5.1 Air Quality

5.1 AIR QUALITY

This section focuses on potential short-term air quality impacts associated with project construction activities, and long-term local and regional air quality impacts associated with the project operation. Information in this section is based on the *Serrano Summit Air Quality Analysis*, prepared by LSA Associates, Inc., dated December 2009 (refer to Appendix 12.3, *Air Quality Analysis*). Additional emissions modeling and data is included in Appendix 12.4, *Air Quality and Greenhouse Gas Data*.

5.1.1 EXISTING SETTING

SOUTH COAST AIR BASIN

Geography

The City of Lake Forest is located in the South Coast Air Basin (Basin), a 10,743-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area of Riverside County.

The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of air pollutants throughout the Basin.

Climate

The general region lies in the semipermanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The climate consists of a semiarid environment with mild winters, warm summers, moderate temperatures, and comfortable humidity. Precipitation is limited to a few winter storms. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have recorded temperatures over 100°F in recent years.

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically 9 to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the project is located offers clear skies and sunshine, yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

LOCAL AMBIENT AIR QUALITY

Air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Basin. Estimates for the Basin have been made for existing emissions.[1] The data indicate that on-road (e.g., automobiles, buses, and trucks) and off-road mobile sources (e.g., trains, ships, and construction equipment) are the major source of current emissions in the Basin. Mobile sources account for approximately 64 percent of volatile organic compounds (VOC) emissions, 92 percent of nitrogen oxides (NO_X) emissions, 39 percent of direct particulate matter smaller than 2.5 microns ($PM_{2.5}$) emissions, 59 percent of sulfur oxides (SO_X) emissions, and 98 percent of carbon monoxide (CO) emissions. Area sources (e.g., architectural coatings, residential water heaters, and consumer products) account for approximately 30 percent of VOC emissions and 32 percent of direct $PM_{2.5}$ emissions. Point sources (e.g., chemical manufacturing, petroleum production, and electric utilities) account for approximately 38 percent of SO_X emissions. Entrained road dust account for approximately 20 percent of direct $PM_{2.5}$ emissions.

The South Coast Air Quality Management District (SCAQMD) has divided its jurisdiction into 38 source receptor areas (SRA) with a designated ambient air monitoring station in most areas. The project is located in the Saddleback Valley SRA (SRA 19). The monitoring station representative of this area is the Mission Viejo station, which is located approximately 2.1 miles south of the project site. The air pollutants measured at the Mission Viejo station site include O_3, CO, and particulates (PM_{10} and $PM_{2.5}$). Nitrogen dioxide (NO_2) is not measured at the Mission Viejo site; therefore, this pollutant has been measured at the Costa Mesa monitoring station. The air quality data monitored at the Mission Viejo and Costa Mesa stations from 2008 to 2010 are presented in Table 5.1-1, *Local Air Quality Levels*.

[1] South Coast Air Quality Management District, *2007 Air Quality Management Plan*, June 2007.

Table 5.1-1
Local Air Quality Levels

Pollutant	California Standard	National Standard	Year	Max. Level[1]	Days State Standard Exceeded[2]	Days National Standard Exceeded[2]
O_3[2] 1 Hour Average	0.09 ppm	None[4]	2010 2009 2008	0.073 0.121 0.118	0 7 9	n/a n/a n/a
O_3[2] 8 Hour Average	0.070 ppm	0.075 ppm	2010 2009 2008	0.069 0.095 0.104	0 14 25	0 10 15
CO[2] 8 Hour Average	9.0 ppm	9 ppm	2010 2009 2008	0.60 1.00 1.10	0 0 0	0 0 0
NO_2[3] 1 Hour Average	0.18 ppm	0.100 ppm	2010 2009 2008	0.070 0.065 0.081	0 0 0	n/a n/a n/a
PM_{10} [2, 5, 6] For 24 Hours	50 µg/m³	150 µg/m³	2010 2009 2008	n/m 56.0 42.0	n/m 1 0	n/m 0 0
$PM_{2.5}$[2, 5, 6] For 24 Hours	None	35 µg/m³	2010 2009 2008	n/m 39.2 32.6	n/m n/m n/m	n/m 1 0

ppm = parts per million
µg/m³ = micrograms per cubic meter
n/m = Not Measured
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less
n/a = Not Applicable

