reactive organic gases, or ROG) are also primary pollutants, but are not "criteria" pollutants (see discussion below). Secondary pollutants are created by atmospheric chemical and photochemical reactions. Secondary pollutants include oxidants, ozone (O_3) and sulfate particulates; these oxidants are commonly referred to as "smog".

Regulatory Setting

Federal

The federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the CAA, which include National Ambient Air Quality Standards (NAAQS) for major air pollutants, hazardous air pollutant standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions. NAAQS are established for "criteria pollutants" under the CAA, which are O_3, CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead (Pb).

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation; these NAAQS may not be exceeded more than once a year, except annual standards, which may never be exceeded. The CAA requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States such as California with areas that exceed the NAAQS must prepare a State Implementation Plan (SIP) that demonstrates how those areas will attain the standards within mandated time frames.

[1] Particulate matter is generally comprised of inert particles that become airborne, such as dust or ash. Particulate matter which is less than 10 microns in diameter is referred to as PM_{10}.

State

The CAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to the California Air Resources Board (CARB), with subsidiary responsibilities assigned to Air Quality Management Districts (AQMDs) and air pollution control districts (APCDs) at the regional and county levels. CARB, which became part of the California Environmental Protection Agency (Cal-EPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act (CCAA) of 1988, responding to the federal CAA, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are more restrictive than the NAAQS, consistent with the CAA, which requires state regulations to be at least as restrictive as the federal requirements. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered in "attainment" if pollutant levels are continuously below the standards and violate the standards no more than once each year. The NAAQS and CAAQS are presented in Table 5.3-1 California and National Ambient Air Quality Standards.

Table 5.3-1

California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a,c]	National Standards [b]	
			Primary [c,d]	Secondary [c,e]
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	—	Same as primary
	8-hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	Same as primary
Carbon monoxide (CO)	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
Nitrogen dioxide (NO_2)	Annual	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as primary
	1-hour	0.18 ppm (339 µg/m^3)	—	—
Sulfur dioxide (SO_2)	Annual	—	0.030 ppm (80 µg/m^3)	—
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	—
	3-hour	—	—	0.5 ppm (1,300 µg/m^3)
	1-hour	0.25 ppm	—	—

Table 5.3-1

California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a,c]	National Standards [b]	
			Primary [c,d]	Secondary [c,e]
		(655 µg/m^3)		
Respirable Particulate Matter (PM_{10})	Annual	20 µg/m^3	—	Same as primary
	24-hour	50 µg/m^3	150 µg/m^3	Same as primary
Fine Particulate Matter ($PM_{2.5}$)	Annual	12 µg/m^3	15.0 µg/m^3	Same as primary
	24-hour	—	35 µg/m^3	Same as primary
Lead [f]	30-day	1.5 µg/m^3	---	---
	Quarterly	—	1.5 µg/m^3	Same as primary
	Rolling 3-Month Average [g]	—	0.15 µg/m^3	
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	—	—
Sulfates	24-hour	25 µg/m^3	—	—
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)		
Visibility reducing particles	8-hour (10 AM to 6 PM PST)	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%.	—	—

Source: CARB 2008

Notes:

[a] California standards for O_3, CO, sulfur dioxide (1 and 24 hour), NO_2, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, 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^3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98% of the daily concentrations, averaged over three years, are equal to or less than the standard.

[c] 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.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] CARB 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.

[g] National lead standard, rolling 3-month average: final rule signed October 15, 2008.

Local

While CARB is responsible for the regulation of mobile emission sources within the state, local AQMDs and APCDs are responsible for enforcing standards and regulating stationary sources. The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SCAB, where the proposed Plan is located. The SCAQMD operates monitoring stations in the SCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's Air Quality Management Plans (AQMP) include control measures and strategies to be implemented to attain state and federal ambient air quality standards in the SCAB. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

The SCAQMD Governing Board adopted the 2003 AQMP on August 1, 2003. The 2003 AQMP updates the attainment demonstration for the federal standards for O_3 and PM_{10}; replaces the 1997 attainment demonstration for the federal CO standard, provides a basis for a maintenance plan for CO for the future; and updates the maintenance plan for the federal NO_2 standard that the SCAB has met since 1992. The 2007 AQMP includes the same updates as the 2003 AQMP and also incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools. As part of the 2007 AQMP, the SCAQMD request that EPA "bump up" the O_3 nonattainment status from severe to extreme to allow additional time for the SCAB to achieve attainment with the federal standard. The additional time would provide for implementation of state and federal measures that apply to sources over which the SCAQMD does not have control. The 2007 AQMP has been approved by CARB but is undergoing review by EPA.

Emissions that would result from mobile, stationary, and areas sources during construction and operation of the proposed Plan are subject to the rules and regulations of the SCAQMD. The SCAQMD rules applicable to the proposed Plan may include the following:

<u>Rule 403 (Fugitive Dust):</u> This rule requires fugitive dust sources to implement Best Available Control Measures for all sources and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust (see also Rule 1186, below).

Rule 431.2 (Sulfur Content of Liquid Fuels): The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of SO_x and particulates during combustion and to enable the use of add-on control devices for diesel fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary source applications in the SCAB. The rule also affects diesel fuel supplied for mobile source applications.

Rule 1113 (Architectural Coatings): This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Rule 1186 (PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations): This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the clean-up of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Southern California Association of Governments (SCAG)

SCAG is a council of governments for the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. As a regional planning agency, SCAG serves as a forum for regional issues relating to transportation, economy, community development, and the environment. SCAG also serves as the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews projects to analyze their impacts on SCAG's regional planning efforts.
Although SCAG is not an air quality management agency, it is responsible for several air quality planning issues. As the designated Metropolitan Planning Organization (MPO) for the Southern California region, it is responsible, pursuant to §176(c) of the 1990 amendments to the CAA, for providing current population, employment, travel, and congestion projections for regional air quality planning efforts.

Pollution Constituents, Effects, and Attainment Status

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health (see Table 5.3-1 for standards). Pollutants of

concern include: O_3, NO_2, CO, SO_2, $PM_{2.5}$, PM_{10}, and Pb. These pollutants are discussed below.[2]

Ozone (O_3). Ozone is a strong smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and ozone precursors, such as hydrocarbons and oxides of nitrogen. These precursors are mainly NO_x and VOCs (also referred to as reactive organic compounds or gases [ROC or ROG]). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Ozone exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ozone). Ozone in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. Ozone levels peak during summer and early fall.

The entire SCAB is designated as a nonattainment area for both federal and state ozone standards. The EPA has classified the SCAB as a "severe" nonattainment area and has mandated that the SCAB achieve attainment by no later than 2021.

Carbon Monoxide (CO). Carbon monoxide is a colorless and odorless gas formed by the incomplete combustion of hydrocarbon, or fossil, fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas such as the Plan location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest

[2] The following descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are partially based on the EPA *Six Common Air Pollutants* (EPA 2008c) and the California Air Resources Board *Glossary of Air Pollutant Terms* (CARB 2008c) published information.

levels of CO typically occur during the colder months of the year when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

The SCAB is designated as an attainment area for both federal and state CO standards.

Nitrogen Dioxide (NO_2). Nitrogen dioxide is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_X plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. Oxides of nitrogen are formed from fuel combustion under high temperature or pressure. In addition, NO_X is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections.

The entire SCAB has not exceeded either federal or state standards for NO_2 in the past five years based published monitoring data. It is designated as an attainment area under the federal and state standards. The state NO_2 standard was revised in 2008, but new designations have not been adopted.

Sulfur Dioxide (SO_2). Sulfur dioxide is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with fine particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

The entire SCAB is in attainment with both federal and state SO_2 standards.

Particulate Matter ($PM_{2.5}$, PM_{10}). Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_X), NO_X, and VOC. Inhalable particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning, industrial sources, windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive are smokers and people who cannot breathe well through their noses, as well as exercising athletes because many breathe through their mouths.

The SCAB is designated as a "serious" nonattainment area for federal PM_{10} standards and as a nonattainment area for state PM_{10} standards. In regards to $PM_{2.5}$ attainment status, the SCAB is designated as a nonattainment area by CARB and by the EPA.

Lead (Pb). Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline, the manufacturing of batteries, paints and other old coatings, ink, ceramics, and ammunition and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth. Accordingly, children are highly susceptible to the effects of lead.

The entire SCAB is in attainment for the federal and state standards for lead.

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans. A toxic substance released into the air is considered a toxic air contaminant (TAC). TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act, Assembly Bill 1807. This two-step process of risk identification and risk management was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill 2588 was enacted by the Legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emission sources, location of resulting "hot spots," notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over five years.

Significant sources of TACs in the environment include industrial processes, such as petroleum refining, chemical manufacturing, electric utilities, metal mining/refining and chrome plating; commercial operations, such as gasoline stations, dry cleaners and

buildings with boilers and/or emergency generators; and transportation activities, particularly diesel-powered vehicles, including trains, buses, and trucks. CARB has determined that the 10 compounds that pose the greatest known health risk in California, based primarily on ambient air quality data, are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (CARB 2009b). Table 5.3-2, below, summarizes the federal and state attainment classifications for the South Coast Air Basin.

Table 5.3-2
South Coast Air Basin Attainment Classification

NATIONAL [a]		
Pollutant	**Averaging Time**	**Designation/Classification**
Ozone (O_3)	8 hour	Nonattainment/severe
Nitrogen dioxide (NO_2)	Annual arithmetic mean	Attainment
Carbon monoxide (CO)	1 hour, 8 hour	Attainment
Sulfur dioxide (SO_2)	24 hour, annual arithmetic mean	Unclassifiable
Respirable particulate matter (PM_{10})	24 hour	Nonattainment/serious
Fine particulate matter ($PM_{2.5}$)	24 hour, annual arithmetic mean	Nonattainment
Lead (Pb)	Calendar quarter	Attainment
STATE [b]		
Pollutant	**Averaging Time**	**Designation/Classification**
Ozone (O_3)	1 hour, 8 hour	Nonattainment[1]
Nitrogen dioxide (NO_2)	1 hour, Annual	Attainment[2]
Carbon monoxide (CO)	1 hour, 8 hour	Attainment
Sulfur dioxide (SO_2)	1 hour, 24 hour	Attainment
Respirable particulate matter (PM_{10})	24 hour, annual arithmetic mean	Nonattainment
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	Nonattainment
Lead (Pb)[3]	30 day average	Attainment
Sulfates (SO_4)	24 hour	Attainment
Hydrogen sulfide (H_2S)	1 hour	Unclassified
Vinyl chloride[3]	24 hour	Unclassified
Visibility-reducing particles	8 hour (10:00 a.m.–6:00 p.m.)	Unclassified

Source: [a] EPA 2010, [b] CARB 2009a.
1 CARB has not issued area classification based on the new state 8-hour standard. The previous classification for the 1-hour O_3 standard was Extreme.
2 CARB has not issued area classification based on the new state 1-hour and annual standards.
3 CARB has identified Pb, vinyl chloride, and TACs with no threshold level of exposure for adverse health effects determined.