Notes:
1. Maximum concentration is measured over the same period as the California Standard.
2. Measurements taken at the Mission Viejo Monitoring Station (located at 26081 Via Pera, Mission Viejo, California 92691).
3. Measurements taken at the Costa Mesa Monitoring Station (located at 2850 Mesa Verde Drive East, Costa Mesa California 92626).
4. The United States Environmental Protection Agency revoked the Federal 1-hour Standard in June of 2005.
5. PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
6. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Source: California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Air Quality Data Statistics*, http://www.arb.ca.gov/adam/welcome.html, accessed on June 30, 2011.

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions.

CO replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes are most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of carbon monoxide. Exposure to high levels of carbon monoxide can slow reflexes and cause drowsiness, and result in death in confined spaces at very high concentrations.

Ozone. O_3 occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone layer) extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

"Bad" ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), NO_X, and sunlight to form; therefore, VOCs and NO_X are ozone precursors. To reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and a period of several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While ozone in the upper atmosphere (stratosphere) protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone (in the troposphere) can adversely affect the human respiratory system and other tissues. Ozone is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children, and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of ozone. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in aggravated respiratory diseases such as emphysema, bronchitis and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue, as well as chest pain, dry throat, headache, and nausea.

Nitrogen Dioxide. Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone, and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air, may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than 10 microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003, the California Air Resources Board (CARB) adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the United States Environmental Protection Agency (EPA) announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the United States Supreme Court reversed this decision and upheld the EPA's new standards.

On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for Federal $PM_{2.5}$ standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Sulfur Dioxide. SO_2 is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. Sulfur dioxide is often used interchangeably with SO_X and lead (Pb). Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics.

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics and CO are of particular concern. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The following types of people are most likely to be adversely affected by air pollution, as identified by CARB: children under 14, elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. Locations that may contain a high concentration of these sensitive population groups are called sensitive receptors and include residential areas, hospitals, day-care facilities, elder-care facilities, elementary schools, and parks.

Sensitive receptors in the project vicinity include residential uses adjacent to the east, south, and west of the project site, as well as Tamarisk Park located approximately 1,200 feet to the west.

5.1.2 REGULATORY FRAMEWORK

U.S. ENVIRONMENTAL PROTECTION AGENCY

The EPA is responsible for implementing the Federal Clean Air Act (FCAA), which was first enacted in 1955 and amended numerous times after. The FCAA established Federal air quality standards known as the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect

the public health and welfare. The criteria pollutants are O_3, CO, NO_2, which is a form of NO_X, SO_2, which is a form of SO_x, PM_{10}, $PM_{2.5}$, and lead (Pb); refer to Table 5.1-2, *National and California Ambient Air Quality Standards*.

Table 5.1-2
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	Nonattainment	N/A[5]	N/A[5]
	8 Hour	0.070 ppm (137 μg/m³)	Unclassified	0.075 ppm (147 μg/m³)	Nonattainment
Particulate Matter (PM_{10})	24 Hour	50 μg/m³	Nonattainment	150 μg/m³	Nonattainment
	Annual Arithmetic Mean	20 μg/m³	Nonattainment	N/A[7]	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		35 μg/m³	Unclassified
	Annual Arithmetic Mean	12 μg/m³	Nonattainment	15.0 μg/m³	Nonattainment
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Attainment
	1 Hour	20 ppm (23 mg/m³)	Attainment	35 ppm (40 mg/m³)	Attainment
Nitrogen Dioxide (NO_2)[6]	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	N/A	53 ppb (100 μg/m³)	Attainment
	1 Hour	0.18 ppm (339 μg/m³)	Attainment	100 ppb (188 μg/m³)	N/A
Lead (Pb)	30 day average	1.5 μg/m³	Attainment	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 μg/m³	Attainment
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 μg/m³)	Attainment	N/A	Attainment
	3 Hour	N/A	N/A	N/A	Attainment
	1 Hour	0.25 ppm (655 μg/m³)	Attainment	75 ppb (196 μg/m³)	N/A
Visibility-Reducing Particles	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	No Federal Standards	
Sulfates	24 Hour	25 μg/m3	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m3)	Unclassified		

μg/m³ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable.

Notes:

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM_{10} 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. In 1990, CARB identified vinyl chloride as a toxic air contaminant, but determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 ppm ambient concentration specified in the 1978 standard.
2. National standards (other than ozone, particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. EPA also may designate an area as *attainment/unclassifiable*, if: (1) it has monitored air quality data that show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over the three years, are equal to or less than the standard. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3. Concentration is 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 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
5. The Federal 1-hour ozone standard was revoked on June 15, 2005 in all areas except the 14 8-hour ozone nonattainment Early Action Compact (EAC) areas.
6. The Nitrogen Dioxide ambient air quality standard was amended in February 22, 2007 to lower the 1-hour standard to 0.18 ppm and establish a new annual standard of 0.030 ppm.
7. The EPA revoked the annual PM_{10} standard in 2006 (effective December 16, 2006).

Source: California Air Resources Board and U.S. Environmental Protection Agency, September 8, 2010.

CALIFORNIA AIR RESOURCES BOARD

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 5.1-2, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMP's also serve as the basis for preparation of the State Implementation Plan (SIP) for the State of California.

Like the EPA, California Air Resources Board (CARB) also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

The SCAQMD is one of 35 air quality management districts that have prepared AQMP's to accomplish a five-percent annual reduction in emissions. The *2007 Air Quality Management Plan for the South Coast Air Basin* (2007 AQMP) relies on a multi-level partnership of governmental agencies at the Federal, State, regional, and local level. The 2007 AQMP proposes policies and measures to achieve Federal and State standards for improved air quality in the Basin and those portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under SCAQMD jurisdiction. The 2007 AQMP includes new information on key elements such as:

- Current air quality;
- Improved emission inventories, especially significant increase in mobile source emissions;
- An overall control strategy comprised of: Stationary and Mobile Source Control Measures, SCAQMD, State and Federal Stationary and Mobile Source Control Measures, and the Southern California Association of Governments Regional Transportation Strategy and Control Measures;
- New attainment demonstration for $PM_{2.5}$ and O_3;
- Milestones to the Federal Reasonable Further Progress Plan; and
- Preliminary motor vehicle emission budgets for transportation conformity purposes.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the Federally designated metropolitan planning organization (MPO)

for the Southern California region and is the largest metropolitan planning organization in the United States. With respect to air quality planning, SCAG has prepared the *2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future* (2008 RCP) for the region, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the 2007 AQMP. SCAG is responsible under the FCAA for determining conformity of projects, plans, and programs within the SCAQMD.

5.1.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

METHODOLOGY

Regional Air Quality

In their *CEQA Air Quality Handbook* (November 1993), the SCAQMD has established significance thresholds to assess the impact of project related air pollutant emissions. Table 5.1-3, *SCAQMD Regional Pollutant Emission Thresholds of Significance*, presents these significance thresholds. There are separate thresholds for short-term construction and long-term operational emissions. A project with daily emission rates below these thresholds is considered to have a less than significant effect on regional air quality. The SCAQMD is in the process of updating the thresholds.

Table 5.1-3
SCAQMD Regional Pollutant Emission Thresholds of Significance

Phase	Pollutant (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction	75	100	550	150	150	55
Operation	55	55	550	150	150	55
CO = carbon monoxide; VOC = volatile organic compounds; NO_X = nitrogen oxides; PM_{10} = particulate matter smaller than 10 microns; $PM_{2.5}$ = particulate matter smaller than 2.5 microns						
Source: South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993.						