Existing Local Air Quality

The SCAQMD maintains ambient air quality monitoring stations throughout the SCAB. The closest ambient air quality monitoring station to the Plan site is the Los Angeles VA Hospital monitoring station, which measures O_3, CO, and NO_2. For PM_{10}, $PM_{2.5}$, and SO_2, values from the monitoring station closest to the Plan site that measures that specific pollutant were used in this analysis, as presented in Table 5.3-3, Ambient Air Quality Data. The most recent background ambient air quality data from 2006 through 2008 are presented in Table 5.3-3 below. Since these monitoring stations are inland from Malibu, and since Malibu is located on the coast, its air quality tends to be better than the air quality at these inland monitoring stations

Table 5.3-3
Ambient Air Quality Data

Pollutant	2006	2007	2008
O_3 [a]			
Maximum 1-hour concentration (ppm)	0.099	0.117	0.111
# of days of State exceedances (>0.09 ppm)	**3**	**2**	**3**
Maximum 8-hour average concentration (ppm)	0.74	0.88	0.097
# of days of State exceedances (>0.070 ppm)	**2**	**2**	**8**
# of days of Fed. exceedances (>0.08 ppm for 2006-07, >0.075 ppm for 2008)	0	**2**	**2**
CO [a]			
Max. Concentration 1 hour (ppm)**	2.9	2.7	2.7
# of days of State exceedances (>20 ppm)	0	0	0
Max. Concentration 8 hours (ppm)	2.00	1.96	1.76
# of days of State exceedances (>9.0 ppm)	0	0	0
NO_2 [a]			
Max. Concentration 1-hour (ppm)	0.078	0.082	0.090
# of days of State exceedances (>0.25 ppm)	0	0	0
Annual arithmetic mean	0.017	0.019	0.018
PM_{10} [b]			
Max. concentration 24-hour (µg/m^3)	45.0	128.0	50.0
# of State exceedances (>50 µg/m^3)	0	**3**	0
# of Fed. exceedances (>150 µg/m^3)	0	0	0
Annual arithmetic mean (State standard = 20 µg/m^3)	27	29	26/25
$PM_{2.5}$ [c]			
Max. concentration (µg/m^3)	44.0	43.3	50.5
# of Fed. exceedances (>35 µg/m^3)	**1**	**1**	**1**
Annual arithmetic mean (15.0 µg/m^3)	12.84	13.25	9.58

Table 5.3-3
Ambient Air Quality Data

Pollutant	2006	2007	2008
SO_2 [b]			
Maximum 1-hour concentration (ppm)**	0.021	0.019	0.017
# of days of State exceedances (>0.25 ppm)	0	0	0
Maximum 24-hour average concentration (ppm)	0.010	0.009	0.004
# of days of State exceedances (>0.04 ppm)	0	0	0
# of days of Fed. exceedances (>0.14 ppm)	0	0	0
Annual arithmetic mean (0.30 ppm)	0.002	0.003	0.001

Source: CARB 2009a
** Data were taken from EPA AirData 2009
[a] Los Angeles-VA Hospital (VA Hospital, West Los Angeles)
[b] Los Angeles- Westchester Parkway LAX (7201 W. Westchester Parkway)
[c] Reseda (18330 Gault St., Reseda)

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. The potential for adverse air quality impacts increases as the distance between the source of emissions and members of the public decreases; as such, impacts on sensitive receptors are of particular concern. Sensitive receptors are identifiable subsets of the general population that are at greater risk than the general population to the adverse effects of a specific air pollutant, which subsets includes children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Hospitals and other medical facilities, schools, daycare centers, convalescent facilities, and residential areas are examples of sensitive land uses that are inhabiteted or used by sensitive receptors.

The nearest sensitive receptors to the Plan site are the existing park and trail areas within and adjacent to the Plan site and the low density, large lot single-family residential homes located immediately to the west, south, and east of the Plan site.

5.3.2 Impact Analysis

Methodology

Construction

Construction activities, including soil disturbance dust emissions and combustion pollutants from on-site construction equipment and from off-site haul trucks, would create a temporary addition of pollutants to the local airshed. These emissions are variable in time and space and differ considerably among construction projects. Such emission levels can, therefore, only be estimated.

Emissions from the construction phase of the Plan were estimated through the use of emission factors from 1) the URBEMIS 2007, Version 9.2.4, land use and air emissions model and 2) the emission factors for delivery trucks available from SCAQMD (SCAQMD 2009).

At the time of preparation of the EIR, a specific phasing program for Plan implementation had not yet been developed. Therefore, in order to assess the worst-case daily construction emissions for comparison to the SCAQMD's emission-based significance thresholds (see below), the construction emissions for each park and its associated trails were estimated separately and then added together, assuming that all construction would commence at the same time in March 2010. Because off-road equipment and motor vehicle emissions decrease over time due to improvements in these fleets, an earlier start date would result in higher emissions. If construction activity within a park were to commence at a later date, then the emissions would be less than those evaluated in this assessment. Accordingly, although Spring 2010 is not a likely construction start date, it is considered a conservative approach as it would result in the greatest emission estimates.

The overall construction periods for construction activity associated with parking lots and park improvements at each park are shown below.

- Ramirez Canyon Park (Kanan Dume Road) – 10 weeks
- Ramirez Canyon Park – 12 weeks
- Escondido Canyon Park – 12 weeks
- Latigo Trailhead – 10 weeks
- Corral Canyon Park – 12 weeks
- Malibu Bluffs– 16 weeks

The overall construction periods for trail improvements was conservatively assumed to be concurrent with that for parking lots and park improvements for each respective park area. Therefore, it was assumed that construction of all Plan improvements would both begin and be completed in 2010.

Construction within each portion of the Plan area would generally consist of 6 following elements:

1. Grading of parking lot(s), retaining wall work, and import/ export of excess soil
2. Paving of parking lot(s) and road(s), including driveway areas
3. Trenching for utility lines, including water lines
4. Grading for park improvements, including campsites and pads for restrooms, and import/ export of excess soil
5. Construction of restrooms, emergency fire shelters, and other structures
6. Grading and construction of trail improvements

The Kanan Dume Road parking lot improvements would only include items 1-2 above. In addition to items 1-6 above, Ramirez Canyon improvements would also include demolition and removal of remnant uses, including the tennis courts. The construction emissions have been conservatively estimated such that the maximum daily emissions for each Plan park site have been identified.

In addition to the 5 Park sites (including Kanan Dume), described above, the Plan also proposes improvements to Ramirez Canyon Road, Delaplane Road, Via Acero Road, and Ramirez Creek. Overall construction period for those improvements are as follows:

- Ramirez Canyon Road and Delaplane Road Widening- 10 weeks
- Via Acero Roadway Improvements- 10 weeks
- Ramirez Creek Restoration/Enhancement- 8 weeks

Unlike the construction activity at the Park sites, construction phasing for the three roadways and Ramirez Creek improvements do not follow a general construction scenario. Construction phases and equipment are presented in Table 5.3-4g-I. See Appendix E for additional construction modeling inputs. Similar to the Park sites, construction emissions have been conservatively estimated to provide the maximum daily emissions at each construction site.

For the parking lots and roadway improvements, the total and daily areas to be graded and paved were conservatively estimated based on the proposed Concept Plans

(Penfield & Smith, 2010). The default equipment fleets in URBEMIS 2007 were used for this activity. Similarly, the total and daily areas to be graded for park and other various improvements were estimated and the default fleets were used. For trail improvements, MRCA provided the following list of off-road equipment that would be used (the URBEMIS equivalent equipment type and engine horsepower assumed for this analysis follow in parentheses) (Tholund, 2009):

- 1 Sweco trail dozer (crawler tractor – 80 horsepower)
- 1 Bobcat loader (skid steer – 44 horsepower)
- 1 mini excavator (excavator – 50 horsepower)
- 1 4x4 ATV with attachments or trailers (other equipment – 50 horsepower)

For each construction area, the construction equipment used for this assessment is shown in Tables 5.3-4a-i, Construction Equipment. Except for the trail improvements (identified above), the number and type of equipment are those provided within URBEMIS 2007 model for the specific identified activity (e.g., grading, etc). To account for export of excess soil from parking lots, campsites, and other grading activities, URBEMIS 2007 estimates the number of total and daily trucks required to haul the soil to a disposal site, which is based on the total amount of import and export, duration of the construction phase (days), and haul truck capacity. Anticipated import and export quantities is based on estimated cut and fill generated at each construction site; these estimates were provided by the project civil engineer (Penfield & Smith, 2010). It is assumed that each truck has a capacity of 20 CY, with the exception of Ramirez Creek Restoration/Enhancement where maximum truck capacity is assumed to be 10 CY. The travel distance from the haul trucks to the closest deposit site is estimated to range from 20 miles to 32 miles one-way trip depending upon the location of the construction site in relation to the closest landfill, which for modeling purposes was assumed to be the Calabasas Landfill located at 5300 Lost Hills Road, Agoura Hills, California. The number of haul trucks is not shown in Tables 5.3-4a-i, but is included in the URBEMIS 2007 output located within *Appendix E*.

Table 5.3-4a

Ramirez Canyon (Kanan Dume Road) Construction Equipment

Construction Phase	Equipment	Number
Fine Grading (Parking)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Paving (Parking)	Cement and Mortar Mixer	4
	Paver	1
	Roller	1
	Tracker/Loader/Backhoe	1

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E).

Table 5.3-4b

Ramirez Canyon Construction Equipment

Construction Phase	Equipment	Number
Demolition	Concrete/Industrial Saw	1
	Rubber Tired Dozer	1
	Tracker/Loader/Backhoe	2
Fine Grading (Parking)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Paving (Parking)	Cement and Mortar Mixer	4
	Paver	1
	Roller	1
	Tracker/Loader/Backhoe	1
Trenching (Utility Improvements)	Excavator	2
	Other General Equipment	1
	Tracker/Loader/Backhoe	1
Fine Grading (Park Improvements)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Building Construction (Miscellaneous Building Improvements)	Cement and Mortar Mixer	1
	Crane	1
	Forklift	1
	Generator Set	1

Table 5.3-4b

Ramirez Canyon Construction Equipment

Construction Phase	Equipment	Number
	Skid Steer Loader	1
Fine Grading (Trail Improvements)	Crawler Tractor (80 HP)*	1
	Excavator (50 HP)*	1
	Skid Steer	1
	Other Equipment (50 HP)*	1

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E) except trail improvements. Default equipment horsepower (HP) was assumed unless otherwise noted by an asterisk (*). Equipment used for trail improvements would be much smaller than the default equipment in URBEMIS.

Table 5.3-4c

Escondido Canyon Park Construction Equipment

Construction Phase	Equipment	Number
Fine Grading (Parking)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Paving (Parking)	Cement and Mortar Mixer	4
	Paver	1
	Rollers	1
	Tracker/Loader/Backhoe	1
Trenching (Utility Improvements)	Excavator	2
	Other General Equipment	1
	Tracker/Loader/Backhoe	1
Fine Grading (Park Improvements)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Building Construction (Miscellaneous Building Improvements)	Cement and Mortar Mixer	1
	Crane	1
	Forklift	1
	Generator Set	1
	Skid Steer Loader	1
Fine Grading (Trail Improvements)	Crawler Tractor (80 HP)*	1
	Excavator (50 HP)*	1
	Skid Steer	1
	Other Equipment (50 HP)*	1

Table 5.3-4c

Escondido Canyon Park Construction Equipment

Construction Phase	Equipment	Number

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E) except trail improvements. Default equipment horsepower (HP) was assumed unless otherwise noted by an asterisk (*). Equipment used for trail improvements would be much smaller than the default equipment in URBEMIS.

Table 5.3-4d

Latigo Trailhead Construction Equipment

Construction Phase	Equipment	Number
Fine Grading (Parking)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Paving (Parking)	Cement and Mortar Mixer	4
	Paver	1
	Rollers	1
	Tracker/Loader/Backhoe	1
Trenching (Utility Improvements)	Excavator	2
	Other General Equipment	1
	Tracker/Loader/Backhoe	1
Fine Grading (Park Improvements)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Building Construction (Miscellaneous Building Improvements)	Cement and Mortar Mixer	1
	Crane	1
	Forklift	1
	Generator Set	1
	Skid Steer Loader	1
Fine Grading (Trail Improvements)	Crawler Tractor (80 HP)*	1
	Excavator (50 HP)*	1
	Skid Steer	1
	Other Equipment (50 HP)*	1

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E) except trail improvements. Default equipment horsepower (HP) was assumed unless otherwise noted by an asterisk (*). Equipment used for trail improvements would be smaller than the default equipment in URBEMIS.

Table 5.3-4e

Corral Canyon Park Construction Equipment

Construction Phase	Equipment	Number
Fine Grading (Parking)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Paving (Parking)	Cement and Mortar Mixer	4
	Paver	1
	Rollers	1
	Tracker/Loader/Backhoe	1
Fine Grading (Park Improvements)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Trenching (Utility Improvements)	Excavator	2
	Other General Equipment	1
	Tracker/Loader/Backhoe	1
Building Construction (Miscellaneous Building Improvements)	Cement and Mortar Mixer	2
	Crane	1
	Excavator	1
	Forklift	1
	Generator Set	1
	Skid Steer Loader	1
	Tracker/Loader/Backhoe	1
Fine Grading (Trail Improvements)	Crawler Tractor (80 HP)*	1
	Excavator (50 HP)*	1
	Skid Steer	1
	Other Equipment (50 HP)*	1

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E) except trail improvements. Default equipment horsepower (HP) was assumed unless otherwise noted by an asterisk (*). Equipment used for trail improvements would be much smaller than the default equipment in URBEMIS.

Table 5.3-4f

Malibu Bluffs Construction Equipment

Construction Phase	Equipment	Number
Fine Grading (Parking)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Paving (Parking)	Cement and Mortar Mixer	4
	Paver	1
	Rollers	1
	Tracker/Loader/Backhoe	1
Trenching (Utility Improvements)	Excavator	2
	Other General Equipment	1
	Tracker/Loader/Backhoe	1
Fine Grading (Park Improvements)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Building Construction (Miscellaneous Building Improvements)	Cement and Mortar Mixer	2
	Crane	1
	Excavator	1
	Forklift	1
	Generator Set	1
	Skid Steer Loader	1
	Tracker/Loader/Backhoe	1
Fine Grading (Trail Improvements)	Crawler Tractor (80 HP)*	1
	Excavator (50 HP)*	1
	Skid Steer	1
	Other Equipment (50 HP)*	1

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E) except trail improvements. Default equipment horsepower (HP) was assumed unless otherwise noted by an asterisk (*). Equipment used for trail improvements would be much smaller than the default equipment in URBEMIS.

Table 5.3-4g
Ramirez Canyon Road/Delaplane Road Widening
Construction Equipment

Construction Phase	Equipment	Number
Mass Site Grading (Roadway)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Trenching (Roadway)	Excavator	2
	Other General Equipment	1
	Tracker/Loader/Backhoe	1
Building Construction (Retaining Wall)	Cement and Mortar Mixer	2
	Concrete/Industrial Saw	2
	Excavator	1
	Forklift	1
	Tracker/Loader/Backhoe	1
Building Construction (Bridge Replacement)	Crane	1
	Cement and Mortar Mixer	1
	Concrete/Industrial Saw	2
Paving (Roadway)	Cement and Mortar Mixer	4
	Paver	1
	Rollers	1
	Tracker/Loader/Backhoe	1

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E) except trail improvements.

Table 5.3-4h

Via Acero Roadway Improvements Construction Equipment

Construction Phase	Equipment	Number
Mass Site Grading (Roadway)	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Trenching (Roadway)	Excavator	2
	Other General Equipment	1
	Tracker/Loader/Backhoe	1
Paving (Roadway)	Cement and Mortar Mixer	4
	Paver	1
	Rollers	1
	Tracker/Loader/Backhoe	1

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E) except trail improvements.

Table 5.3-4i

Ramirez Creek Restoration/Enhancement Construction Equipment

Construction Phase	Equipment	Number
Mass Site Grading (Excavation/Removal of Creek Walls/)	Excavator	1
	Grader	1
	Rubber Tired Dozers	1
	Tracker/Loader/Backhoe	1
	Water Trucks	1
Building Construction (Retaining Wall)	Cement and Mortar Mixer	2
	Concrete/Industrial Saw	2
	Excavator	1
	Forklift	1
	Tracker/Loader/Backhoe	1
Building Construction (Boulder Berms)	Crane	1
	Dumpers/Tenders	1
	Excavator	1
	Tracker/Loader/Backhoe	1

Source: URBEMIS 2007 V 9.2.4 Phase Assumptions (see Appendix E) except trail improvements.

To account for delivery trucks for construction materials, it was assumed that 4 trucks per day would be required either for park improvements (e.g., building materials, concrete, landscape vegetation and materials) or trail improvements (e.g., retaining wall materials) at each park. The emissions from these trucks were estimated using SCAQMD emission factors for delivery trucks (SCAQMD, 2009) and an assumed one-way travel distance of 20 miles.

To account for dust control measures in the calculations, it was assumed that the active grading sites would be watered at least 2 times daily, resulting in an 55% reduction, as assumed by URBEMIS 2007, to comply with Rule 403.

Operation

Operations of the Plan would produce VOC, NO_x, CO, SO_x, PM_{10} and $PM_{2.5}$ emissions from vehicle trips to and from the parks. For this analysis, it was assumed that no substantial area source emissions would occur. As defined in the URBEMIS 2007 model, area sources include natural gas combustion for space and water heating, use of consumer products, landscape maintenance, and fireplaces. As noted in Section 5.15, Utilities and Services Systems, the proposed Plan would not involve new natural gas service or a substantial increase in gas usage. No open fires would be allowed in any of the parks, and the emissions associated with fuel combustion for approved camp stoves would be negligible. All new landscaping would be native, drought-tolerant plants that would require minimal care.

Specifically, the proposed Plan would impact air quality through the vehicular traffic generated by campers, hikers, and other park visitors, employees, and miscellaneous visitors (e.g., waste haulers). According to the Plan's traffic analysis (see Section 5.14, *Transportation, Circulation, and Parking*), the increase in average daily trips (ADT) is estimated to be 373 on weekdays and 514 on weekends, including days on which special events associated with Ramirez Canyon Park are conducted. During special event days, the park would be allowed to accommodate a maximum of 200 participants or 150 participants, depending on the time of year. In addition, there could be up to approximately 32 additional support staff (non-Ramirez staff). On these days, visitors would be transported to the park using shuttle buses consisting of large passenger vans and small buses (approximately 30 ft in length) to limit the total ADT to 80.

The URBEMIS 2007 model was utilized to estimate daily emissions from proposed vehicular sources (refer to *Appendix E*, which includes the data and assumptions used to generate emissions information summarized within this section for both the summer

and winter seasons). URBEMIS 2007 default data, including fleet mix, temperature, trip characteristics, variable start information, emission factors, and trip distances, were conservatively used for the model inputs for the weekday and typical weekend days. The default fleet mix consists primarily of passenger vehicles (automobiles and light-duty trucks), but it also includes some motorcycles, buses, and heavier class trucks. Inclusion of the heavier class trucks would simulate miscellaneous vehicles associated with park operations, such as overnight delivery vehicles, maintenance workers, and waste haulers. Emission factors representing the vehicle mix and emissions for the year 2010, the first potential year of expanded park operation, were used to estimate emissions.