Construction

Mass daily combustion emissions, fugitive PM_{10} and $PM_{2.5}$, and off-gassing emissions were calculated using the CalEEMod computer model, as recommended by the SCAQMD. The CalEEMod model separates the construction process into multiple phases, including demolition and site clearing, grading, trenching, paving, building construction, and architectural coating. Construction emissions account for on-site construction equipment emissions, haul truck trips, and worker commute trips. Construction activities were based upon construction scheduling and other preliminary construction details provided by the Applicant. Where appropriate, CalEEMod defaults were utilized. CalEEMod assumptions are provided in Appendix 12.4, *Air Quality and Greenhouse Gas Data*, of this EIR.

Operations

The CalEEMod software was also used to quantify the daily emissions from mobile and area sources that would occur during long-term operation of the project. Mobile source emissions calculations in CalEEMod were supplemented with traffic trips within the project's *Traffic Impact Analysis*. Area source emissions were quantified using CalEEMod default emissions and exclude emissions from wood burning fireplaces and stoves.

Local Air Quality

Localized Significance Thresholds

As part of the SCAQMD's environmental justice program, attention was focused on localized effects of air quality. In accordance with Governing Board direction, SCAQMD staff developed localized significance threshold (LST) methodology and mass rate look-up tables by SRA that can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The LST's represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each SRA. The LST methodology is described in *Final Localized Significance Threshold Methodology* (updated July 2008) by the SCAQMD and is available at the SCAQMD website.[2] The SCAQMD periodically updates the lookup tables to reflect current monitoring data and the website was reviewed on October 21, 2009 to ensure that the most recent data was used as part of the baseline for this analysis.

The LST mass rate look-up tables provided by the SCAQMD allow one to determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts. If the calculated on-site emissions for the proposed construction or operational activities are below the LST emission levels found on the LST mass rate look-up table, then the proposed construction or operation activity would not result in a significant impact on local air quality.

The LST mass rate look-up tables are applicable to NO_X, CO, PM_{10}, and $PM_{2.5}$. LST's are derived based on the location of the activity (i.e., the source/receptor area); the emission rates of NO_X, CO, PM_{10}, and $PM_{2.5}$; and the distance to the nearest exposed individual. This distance is based upon the uses around the project and the Ambient Air Quality Standard (AAQS) averaging times for the pollutants of concern. The shortest AAQS averaging time for CO and NO_2 are for one-hour and the nearest exposed individual is the location where a person could be expected to remain for 1-hour. The shortest averaging time for the PM_{10} and $PM_{2.5}$ AAQS is 24 hours and the nearest exposed individual is the location where a person could be expected to remain for 24-hours. Typically, this is the nearest residential use.

The LST methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the

[2] South Coast Air Quality Management District, *Localized Significance Thresholds*, October 21, 2009. http://aqmd.gov/ceqa/handbook/LST/LST.html.

values given, or with receptors at distances between the given distances, the methodology uses linear interpolation to determine the thresholds. If receptors are within 25 meters of the site, the methodology document states that the threshold for the 25-meter distance should be used.

The project is located in SRA 19 (Saddleback Valley) and is approximately 98.9 acres in size. The nearest off-site location where a person could be for 1-hour is adjacent to the east, south, and west of the site. Per SCAQMD guidance a receptor distance of 25-meters (82 feet) was used to establish the thresholds for CO, NO_X, PM_{10}, and $PM_{2.5}$. Based on these factors, the LST thresholds specific for the proposed project were calculated and are presented in Table 5.1-4, *Localized Significance Thresholds*. A project with daily emission rates below these thresholds is considered to have a less than significant effect on local air quality.

Table 5.1-4
Localized Significance Thresholds

Phase	Localized Significance Threshold (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction	197	1,804	12	8
Operation	197	1,804	3	2
CO = carbon monoxide; VOC = volatile organic compounds; NO_X = nitrogen oxides; PM_{10} = particulate matter smaller than 10 microns; $PM_{2.5}$ = particulate matter smaller than 2.5 microns				
Source: South Coast Air Quality Management District, *Localized Significance Threshold Methodology, Appendix C*, October 21, 2009.				