The maximum emissions associated with weekdays, weekends, and special event days were estimated using URBEMIS 2007 separately for each of the parks. For the special event days, the URBEMIS 2007 default values were used for all of the parks except Ramirez Canyon Park.

Baseline Scenarios and Methodology for Ramirez Canyon Park

For purposes of full disclosure of potential environmental impacts associated with air quality, the analysis of impacts associated with the use of Ramirez Canyon Park will address the following two baseline scenarios:

1) Recreation/ Administration: The environmental setting assumes an environmental baseline of existing recreation and administrative uses and related improvements associated with the Ramirez Canyon Park site as of the date of the Notice of Preparation.

2) Vacant Residential: The environmental setting assumes an environmental baseline of vacant residential uses and improvements historically associated with the Ramirez Canyon Park site prior to acquisition by the Conservancy/ MRCA.

For the Ramirez Canyon Park Recreation/ Administration Baseline, a special fleet mix was generated for special events. It was assumed for the Plan under the Recreation/ Administration Baseline that 200 visitors would use shuttles, each carrying 14 passengers (i.e., 14 persons plus a driver in a 15-passenger shuttle van) for a total of 14 round trips or an ADT of 28. Under the Plan, the total daily trips allowed for Ramirez Canyon Park is 40 round trips or an ADT of 80. The existing ADT associated with Ramirez Canyon Park is 16; thus, there would be an additional ADT of 64. The remaining ADT of 36 (64 – 28) under the Plan was assumed to be associated with passenger vehicles. Only the vehicle classes that would represent the special event fleet mix specified above were assumed for the Plan's Ramirez Canyon Park special event

scenario; this includes automobiles, light-duty trucks, light-heavy-duty trucks (shuttles), and motorcycles. As such, the Plan's special event scenario fleet deviates from the Plan's weekday scenario, which assumes a greater mix of vehicle types, such as school buses and medium-heavy-duty trucks. Most of the miscellaneous vehicle trips, including refuse collection by medium-heavy-duty trucks, would tend to occur on weekdays and not during special events. Nonetheless, the fleet mix on weekdays would be primarily light-duty automobiles and trucks.

Similar to the Ramirez Canyon Park Recreation/ Administration Baseline, the Plan under the Ramirez Canyon Park Vacant Residential Baseline would utilized a tailored fleet mix to represent the Plan's special event vehicle conditions; it assumed for the Plan under the Vacant Residential Baseline that 200 visitors would use shuttles, each carrying 14 passengers for a total ADT of 28; and the total daily trips allowed for Ramirez Canyon Park would be an ADT of 80. In contrast to the Recreation/ Administration Baseline scenario, however, the existing ADT associated with this Baseline scenario is assumed to be zero, as the Barwood Building, the Peach House, the Barn, the Art/ Deco House, and the Ranger's Residence (as well as the existing on-site improvements) are assumed to be vacant residential structures/ uses, with no associated vehicle trips. Thus, the Plan, under the Vacant Residential Baseline, would generate an additional ADT of 52 (80-28) over the special event ADT. The remaining ADT of 52 was assumed to be associated with passenger vehicles (automobiles and light-duty trucks). The vehicle classes in the fleet mix assumed for the Plan's Ramirez Canyon Park special event scenario discussed under the Recreation/ Administration baseline, above, were also assumed for the Vacant Residential Baseline scenario.

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the proposed Plan would have a significant impact to air quality if it:

- Conflicts with or obstruction of implementation of the applicable air quality plan.
- Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
- Results in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under applicable federal or state ambient air quality standards (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Exposes sensitive receptors to substantial pollutant concentrations.

- Creates objectionable odors affecting a substantial number of people.

In addition, Appendix G of the CEQA Guidelines indicates that where available, the significance criteria established by the applicable air quality management or pollution control district may be relied upon to determine if the proposed Plan would have a significant impact on air quality. The SCAQMD CEQA Air Quality Handbook (SCAQMD 1993) sets forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality. Plan-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 5.3-5, SCAQMD Air Quality Significance Thresholds, are exceeded.

To evaluate whether a project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for ozone (see Table 5.3-1), which is a nonattainment pollutant, the SCAQMD considers a project to have a significant impact if the project's construction or operational emissions would exceed the VOC or NO_X mass daily thresholds shown in Table 5.3-5. These emission-based thresholds for ozone precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse ozone impacts to occur) because ozone itself is not emitted directly (see discussion of ozone and its sources above) and the effects of an individual project's emissions of ozone precursors (VOC and NO_X) on ozone levels in ambient air cannot be determined through air quality models or other quantitative methods.

Table 5.3-5
SCAQMD Air Quality Significance Thresholds

Pollutant	Construction	Operation
Criteria Pollutants Mass Daily Thresholds		
VOC	75 lbs/day	55 lbs/day
NO_x	100 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
SO_x	150 lbs/day	150 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
Lead [a]	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [b]		
NO_2 1-hour average **NO_2 annual average**	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.030 ppm (state)	
CO 1-hour average **CO 8-hour average**	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	
PM_{10} 24-hour average **PM_{10} annual arithmetic mean**	10.4 $\mu g/m^3$ (construction)[c] 2.5 $\mu g/m^3$ (operation) 20.0 $\mu g/m^3$	
$PM_{2.5}$ 24-hour average	10.4 $\mu g/m^3$ (construction)[c] 2.5 $\mu g/m^3$ (operation)	

Source: SCAQMD, 1993, Revised March 2009

[a] The phasing-out of leaded gasoline started in 1976. As gasoline no longer contains lead, the proposed project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

[b] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

[c] Ambient air quality threshold based on SCAQMD Rule 403.

Notes: Lbs/day = pounds per day; ppm = parts per million; ug/m^3 = microgram per cubic meter; ≥ greater than or equal to

The SCAQMD CEQA Air Quality Handbook (1993) also sets forth additional indicators of potential air quality impacts which should be used as screening criteria indicating the need for further analysis. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Project would have the potential to create or be subjected to an objectionable odor over 10 dilutions to thresholds (D/T) that could impact sensitive receptors.
- Project would have hazardous materials on site and could result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.
- Project could emit an air toxic contaminant regulated by District rules or that is on a federal or state air toxic list.
- Project could involve burning of hazardous, medical, or municipal waste as waste-to-energy facility.
- Project could be occupied by sensitive receptors within a quarter mile of an existing facility that emits air toxics identified in District Rule 1401 or near CO hot spots.
- Project could emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

Localized Significance Threshold (LST) Analysis

In addition to the emission-based thresholds listed above, SCAQMD also recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the project as a result of construction activities (SCAQMD, 2008). The significance thresholds for NO_2 and CO represent the allowable increase in concentrations above background levels in the vicinity of a project that would not cause or contribute to an exceedance of the relevant NAAQS or CAAQS, while the threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust) (SCAQMD, 2008). The

significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ NAAQS/CAAQS. For project sites of 5 acres or less, the SCAQMD Localized Significance Threshold (LST) Methodology (SCAQMD, 2008) includes "lookup tables" that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance criteria (i.e., the emissions would not cause an exceedance of the applicable concentration limits for NO_2, CO, PM_{10}, and $PM_{2.5}$) without performing project-specific dispersion modeling. The allowable emission rates depend on the following parameters:

(a) Source-Receptor Area (SRA) in which the project is located

(b) Size of the project site

(c) Distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals).

The Plan site is located in SRA 2 (Northwest Los Angeles County Coastal). While the overall Plan site is larger than 5 acres, no construction activity would involve more than 5 acres of daily disturbance. Therefore, use of the LST "lookup tables" is appropriate for this analysis. Construction activity includes grading and use of construction equipment which would occur throughout Plan construction. Most of the construction activity would not be close to sensitive receptors. However, some of the construction would occur in proximity to existing residences. For purposes of this analysis, a worst-case was assumed to be a construction activity area of 1 acre or less located within 25 meters (approximately 82 feet) of a sensitive receptor. These parameters are the lowest values (smallest Plan area and closest distance) in the LST "lookup tables" and would result in the most stringent thresholds. If other construction areas were located farther away from sensitive receptors, then the thresholds would be less stringent. The thresholds are shown in Table 5.3-6, Localized Significance Thresholds for SRA 2.

Table 5.3-6

Localized Significance Thresholds for SRA 2

Pollutant	Localized Significance Threshold (lbs/day)
NO_2	114
CO	554
Respirable Particulate Matter (PM_{10})	4
Fine Particulate Matter ($PM_{2.5}$)	3

Source: SCAQMD 2008, Appendix C.

Plan Impacts and Mitigation Measures

Impact AQ-1: Combined air pollutant emissions generated during construction of proposed Plan improvements, including grading and earthwork activities, equipment operation, and construction-related vehicular travel, would exceed SCAQMD construction-related emission thresholds for NOx, but not the thresholds for any of the other criteria pollutants. Without mitigation, impacts would be potentially significant.

To represent the worst case scenario, construction of all Plan improvements, including parking areas, campsites, park facilities, and trails, proposed in or associated with each park site was assumed to occur simultaneously, starting on the same day in early March 2010. Table 5.3-7, presents the estimated maximum daily emissions associated with construction of each park and the combined maximum emissions for each criteria pollutant. The maximum daily emissions could occur during any construction subphase (e.g., grading of parking areas, asphalt paving of parking areas, park improvements, trail improvements), but would be unlikely to occur on the same day at each park.

Table 5.3-7

Estimated Maximum Daily 2010 Construction Emissions (lbs/day)

LOCATION	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Ramirez Canyon Park (including Kanan Dume)	7.81	45.72	29.44	0.01	4.56	2.96
Escondido Canyon Park	9.98	65.98	41.56	0.01	5.95	4.18
Latigo Trailhead	8.45	56.86	35.51	0.01	3.76	3.19
Corral Canyon Park	12.67	83.61	55.97	0.02	7.32	5.08
Malibu Bluffs	11.41	73.51	45.86	0.01	5.1	4.48
Ramirez Canyon Rd/Delaplane Rd Widening	3.16	26.71	14.15	0.01	1.9	1.34
Via Acero Rd Improvements	3.05	25.18	13.56	0	2.85	1.49
Ramirez Creek Restoration/Enhancement	4.27	38.23	26.85	0.02	3.61	2.09
TOTAL	**60.8**	**415.8**	**262.9**	**0.09**	**34.06**	**24.6**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	NO	**YES**	NO	NO	NO	NO

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. The total values assume that the worst-case emissions for each park would occur concurrently.