Localized CO

In addition, the project would result in a local air quality impact if the project results in increased traffic volumes and/or decreases in Level of Service (LOS) that would result in an exceedance of the CO ambient air quality standards of 20 ppm for 1-hour CO concentration levels, and 9 ppm for 8-hour CO concentration levels. If the CO concentrations at potentially impacted intersections with the project are lower than the standards, then there is no significant impact. If future CO concentrations with the project are above the standard, then the project would have a significant local air quality impact.

Local area CO emissions for roadways were quantified using the CALINE4 line-source dispersion model developed by the California Department of Transportation (Caltrans) combined with EMFAC2007 emission factors. The analysis of local CO impacts followed the protocol recommended by Caltrans and published in their *Transportation Project-Level Carbon Monoxide Protocol*, and is also consistent with the procedures identified through the SCAQMD's CO modeling protocol.

Toxic Air Contaminants

Potential Toxic Air Contaminants (TACs) impacts are evaluated by conducting a screening level analysis, followed by a more detailed analysis, if necessary. The screening level analysis consists of reviewing the project description and site plan to identify any new or modified TAC emissions

sources. If it is determined that the proposed project would introduce a new source, or modify an existing TAC emissions source, then downwind sensitive receptor locations are identified, and site specific dispersion modeling is conducted to determine proposed project impacts.

INITIAL STUDY CHECKLIST

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by Appendix G of the *CEQA Guidelines*, as amended, and used by the City of Lake Forest in its environmental review process. The Initial Study Checklist includes questions relating to air quality. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant adverse environmental impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan; refer to Impact Statement AQ-4.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation; refer to Impact Statement AQ-1 and AQ-2.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors); refer to Impact Statement AQ-1 and AQ-2.
- Expose sensitive receptors to substantial pollutant concentrations; refer to Impact Statement AQ-3.
- Create objectionable odors affecting a substantial number of people; refer to Section 9.0, *Effects Found Not To Be Significant*.

5.1.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM (CONSTRUCTION) AIR EMISSIONS

AQ-1 SHORT-TERM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT WOULD RESULT IN AIR POLLUTANT EMISSION IMPACTS OR EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

Impact Analysis: Temporary impacts would result from project construction activities. Air pollutants would be emitted by construction equipment and fugitive dust would be generated during demolition of the existing structures and improvements as well as during grading of the site. Emissions during the primary phases of construction were calculated using the CalEEMod program. The equipment modeled during each phase was based on the defaults in CalEEMod modified as needed to represent the project specifics. All fugitive dust calculations accounted for watering and other dust control methods required to be implemented per SCAQMD Rule 403 (refer to Mitigation Measure AQ-1).

Depending on market conditions, the project is expected to be constructed in phases generally over a period of six years, starting from approximately 2013 to approximately 2019.

Fugitive Dust Emissions

Fugitive dust (PM_{10} and $PM_{2.5}$) from grading and construction is expected to be short-term and would cease following completion of the proposed project improvements. Most of this material is composed of inert silicates, which are less harmful to health than the complex organic particulates released from combustion sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and SO_X combining with ammonia. The greatest amount of fugitive dust generated is expected to occur during site grading and excavation. Dust generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular concern is the amount of PM_{10} generated as a part of fugitive dust emissions.

The CalEEMod computer model calculates PM_{10} and $PM_{2.5}$ fugitive dust as part of the site earthwork activity emissions; refer to Table 5.1-5, *Maximum Daily Pollutant Emissions During Construction*. Maximum particulate matter emissions would occur during the initial stages of construction, when grading activities would occur. With the application of Mitigation Measure AQ-1, which requires adherence to SCAQMD Rule 403 and other dust control techniques, the maximum mitigated particulate matter concentration would be 10.36 pounds per day (lbs/day) for PM_{10} and 6.95 lbs/day for $PM_{2.5}$ in 2015. It should be noted that Mitigation AQ-1 has been modified from OSA PEIR Mitigation Measure 3.3-7 to reflect project specific conditions as well as current SCAQMD guidance. Therefore, emissions in each year are below SCAQMD thresholds of 150 lbs/day for PM_{10} and 55 lbs/day for $PM_{2.5}$. Although the unmitigated particulate matter levels are below the SCAQMD thresholds in the absence of specific dust reduction measures, the mitigation has been recommended as the Basin is nonattainment for PM_{10} and $PM_{2.5}$.

Construction Exhaust Emissions

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As presented in Table 5.1-5, construction equipment and worker vehicle exhaust emissions would be below the established SCAQMD thresholds in each construction year except 2015. The NO_X emissions during the periods described above would result in a significant impact during 2015 construction activities due to its contribution in forming ozone.

Table 5.1-5
Maximum Daily Pollutant Emissions During Construction

	Daily Pollutant Emissions (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2013						
Unmitigated	9.53	74.39	45.68	0.08	16.38	10.52
Mitigated[2]	9.53	74.39	45.68	0.08	8.63	6.35
SCAQMD Construction Thresholds	75	100	550	150	150	55
Mitigated Emissions Exceed Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
2014						
Unmitigated	12.29	73.1	51.41	0.1	10.95	7.51
Mitigated[2]	12.29	73.1	51.41	0.1	6.87	5.43
SCAQMD Construction Thresholds	75	100	550	150	150	55
Mitigated Emissions Exceed Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
2015						
Unmitigated	20.64	114.87	79.23	0.16	16.51	9.03
Mitigated[2]	20.64	114.87	79.23	0.16	10.36	6.95
SCAQMD Construction Thresholds	75	100	550	150	150	55
Mitigated Emissions Exceed Thresholds?	*No*	*YES*	*No*	*No*	*No*	*No*
2016						
Unmitigated	27.57	69.67	63.98	0.12	13.22	7.14
Mitigated[2]	27.57	69.67	63.98	0.12	8.48	5.05
SCAQMD Construction Thresholds	75	100	550	150	150	55
Mitigated Emissions Exceed Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
2017						
Unmitigated	15.59	47.52	45.97	0.09	8.75	5.06
Mitigated[2]	15.59	47.52	45.97	0.09	5.47	3.5
SCAQMD Construction Thresholds	75	100	550	150	150	55
Mitigated Emissions Exceed Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
2018						
Unmitigated	6.44	41.58	36.3	0.07	8.66	5.43
Mitigated[2]	6.44	41.58	36.3	0.07	4.71	3.35
SCAQMD Construction Thresholds	75	100	550	150	150	55
Mitigated Emissions Exceed Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
2019						
Unmitigated	20.83	19.19	20.13	0.04	1.58	0.98
Mitigated[2]	20.83	19.19	20.13	0.04	1.58	0.98
SCAQMD Construction Thresholds	75	100	550	150	150	55
Mitigated Emissions Exceed Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

CO = carbon monoxide; VOC = volatile organic compounds; NO_X = nitrogen oxides; PM_{10} = particulate matter smaller than 10 microns; $PM_{2.5}$ = particulate matter smaller than 2.5 microns

Notes:

1. Emissions were calculated using CalEEMod, as recommended by the SCAQMD.
2. The reduction/credits for construction emission mitigations are based on mitigation included in the CalEEMod model and as typically required by the SCAQMD through Rule 403. The mitigation includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.

Source: LSA Associates, Inc., *Air Quality Analysis for Serrano Summit*, December 2009; refer to Appendix 12.3, *Air Quality Analysis*. Updated CalEEMod modeling prepared by RBF Consulting; refer to Appendix 12.4, *Air Quality and Greenhouse Gas Data*, for assumptions used in this analysis.