As shown in Table 5.3-7, combined worst-case scenario construction emissions for the proposed Plan improvements would not exceed the SCAQMD thresholds for VOC, CO, SO_2, PM_{10}, or $PM_{2.5}$. NO_X emissions associated with the construction of individual Plan components would also not exceed the SCAQMD threshold of 100 pounds per day (lbs/day); however, the combined maximum daily emissions for all locations would total approximately 215 lbs/day, thus exceeding the 100 lbs/day threshold for NO_X. Under this worst-case scenario, impacts would be *potentially significant* without mitigation.

Mitigation Measures

Implementation of the following construction phasing mitigation measure would reduce the total combined NO_X construction emissions to below the threshold level.

MM AQ-1.1 To ensure that Plan-generated construction emissions would not exceed the 100 lb/day NO_X threshold, construction of the proposed Plan improvements shall be scheduled such that no more than one Park site or other improvement area could be developed at a single time.

Implementation of Mitigation Measure AQ-1.2 would reduce air pollutant emissions, including NO_X, PM_{10}, and $PM_{2.5}$ resulting from operation of construction equipment.

MM AQ-1.2 The following measure shall be adhered to during Plan grading and construction to reduce NO_X, PM_{10}, and $PM_{2.5}$ and CO emissions from construction equipment:

a) Heavy-duty diesel-powered construction equipment meeting California Air Resources Board/U.S. Environmental Protection Agency Tier 1 standards for off-road equipment or better should be utilized wherever feasible as determined by the Division of the State Architect.
b) The engine size of construction equipment shall be the minimum practical size.
c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any on time.
d) Construction equipment shall be maintained in tune per the manufacturer's specifications.

e) Catalytic converters shall be installed on gasoline-powered equipment, if feasible as determined by the Division of the State Architect.
f) Diesel-powered equipment should be replaced by electric equipment whenever feasible.

In compliance with Rule 403, construction modeling assumed that the active grading sites would be watered at least 2 times daily. The following mitigation measure is recommended to further reduce PM_{10} and $PM_{2.5}$ emissions and ensure full compliance with SCAQMD Rule 403.

MM AQ-1.3 Consistent with SCAQMD Rule 403, it is recommended that fugitive dust generated by grading and construction activities be kept to a minimum with a goal of retaining dust on the site, by following the dust control measures listed below:

a) During clearing, grading, earth moving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.
b) During construction, water truck or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning and after work is completed for the day and whenever winds exceed 15 miles per hour.
c) Soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation.
d) Vehicles speeds on unpaved roads shall be less than 15 miles per hours.
e) All grading and excavation operations shall be ceased when wind speeds exceed 25 miles per hour.
f) Dirt and debris spilled onto paved surfaces at the Plan site and on the adjacent roadways shall be swept, vacuumed, and/ or washed at the end of each workday.
g) All trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be tarped and maintain a minimum two feet of freeboard.
h) At a minimum, at each vehicle egress from the Plan site to a paved public road, 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 30 feet wide and at least 50 feet long (or as otherwise directed by SCAQMD).

i) Review and comply with any additional requirements of SCAQMD Rule 403.

Plan Requirement and Timing: The above measures shall be integrated into the final project construction plans and/or to the Public Works Plan, as applicable, prior to construction activity. Implementation of the measures should be an on-going obligation of the project.

Monitoring: Prior to construction activity, MRCA staff shall review and approve all construction plans to ensure consistency with the above measures. During construction efforts and prior to project sign-off, MRCA staff shall verify implementation of applicable portions of the above measures. During operation of the project, MRCA management shall ensure faithful compliance with applicable portions of the above measures.

Residual Impacts

With the implementation of mitigation measures MM AQ-1.1 through MM AQ-1.3, impacts resulting from construction-generated air pollutant emissions would be ***less than significant (Class II).***

Impact AQ-2: Construction activities would not generate emissions in excess of site-specific localized significance thresholds (LST) for NO_X, CO, PM_{10}, or $PM_{2.5}$. Impacts would be potentially significant, but feasibly mitigated.

As indicated in the discussion of the thresholds of significance, the SCAQMD recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ impacts to sensitive receptors in the immediate vicinity of the Plan site as a result of construction activities. The allowable emission rates for SRA 2 (Northwest Los Angeles County Coastal) from the SCAQMD LST Methodology's "lookup tables" are shown in Table 5.3-8a-h and compared to the maximum daily on-site construction emissions of these pollutants for each park site. As shown below, construction activities at each of the parks' construction areas would not generate emissions in excess of site-specific LSTs for NO_X or CO; however, the LSTs for PM_{10} and/or $PM_{2.5}$ may be exceeded in some cases.

Tables 5.3-8a-h compare the estimated maximum construction-generated emissions associated with proposed improvements at each park site and the most stringent LST in the "lookup tables" based on the smallest Plan area and closest distance from the construction site to sensitive receptors.

Local significance thresholds for construction emissions analysis at Ramirez Canyon Park assume the maximum emissions associated with concurrent grading of the parking lot and grading of proposed trails, as both improvement areas would be located near the same sensitive receptors. The closest distance was assumed to represent a worst-case scenario for the LSTs, although these residences are not located as close as 25 meters (approximately 82 feet) to the parking lot improvements.

Table 5.3-8a
Ramirez Canyon Park
Localized Significance Thresholds Analysis for Construction Emissions

	NO_x	CO	PM_{10}	$PM_{2.5}$
Proposed Project (lbs/day)	46	30	4.5	3
Localized Significance Threshold (lbs/day)	114	554	4	3
Thresholds Exceeded?	No	No	**Yes**	No

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. These estimates reflect control of fugitive dust required by Rule 403.

As shown in Table 5.3-8a, the maximum daily emissions associated with construction activity at Ramirez Canyon Park would not exceed LSTs for NO_X, CO, or $PM_{2.5}$ assuming a construction activity area of 1 acre or less located within 25 meters of a sensitive receptor, but they would exceed the LST for PM_{10}.

Local significance thresholds for construction emissions analysis at Escondido Canyon Park assume the maximum emissions associated with concurrent grading of the parking lot and grading of proposed trails, as both improvement areas would be located near the same sensitive receptors. The closest sensitive receptors to proposed improvements at Escondido Canyon Park would be near trail alignments along Murphy Way. Construction of park improvements, such as grading and paving of the parking lot and campsite grading and preparation, would be located more than one mile east of the trail improvements near Murphy Way. Accordingly, potential construction impacts in regards to LSTs at Escondido Canyon Park have been assessed in two areas, including impacts near the camp area and impacts during trail construction within Escondido Canyon. Table 5.3-8b compares the most stringent site-specific LST thresholds to the maximum daily emissions resulting from construction of the proposed park

improvements. Despite the greater distance to the closest sensitive receptors, the more stringent thresholds corresponding to a distance of 25 meters were used to conservatively evaluate the construction emissions for park improvements.

Table 5.3-8b

Escondido Canyon Park

Localized Significance Thresholds Analysis for Construction Emissions

	NO_x	CO	PM_{10}	$PM_{2.5}$
Proposed Project (lbs/day)	66	42	5	4
Localized Significance Threshold (lbs/day)	114	554	4	3
Thresholds Exceeded?	No	No	**Yes**	**Yes**

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. These estimates reflect control of fugitive dust required by Rule 403.

As shown in Table 5.3-8b, the maximum daily emissions associated with park improvement construction activity at Escondido Canyon Park would not exceed LST values for NO_X and CO for 1 acre or less of construction activity area located within 25 meters of a sensitive receptor, but they would exceed the LSTs for PM_{10} and $PM_{2.5}$.

Proposed parking, camp areas, and a portion of the proposed trails at Latigo Trailhead would be located within the same general area south of Latigo Canyon Road. As such, concurrent grading of the parking lot and trails would represent the maximum daily construction emissions, as shown in Table 5.3-8c. Although no sensitive receptors have been identified within 25 meters of the site improvements, the LSTs for this distance were assumed to conservatively represent potential impacts.

Table 5.3-8c

Latigo Trailhead

Localized Significance Thresholds Analysis for Construction Emissions

	NO_x	CO	PM_{10}	$PM_{2.5}$
Proposed Project (lbs/day)	57	36	4	3
Localized Significance Threshold (lbs/day)	114	554	4	3
Thresholds Exceeded?	No	No	No	No

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. These estimates reflect control of fugitive dust required by Rule 403.

Table 5.3-8c indicates that the maximum daily emissions associated with construction activity at Latigo Trailhead would not exceed NO_X, CO, PM_{10}, or $PM_{2.5}$ LSTs for 1 acre or less of construction activity area located within 25 meters of a sensitive receptor.

Local significance thresholds for construction emissions analysis at Corral Canyon Park assume the maximum emissions associated with concurrent grading of the parking lot and grading of proposed trails, as both improvement areas would be located near the same sensitive receptors. The closest sensitive receptors to proposed improvements at Corral Canyon Park would be the residences located in the northern canyon portion.

The maximum emissions for park improvements, as shown in Table 5.3-8d, represent the concurrent paving of the proposed parking lot adjacent to the north side of Pacific Coast Highway and the grading of the proposed campsites, which would both be located within the southern portion of Corral Canyon.

Table 5.3-8d
Corral Canyon Park
Localized Significance Thresholds Analysis for Construction Emissions

	NO_x	CO	PM_{10}	$PM_{2.5}$
Proposed Plan (lbs/day)	84	56	7	5
Localized Significance Threshold (lbs/day)	114	554	4	3
Thresholds Exceeded?	No	No	**Yes**	**Yes**

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. These estimates reflect control of fugitive dust required by Rule 403.

As shown in Table 5.3-8d, construction of park improvements at Corral Canyon Park South would not result in maximum daily emissions of NO_X or CO that would exceed LST for a construction activity area of 1 acre or less located within 25 meters of a sensitive receptor; however, the maximum daily emissions of PM_{10} and $PM_{2.5}$ would exceed the LSTs for these pollutants.

Concurrent construction of proposed parking lots at Malibu Bluffs and proposed trail segments near parking lots would represent the maximum daily construction emissions at Malibu Bluffs. Table 5.3-8e compares estimated maximum construction emissions to the most stringent LST thresholds.

Table 5.3-8e

Malibu Bluffs

Localized Significance Thresholds Analysis for Construction Emissions

	NO_x	CO	PM_{10}	$PM_{2.5}$
Proposed Plan (lbs/day)	74	46	5	4
Localized Significance Threshold (lbs/day)	114	554	4	3
Thresholds Exceeded?	No	No	**Yes**	**Yes**

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. These estimates reflect control of fugitive dust required by Rule 403.

As shown in Table 5.3-8e, construction activity at Malibu Bluffs would not exceed LST values for NO_X and CO LSTs for 1 acre or less of construction activity area located within 25 meters of a sensitive receptor; however, the maximum daily emissions of PM_{10} and $PM_{2.5}$ would exceed the LST for these pollutants.

Proposed road widening improvements would be located within the same general area. Grading of the roadway and surrounding area would represent the maximum daily construction emissions, as shown in Table 5.3-8f. Although no sensitive receptors have been identified within 25 meters of the road improvements, the LSTs for this distance were assumed to conservatively represent potential impacts.

Table 5.3-8f

Ramirez Canyon Road/Delaplane Road Widening

Localized Significance Thresholds Analysis for Construction Emissions

	NO_x	CO	PM_{10}	$PM_{2.5}$
Proposed Plan (lbs/day)	27	14	2	1
Localized Significance Threshold (lbs/day)	114	554	4	3
Thresholds Exceeded?	No	No	No	No

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. These estimates reflect control of fugitive dust required by Rule 403.

As shown in Table 5.3-8f, construction activity at Ramirez Canyon Road/Delaplane Road would not exceed LST values for NO_X, CO, PM_{10}, or $PM_{2.5}$ for 1 acre or less of construction activity area located within 25 meters of a sensitive receptor.

Similar to roadway widening at Ramirez Canyon Road and Delaplane Road, the greatest emissions generated during construction of roadway improvements along Via Acero would occur during grading or the road in preparation for paving activity, as shown in Table 5.3-8g. Although no sensitive receptors have been identified within 25 meters of the road improvements, the LSTs for this distance were assumed to conservatively represent potential impacts.

Table 5.3-8g

Via Acero Road Improvements

Localized Significance Thresholds Analysis for Construction Emissions

	NO_x	CO	PM_{10}	$PM_{2.5}$
Proposed Plan (lbs/day)	25	14	3	1.5
Localized Significance Threshold (lbs/day)	114	554	4	3
Thresholds Exceeded?	No	No	No	No

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. These estimates reflect control of fugitive dust required by Rule 403.

As shown in Table As shown in Table 5.3-8g, construction activity at Via Acero Road would not exceed LST values for NO_X CO, PM_{10} or $PM_{2.5}$ LSTs for 1 acre or less of construction activity area located within 25 meters of a sensitive receptor.

Proposed restoration in Ramirez Creek would result in construction emissions as shown in Table 5.3-8h. Although no sensitive receptors have been identified within 25 meters of the road improvements, the LSTs for this distance were assumed to conservatively represent potential impacts.

Table 5.3-8h

Ramirez Creek Restoration/Enhancement

Localized Significance Thresholds Analysis for Construction Emissions

	NO_x	CO	PM_{10}	$PM_{2.5}$
Proposed Plan (lbs/day)	38	27	4	2
Localized Significance Threshold (lbs/day)	114	554	4	3
Thresholds Exceeded?	No	No	No	No

Source: URBEMIS 2007 Version 9.2.4. See Appendix E for complete results. These estimates reflect control of fugitive dust required by Rule 403.

As shown in Table 5.3-8h, construction activity at Ramirez Creek would not exceed LST values for NO_X CO, PM_{10} or $PM_{2.5}$ LSTs for 1 acre or less of construction activity area located within 25 meters of a sensitive receptor.

As reported above, the estimated daily construction emissions would be below the NO_x and CO LSTs for all park sites based on the SCAQMD LST "lookup tables." The PM_{10} and $PM_{2.5}$ emissions at several of the parks would exceed the LST "lookup table" values. Therefore, impacts would be *potentially significant* for PM_{10} and $PM_{2.5}$.

Mitigation Measures

Implementation of Mitigation Measure MM AQ-2 would reduce impose a larger separation distance between construction equipment and sensitive receptors to avoid significant ambient air quality impacts. At a minimum distance of 50 meters, the SCAQMD LST threshold for a 1-acre construction area would be 12 and 4 lbs/day for PM_{10} and $PM_{2.5}$ respectively. Accordingly, none of the project impacts described previously would exceed these LSTs, except for $PM_{2.5}$ at Corral Canyon Park. The majority of the PM_{10} and $PM_{2.5}$ emissions during construction was found to be associated with exhaust from off-road diesel-powered construction equipment. Thus, if construction must be located less than 50 meters from a sensitive receptor, using Level 3 diesel particulate filters, which must achieve a minimum of 85% control efficiency, on all heavy-duty diesel construction equipment would be sufficient to reduce PM_{10} and $PM_{2.5}$ emissions to a less-than-significant level. Mitigation Measure AQ-1.3 would already reduce PM_{10} and $PM_{2.5}$ emissions associated with fugitive dust during soil disturbance.

MM AQ-2 The following measure shall be adhered to during Plan grading and construction to reduce PM_{10} and $PM_{2.5}$ impacts to sensitive receptors from fugitive dust and construction equipment:

a) All construction shall either (1) be prohibited within 50 meters of a sensitive receptor, including but not limited to residential units or (2) heavy-duty diesel-powered construction equipment shall be equipped with a Level 3 diesel particulate filter verified by the California Air Resources Board or U.S. Environmental Protection Agency for the make, model, and model year of the equipment being used.

In addition to MM AQ-2(a), the following mitigation is required at Corral Canyon Park to reduce concentrated PM_{10} and $PM_{2.5}$ emissions resulting from simultaneous construction of trails and park improvements:

b) Concurrent construction of building improvements (i.e., fire truck storage shed, restroom, etc.) and trail improvements within the Corral Canyon South Camp Area, including Corral Camp Parking Area, shall be prohibited.

Plan Requirement and Timing: Mitigation measure AQ-2 shall be integrated into the final project construction plans and/or to the Public Works Plan, as applicable, prior to construction activity. Implementation of the measures should be an on-going obligation of the project.

Monitoring: Prior to construction activity, MRCA staff shall review and approve all construction plans to ensure consistency with the above measures. During construction efforts and prior to project sign-off, MRCA staff shall verify implementation of applicable portions of the above measures. During operation of the project, MRCA management shall ensure faithful compliance with applicable portions of the above measures.

As construction of proposed improvements would exceed the most stringent LSTs for PM_{10} and $PM_{2.5}$, mitigation is required. Required and recommended mitigation measures listed in AQ-1 would reduce construction-generated air pollutant emissions at all park sites.

Residual Impacts

Potential impacts based on local significance thresholds for the proposed Plan would be ***less than significant (Class II)*** with the incorporation of mitigation measures.

Impact AQ-3: **Operation of the proposed Plan would generate air pollutant emissions, but emissions would not exceed SCAQMD operational significance thresholds. Therefore, the Plan's operational impact to regional air quality would be less than significant.**

Operational emissions associated with the proposed Plan would be generated as a result of vehicle travel by patrons of the proposed Plan trails, camping, and other park

facilities. Visitors of the proposed park improvements would generate minimal to no "area" emissions, e.g., hearth, natural gas, landscaping, or consumer product emissions; therefore, the estimated operational emissions are based on projected "mobile" emissions.

As indicated in the Methodology discussion above, the analysis of impacts associated with the use of Ramirez Canyon Park includes separate analyses based on the following two baseline scenarios:

1) Recreation/ Administration: The environmental setting assumes an environmental baseline of existing recreation and administrative uses and related improvements associated with the Ramirez Canyon Park site as of the date of the Notice of Preparation.

2) Vacant Residential: The environmental setting assumes an environmental baseline of vacant residential uses and improvements historically associated with the Ramirez Canyon Park site prior to acquisition by the Conservancy/ MRCA.

For each Plan component (each park and associated trails), four operational emissions scenarios were modeled to represent weekday and weekend traffic conditions during the summer and winter seasons. Estimated emissions resulting from implementation of the proposed Plan consists of the combined total emissions for all five park sites, including Kanan Dume as part of the Ramirez Canyon Park improvements.

Plan Site Under the Ramirez Canyon Park Recreation/ Administration Baseline Scenario

Table 5.3-9 presents the maximum daily operational emissions for the Plan under the Ramirez Canyon Park Recreation/ Administration baseline, representing the highest emissions for each individual criteria pollutant that could potentially occur during any day of the year. Maximum daily operational emissions are based on estimated Plan-generated ADT under the Recreation/ Administration Baseline, which would be 367 total trips during the weekdays and 504 total trips during the weekend days (ATE, 2010).

Table 5.3-9
Estimated Maximum Plan Site Operational Emissions (lbs/day)
Under the Recreation/ Administration Baseline

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Weekday						
Summer	11.29	18.06	158.61	0.18	29.45	5.7
Winter	14.19	21.86	146.91	0.13	29.42	5.7
Weekend						
Summer	14.99	25.54	207.79	0.24	39.06	7.54
Winter	18.97	30.86	193.01	0.20	39.06	7.54
Maximum Daily Scenario						
Max	**18.97**	**30.86**	**207.79**	**0.24**	**39.06**	**7.54**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	No	No	No	No	No	No

Source: URBEMIS 2007 version 9.2.4. See Appendix E for calculations.

As shown in Table 5.3-9, maximum daily emissions resulting from operation of the proposed Plan under the Recreation/ Administration Baseline for Ramirez Canyon Park, would not exceed established SCAQMD thresholds for the criteria pollutants listed above.

Plan Site Under the Ramirez Canyon Park Vacant Residential Baseline Scenario

Table 5.3-10 presents the maximum daily operational emissions for the Plan under the Ramirez Canyon Park Vacant Residential baseline (assuming vacancy of all structures), representing the highest emissions for each individual criteria pollutant that could potentially occur during any day of the year. Maximum daily operational emissions are based on estimated Plan-generated ADT under the Vacant Residential Baseline, which would be 421 total trips during the weekdays and 511 total trips during the weekend days (ATE, 2010).