The generation of NO_X emissions during construction is almost entirely due to engine combustion in construction equipment, haul trucks, and employee commuting. Therefore, Mitigation Measure AQ-2 would be required to reduce NO_X emissions to the maximum extent practicable. It should be noted that Mitigation Measure AQ-2 is modified from OSA PEIR Mitigation Measures 3.3-1 through 3.3-6 based on guidance from the SCAQMD. While Mitigation Measure AQ-2 would reduce NO_X emissions, it is not certain that these emissions can be reduced to below the significance thresholds. Therefore, even with implementation of Mitigation Measure AQ-2, the NO_X emissions during construction of the project are considered significant and unavoidable.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SCAQMD, the ROG emissions associated with paving and architectural coating have been quantified with the CalEEMod model. Based on the modeling, the proposed project would not result in an exceedance of ROG emissions and therefore would be considered less than significant.

Asbestos

Pursuant to guidance issued by the Governor's Office of Planning and Research, State Clearinghouse, lead agencies are encouraged to analyze potential impacts related to naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed.

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties of the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (dated August 2000), the proposed project is not located in an area where NOA is likely to be present. Therefore impacts would be considered less than significant.

PROJECT ALTERNATIVE

The development of the Project Alternative would consist of 225 units instead of the Civic Center. This would result in the development of 833 residential dwelling units and 1,500 square feet of recreational uses instead of 603 dwelling units and 115,500 square feet of community and public uses. Construction activities would result in similar grading and building activities as what was analyzed for the proposed project. Additionally, construction of the Project Alternative would have the same phasing and duration as the proposed project. Therefore, construction emissions associated with the Project Alternative would be similar to the proposed project.

As with the proposed project, construction emissions for the Project Alternative would also be below the established SCAQMD thresholds in each construction year except 2015. The NO_X emissions during the periods described above would result in a significant impact during 2015 construction activities due to its contribution in forming ozone. Therefore, Mitigation Measure AQ-2 would be required to reduce NO_X emissions to the maximum extent practicable. While Mitigation Measure AQ-2 would reduce NO_X emissions, it is not certain that these emissions can be reduced to below the significance thresholds. Therefore, even with implementation of Mitigation Measure AQ-2, the NO_X emissions during construction of the project are considered significant and unavoidable. All other construction related emissions would be reduced to a less than significant level with the implementation of Mitigation Measure AQ-1 and AQ-2.

Mitigation Measures:

AQ-1 Prior to issuance of any Grading Permit, the City Engineer and the Chief Building Official shall confirm that the Grading Plan, Building Plans and specifications stipulate that, in compliance with South Coast Air Quality Management District Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the South Coast Air Quality Management District's Rules and Regulations. In addition, South Coast Air Quality Management District Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. The following measures shall be implemented to reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust; watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day;
- Water trucks shall be utilized on the site and shall be available to be used throughout the day during site grading to keep the soil damp enough to minimize dust being raised by the construction operations;
- Replace ground cover in disturbed areas as quickly as possible;
- On-site vehicle speed shall be limited to 15 miles per hour;

- All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized;

- All material transported off-site shall be sufficiently watered and securely covered to prevent excessive amounts of dust prior to departing the job site. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code;

- Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip on a gravel surface to prevent dirt and dust from impacting the surrounding areas;

- All delivery truck tires shall be watered down and scraped down prior to departing the job site;

- Visible dust beyond the property line which emanates from the project shall be minimized to the extent feasible;

- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period; and

- Sweep streets at the end of the day.

Level of Significance After Mitigation: Less than significant impact from construction particulate matter.

AQ-2 The following measures shall be implemented during construction to substantially reduce NO_X related emissions. They shall be included in the Grading Plan, Building Plans, and contract specifications. Contract specification language shall be reviewed by the City prior to issuance of a grading permit. Reductions in particulate emissions shall also be realized from the implementation of these measures as well as Mitigation Measure AQ-1.

- Off-road diesel equipment operators shall be required to shut down their engines rather than idle for more than five minutes, and shall ensure that all off-road equipment is compliant with the CARB in-use off-road diesel vehicle regulation and SCAQMD Rule 2449.

- The following note shall be included on all grading plans: "During construction activity, the contractor shall utilize California Air Resources Board (CARB) Tier III certified equipment or better for all on-site construction equipment according to the following:

- January 1, 2012 to December 31, 2014: All off-road diesel powered construction equipment greater than 50 hp shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

- Post-January 1, 2015: If applicable, all off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards where available and commercially feasible.