Table 5.3-10
Estimated Maximum Plan Site Operational Emissions (lbs/day)
Under the Vacant Residential Baseline

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Weekday						
Summer	13.08	21.20	186.27	0.22	34.55	6.69
Winter	16.58	25.66	172.49	0.16	34.55	6.69
Weekend						
Summer	15.92	26.58	220.68	0.26	41.31	7.97
Winter	20.16	32.14	205.17	0.22	41.31	7.97
Maximum Daily Scenario						
Max	**20.16**	**32.14**	**220.68**	**0.26**	**41.31**	**7.97**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	No	No	No	No	No	No

Source: URBEMIS 2007 version 9.2.4. See Appendix E for calculations.

As shown in Table 5.3-10, maximum daily emissions resulting from operation of the proposed Plan under the Vacant Residential Baseline scenario for Ramirez Canyon Park would not exceed established SCAQMD thresholds for the criteria pollutants.

The following tables illustrate estimated operational emissions for each park property separately.

Ramirez Canyon Park

Recreation/ Administration Baseline Scenario

For the Recreation/ Administration Baseline scenario, Table 5.3-11 presents the estimated operational emissions for Ramirez Canyon Park, which include emissions related to use of the Kanan Dume parking facilities. The weekday scenario represents daily emissions associated with normal use of Ramirez Canyon Park and offsite parking areas at Kanan Dume and assumes a default vehicle fleet, similar to operational modeling for other park areas under the Plan. As the existing (baseline) weekday ADT at Ramirez Canyon Park is 54 trips and the maximum allowable daily trips under the Plan is 80, the net increase in ADT resulting from the proposed Plan improvements at Ramirez Canyon Park would be 26. The weekend Plan scenario represents emissions associated with

anticipated Ramirez Canyon Park special event traffic conditions. As described in the Methodology section above, a fleet mix was tailored to represent the shuttles and vans that would transport groups of visitors to the park during weekend special events under the Plan at Ramirez Canyon Park. The total daily trips allowed by the Plan for Ramirez Canyon Park is 40 round trips or an ADT of 80. Because the Recreation/ Administration Baseline includes the existing 16 weekend ADT, the Plan's net new ADT modeled under this baseline scenario is 64. During the weekdays, the 26 parking spaces at Kanan Dume would generate 94 trips; during the weekends the same amount of parking spaces would result in 138 trips. Both weekday and weekend emission estimates were modeled under summer and winter conditions. Maximum daily operational emissions are based on estimated Plan-generated ADT at Ramirez Canyon Park and Kanan Dume under the Recreation/ Administration Baseline scenario, which would be 120 trips during the weekdays and 202 trips during the weekend days (ATE, 2010).

Table 5.3-11
Ramirez Canyon Park Operational Emissions (lbs/day)
Under the Recreation/ Administration Baseline

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Weekday						
Summer	3.39	5.49	48.15	0.05	8.96	1.73
Winter	4.05	6.28	42.14	0.04	8.44	1.64
Weekend						
Summer	5.75	10.65	77.05	0.09	14.81	2.84
Winter	7.3	12.86	71.94	0.07	14.81	2.84

Source: URBEMIS 2007 version 9.2.4. See Appendix E for calculations.

Vacant Residential Baseline Scenario

For the Vacant Residential Baseline scenario, Table 5.3-12 presents the estimated operational emissions for Ramirez Canyon Park, including those associated with the Kanan Dume parking facilities. These emissions do not reflect an adjustment for the existing ADT associated with the existing residences onsite, which are assumed to be vacant under this scenario. The weekday scenario represents daily emissions associated with normal use of Ramirez Canyon Park and offsite Kanan Dume parking areas, without accounting for the existing ADT of 54. Therefore, the Plan's "net" ADT at Ramirez Canyon Park under the Residential Baseline weekday scenario would be 80. The Kanan Dume parking area would generate an additional ADT of 86 on weekdays.

Similar to the Recreation/ Administration Baseline scenario, the Vacant Residential Baseline weekend scenario represents estimated emissions generated during special events at Ramirez Canyon Park. The weekend Vacant Residential Baseline scenario assumes the maximum addition of 80 ADT under the Plan, as the existing baseline is zero, in contrast to the Recreation/ Administration baseline, which nets out an existing baseline of 16 average daily trips associated with the existing uses onsite. The Plan's weekend ADT associated with the Kanan Dume parking area would be the same as that used for the Recreation/ Administration scenario, which is 138. Both weekday and weekend emission estimates were modeled under summer and winter conditions. Maximum daily operational emissions are based on estimated Plan-generated ADT at Ramirez Canyon Park and Kanan Dume under the Vacant Residential scenario, which would be 120 trips during the weekdays and 202 trips during the weekend days (ATE, 2010).

Table 5.3-12
Ramirez Canyon Park Operational Emissions (lbs/day)
Under the Vacant Residential Baseline

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Weekday						
Summer	5.18	8.63	75.81	0.09	14.06	2.72
Winter	6.68	10.45	70.21	0.07	14.06	2.72
Weekend						
Summer	6.68	11.69	89.94	0.11	17.06	3.27
Winter	8.49	14.14	84.10	0.09	17.06	3.27

Source: URBEMIS 2007 version 9.2.4. See Appendix E for calculations.

Escondido Canyon Park Table 5.3-13 presents the estimated Escondido Canyon Park operational emissions during the weekday and weekend scenarios and both summer and winter conditions. Maximum daily operational emissions are based on estimated Plan-generated ADT at Escondido Canyon Park, which would be 37 trips during the weekdays (26 from campsites and 11 from day-use areas) and 42 trips during the weekend days (26 from campsites and 16 from day-use traffic) (ATE, 2010).

Table 5.3-13

Escondido Canyon Park Operational Emissions (lbs/day)

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Weekday						
Summer	1.24	1.97	17.33	0.01	3.22	0.62
Winter	1.55	2.39	16.04	0.01	3.22	0.62
Weekend						
Summer	1.37	2.19	19.23	0.02	3.57	0.69
Winter	1.72	2.65	17.80	0.02	3.57	0.69

Source: URBEMIS 2007 version 9.2.4. See Appendix E for calculations.

Latigo Trailhead

Table 5.3-14 presents maximum weekday and weekend Latigo Trailhead operational emissions under the summer and winter conditions. Maximum daily operational emissions are based on estimated Plan-generated ADT at Latigo Trailhead, which would be 24 trips during the weekdays (10 from campsites and 14 from day-use area) and 31 trips during the weekend days (10 from campsites and 21 from day-use traffic) (ATE, 2010).

Table 5.3-14

Latigo Trailhead Maximum Operational Emissions (lbs/day)

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Weekday						
Summer	0.75	1.19	10.48	0.02	1.94	0.37
Winter	0.94	1.44	9.70	0.00	1.94	0.37
Weekend						
Summer	0.92	1.48	13.02	0.02	2.41	0.46
Winter	1.16	1.79	12.05	0.01	2.41	0.46

Source: URBEMIS 2007 version 9.2.4. See Appendix E for calculations.

Corral Canyon Park

Table 5.3-15 presents maximum daily operational emissions for Corral Canyon Park under both winter and summer conditions. Maximum daily operational emissions are based on estimated Plan-generated ADT at Corral Canyon Park, which would be 50 trips during the weekdays (32 from campsites and 18 from day-use areas) and 59 trips during the weekend days (32 from campsites and 27 from day-use traffic) (ATE, 2010).

Table 5.3-15

Corral Canyon Park Maximum Operational Emissions (lbs/day)

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Weekday						
Summer	1.65	2.63	23.08	0.03	4.28	0.83
Winter	2.07	3.18	21.37	0.03	4.28	0.83
Weekend						
Summer	1.86	2.99	26.25	0.03	4.87	0.95
Winter	2.35	3.61	24.30	0.03	4.87	0.95

Source: URBEMIS 2007 version 9.2.4. See Appendix E for calculations.

Malibu Bluffs

Table 5.3-16 presets maximum daily emissions associated with weekday and weekend operation of the Malibu Bluffs area with implementation of the proposed improvements during summer and winter seasons. Maximum daily operational emissions are based on estimated Plan-generated ADT at Malibu Bluffs, which would be 136 trips during the weekdays (64 from campsites and 72 from day-use areas) and 170 trips during the weekend days (64 from campsites and 106 from day-use traffic) (ATE, 2010).

Table 5.3-16

Malibu Bluffs Maximum Operational Emissions (lbs/day)

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Weekday						
Summer	4.26	6.78	59.57	0.07	11.05	2.15
Winter	5.34	8.20	55.17	0.05	11.05	2.15
Weekend						
Summer	5.09	8.23	72.24	0.08	13.40	2.60
Winter	6.44	9.95	66.92	0.07	13.40	2.60

Source: URBEMIS 2007 version 9.2.4. See Appendix E for calculations.

Mitigation Measures

Operational emissions associated with the proposed Plan would not exceed SCAQMD thresholds. No mitigation measures are necessary.

Residual Impacts

Impacts associated with operational emissions would be ***less than significant (Class III).***

Impact AQ-4: Plan motor vehicle emissions would not result in carbon monoxide "hotspots" at local intersections or roadways. Impacts would be less than significant.

Emissions from motor vehicles are the primary source of CO emissions in the SCAB. The SCAB is an attainment area with respect to the NAAQS and CAAQS; however, CO emissions are congested intersections or roadways can lead to highly localized concentrations close to the intersection or roadway. Ambient concentrations exceeding the NAAQS or CAAQS referred to as CO "hotspots." The potential for creation of a CO hotspot can be evaluated by dispersion modeling and is referred to as a CO hotspots analysis.

The SCAQMD recommends that a CO hotspots analysis be performed for any intersection affected by a proposed project where the level of service (LOS) worsens from C to D, or if a proposed project increases the volume-to-capacity ratio at any

intersection rated D or worse by 2% or more. According to the traffic and parking study for the proposed Plan under the Ramirez Canyon Park Recreation/ Administration Baseline would generate a net of 367 average daily trips (ADT), 22 a.m. peak hour trips, and 30 p.m. peak hour trips on weekdays and 204 daily trips and 35 peak hour trips on weekends (ATE 2010), which results in an increase of less than 1% of the ADT on Pacific Coast Highway (PCH) east of Kanan Dume Road, Latigo Canyon Road, John Tyler Drive, and Malibu Canyon Road. The Plan under the Ramirez Canyon Park Vacant Residential Baseline would generate a net of 421 average daily trips (ADT), 27 a.m. peak hour trips, and 35 p.m. peak hour trips on weekdays and 511 daily trips and 36 peak hour trips on weekends (ATE 2010), which results in an increase of less than 1% or 2% of the ADT on Pacific Coast Highway (PCH). See *Appendix O* for the full Traffic Study.

Under both Baseline conditions for Ramirez Canyon Park, the existing LOS at local intersections studied within the Plan area ranges from A to C during the A.M. peak hour and A to F during the P.M. peak hour. The worst LOS would occur at the unsignalized intersections at PCH at Winding Way, PCH at Latigo Canyon Road, and PCH at Corral Canyon Road and are related to the delays for turning from the side streets onto PCH (ATE 2010). When combined with the cumulative traffic levels, under both Baseline conditions, the proposed Plan would not result in a degradation of the LOS from anticipated levels (e.g., no intersection would worsen from C to D as a result of the project) (ATE 2010). Furthermore, the volume-to-capacity ratios at intersections rated D or worse would increase less than 1% under both Baseline conditions. (ATE 2010)

In addition, the existing CO concentrations, as measured at the West Los Angeles monitoring station are well below the CAAQS. Based on the levels during the last 3 years, as shown in Table 5.3-3, maximum 1-hour concentrations are approximately 15% of the CAAQS, and maximum 8-hour concentrations are approximately 20% of the CAAQS. These levels are not likely to increase in the future due to increasingly stringent motor vehicle standards, replacement of older vehicles with new vehicles, and improved fuels.

Based on this analysis, the operational motor vehicle emissions associated with the Plan would result in *less than significant* impacts to ambient air quality.

Mitigation Measures

As the proposed Plan would not result in a degradation of the LOS from anticipated levels at studied intersections, no mitigation would be required.

Residual Impacts

Potential impacts to sensitive receptors resulting from CO hotspots would be ***less than significant (Class III).***

Impact AQ-5: Plan construction activities potentially exposing adjacent sensitive receptors to objectionable odors would be short-term and limited and would be considered less than significant.

Odors are one of the forms of air pollution that are most obvious to the general public. Odors can present significant problems for both the source and surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern in the general public. During the construction period, the potential odors generally associated with the proposed Plan would result from the application of asphalt, from diesel and gas fumes, and from the limited application of paint. Due to the short-term nature of construction and the limited circumstances under which such odors would be strongly prevalent during construction, as well as the distance between many of the Plan improvements and sensitive receptors, odors associated with Plan construction would be *less than significant.*

Mitigation Measures

As impacts resulting from construction generated odors including application of asphalt, from diesel and gas fumes, and from the application of paint would be less than significant, no mitigation measures are required.

Residual Impacts

Impacts to sensitive receptors would be ***less than significant (Class III).***

Impact AQ-6: The proposed Plan would not conflict with or obstruct implementation of the applicable air quality plan. Impacts would be less than significant.

While striving to achieve the NAAQS for ozone and $PM_{2.5}$ through a variety of air quality control measures, the 2007 AQMP also accommodates planned growth in the SCAB. Projects are considered to be consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors (e.g.,

population, employment) are consistent with the underlying regional plans used to develop the AQMP.

As indicated in Chapter 3 of the 2007 AQMP, demographic growth forecasts for various socioeconomic categories, developed by SCAG for their interim 2007 Regional Transportation Plan (RTP), were used in the modified 2004 RTP to estimate future emissions in the 2007 AQMP (SCAQMD, 2007). The proposed Plan would not change the underlying demographic growth forecasts because it would not either create or encourage new population growth. Accordingly, the proposed Plan would be consistent with population forecasts used to prepare the 2007 AQMP.

As described in Section 2.0, *Project Description*, implementation of the proposed Plan would be consistent with the LCP's land use designations and zoning for the area. Thus, the proposed Plan would not result in a change in land use that would result in an increase in vehicle trips that was not accounted for in the development of the AQMP. Furthermore, the Plan provides for use of alternative transportation modes to access the Plan site that include walking, biking, shuttle vans, and transit stops, which is consistent with goals included in the RTP.

Based on the preceding assessment, the proposed Plan would not conflict with or obstruct implementation of the AQMP, and this impact would be *less than significant*.

Mitigation Measures

As the proposed Plan does not conflict with or obstruct implementation of the AQMP, no mitigation is required.

Residual Impacts

Impacts related to potential inconsistency with the AQMP would be ***less than significant (Class III).***

<u>Analysis of Impacts Post-Mitigation</u>

Impact AQ-7: Implementation of mitigation measures intended to reduce impacts associated with the proposed Plan's improvements would result in less than significant impacts on air quality.

In addition to analysis of the project (as proposed), CEQA requires that an EIR discuss the environmental impacts associated with the implementation of any required mitigation. This section, therefore, evaluates how mitigation measures required in other sections of this EIR would affect air quality. Required mitigation measures to reduce the Plan's environmental impact that would potentially result in impacts to air quality include off-site biological mitigation measures, described in detail in Section 5.4, *Biological Resources*, and briefly discussed below in the context of Air Quality.

Habitat restoration/ mitigation would be conducted at four sites: Malibu Bluffs, Corral Canyon, Tuna/Las Flores Canyon, and King Gillette Ranch (see, also, *Appendix H-2*). Potential impacts to air quality resulting from this proposed biological mitigation would mainly be associated with construction activity required to implement the restoration sites.

For the Corral Canyon and Malibu Bluffs mitigation sites, restoration would involve the conversion of non-native California grasslands to various associations of coastal sage scrub. Soil preparation would include thatch clearing to expose mineral soils, incorporation of any needed soil amendments, and cross ripping to prepare the soil for planting. The flatter portions of the site and trails/roads to be abandoned will be cross-ripped to a depth of at least 6 inches in two directions to loosen compacted soil, incorporate any recommended soil amendments and/or fertilizers, and prepare the surface for seeding. Slopes steeper than 3:1 shall not be ripped. Restoration at Tuna/Las Flores Canyon would involve hydroseeding the chaparral revegetation area. In addition, 2 acres of land would be planted with locally collected acorns that would be planted in 1 foot deep and 1 foot in diameter pits. At King Gillette Ranch, restoration would include wetland creation, which would be achieved through grading an area of existing pastureland to the flow line of the adjacent creek. Soil preparation at King Gillette Ranch would include thatch clearing to expose mineral soils, incorporation of any needed soil amendments, and cross ripping to prepare the soil for planting.

It is reasonable to assume that construction activity described above would be performed primarily by hand labor and would not require extensive use of heavy equipment, if any. Potential emissions would therefore be principally fugitive dust resulting from earth-moving activities, such as minor grading. In the event that restoration would require a more intensive construction approach, Mitigation Measures described under Impact AQ-1 would ensure that emissions would not exceed SCAQMD thresholds. If mechanical equipment is determined to be necessary for wetland creation at King Gillette Ranch, incorporation of Mitigation Measures AQ-1b and 1c would be required. Vehicular emissions associated with construction worker travel would be short-term and minimal.

Long-term operational emissions resulting from biological mitigation would be limited to occasional vehicular travel generated by a landscape maintenance contractor during the 5-year maintenance and monitoring program that would be implemented on all mitigation sites to ensure successful implementation of the habitat mitigation program. Maintenance would consist of controlling weeds and other pests, irrigation system operation and repairs and/or hand watering (if used), trash removal, erosion control, access control, remedial planting and seeding, etc. It is anticipated that emissions associated with maintenance would be negligible.

Potential beneficial impacts associated with biological restoration sites would be increased vegetation of previously denuded areas, which would have the effect of removing air pollutants through dry deposition and carbon sequestration and storage. Successful restoration of disturbed areas would result in additional plant coverage, which has the potential to store atmospheric CO_2 and other air pollutants.

Residual Impacts

Implementation of mitigation measures intended to reduce impacts associated with the proposed Plan's improvements would not result in air pollutant emissions that would exceed thresholds established by the SCAQMD. Therefore, impacts to air quality would be **less than significant (Class III).**

5.3.3 Cumulative Impacts

Cumulative projects are listed in Table 3.1 of Section 3.6, *Projects Considered for Cumulative Analysis*. The Plan site's contribution to cumulative air quality impacts is evaluated below. The *Area of Influence*, or geographic region for the respective environmental resource for which cumulative projects are assessed, is identified below and forms the basis of the cumulative impact analysis for this section.

Area of Influence: The proposed Plan site is located within the SCAB for which the 2007 AQMP has been prepared to address regional air quality issues. Therefore, the Area of Influence for assessing cumulative air quality impacts on recreation is the SCAB.

Impact AQ-8: **The proposed Plan would not result in a cumulatively considerable net increase of any criteria pollutant for which the South Coast Air Basin is in nonattainment under applicable federal or state ambient air quality**

standards. Associated impacts would be less than cumulatively considerable and would be considered less than significant.

As shown in Table 5.3.-2, the SCAB is a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, which is the result of cumulative emissions from mobile, area, and point sources in the air basin. The proposed Plan is consistent with the land use designation of the Plan area and would not meaningfully contribute to changes in anticipated emissions in the SCAB. The 2007 AQMP is designed to accommodate growth in the SCAB while reducing overall emissions to achieve state and federal ambient air quality standards. As stated in Impact AQ-6, the proposed Plan would not conflict with or obstruct implementation of the 2007 AQMP.

The SCAQMD recommends that any operational emissions from individual projects that exceed the project-specific thresholds of significance identified above be considered cumulatively considerable. However, as indicated above, operation of the proposed Plan improvements would result in less than significant impacts.

Mitigation Measures

As the proposed Plan would not result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is in nonattainment, no mitigation is required.

Residual Impacts

Cumulative air quality impacts related to Plan implementation would be ***less than significant (Class III).***