- A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided to the City at the time of mobilization of each applicable unit of equipment.

- The contractor and applicant, if the applicant's equipment is used, shall maintain construction equipment engines by keeping them tuned and regularly serviced to minimize exhaust emissions.

- Use low sulfur fuel for stationary construction equipment. This is required by SCAQMD Rules 431.1 and 431.2.

- Utilize existing power sources (i.e., power poles) when available. This measure would minimize the use of higher polluting gas or diesel generators.

- Configure construction parking to minimize traffic interference.

- Minimize obstruction of through-traffic lanes and provide temporary traffic controls such as a flag person during all phases of construction when needed to maintain smooth traffic flow. Construction shall be planned so that lane closures on existing streets are kept to a minimum.

- Schedule construction operations affecting traffic for off-peak hours to the best extent when possible.

- Develop a traffic plan to minimize traffic flow interference from construction activities (the plan may include advance public notice of routing, use of public transportation and satellite parking areas with a shuttle service.)

- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than five minutes.

Level of Significance After Mitigation: Significant and Unavoidable Impact from Construction NO_X.

LONG-TERM (OPERATIONAL) AIR EMISSIONS

AQ-2 DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT WOULD RESULT IN SIGNIFICANT AND UNAVOIDABLE IMPACTS PERTAINING TO OPERATIONAL AIR EMISSIONS.

Impact Analysis: Operational emissions generated by both stationary and mobile sources would result from normal daily activities on the project site after occupation (i.e., increased concentrations of O_3, PM_{10}, and CO). Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, and the use of consumer products. Stationary energy emissions would result from energy consumption associated with the proposed project. Mobile emissions would be generated by the motor vehicles traveling to and from the project site.

It should be noted that the OSA PEIR concluded that the estimated daily operational emissions resulting from buildout of the OSA would exceed the SCAQMD recommended thresholds of significance for CO, VOC, NO_X, and PM_{10}. The exceedance of the SCAQMD thresholds for these criteria pollutants is primarily due to the increase in motor vehicles traveling to and from the new land uses within the development sites. Emissions associated with the proposed Serrano Summit Area Plan are discussed below.

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using the CalEEMod model. This model predicts ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from motor vehicle traffic associated with new or modified land uses; refer to Appendix 12.4, *Air Quality and Greenhouse Gas Data*. According to the project's *Traffic Impact Analysis*, the proposed project would generate 8,770 daily trips after buildout. Table 5.1-6, *Long-Term Operational Air Emissions* presents the anticipated mobile source emissions. As shown in Table 5.1-6, unmitigated emissions generated by vehicle traffic associated with the proposed project would exceed established SCAQMD thresholds for ROG, CO, and PM_{10}. NO_X thresholds would be exceeded under the unmitigated condition as well. Mitigation Measure GHG-1 (refer to Section 5.2, *Greenhouse Gas Emissions*) requires the project to provide pedestrian connections to the off-site circulation network, implement a trip reduction program, and provide a ride sharing program in order to reduce mobile source NO_X levels. However, despite implementation of Mitigation Measure GHG-1, emissions would remain above SCAQMD thresholds. Therefore, impacts in this regard would be significant.

Stationary Source Emissions

Stationary source emissions would be generated due to an increased demand for electrical energy and natural gas with the development of the proposed project. This assumption is based on the supposition that those power plants supplying electricity to the site are utilizing fossil fuels. Electric power generating plants are distributed throughout the Basin and western United States, and their emissions contribute to the total regional pollutant burden. The primary use of natural gas by the proposed land uses would be for combustion to produce space heating, water heating, other miscellaneous heating, or air conditioning, consumer products, and landscaping. As indicated in Table 5.1-6, stationary source emissions from the proposed project would exceed SCAQMD thresholds for NO_X when combined with mobile source emissions. Mitigation Measure GHG-1 requires the project to implement various energy efficiency measures that would reduce stationary source emissions. However, despite the implementation of Mitigation Measure GHG-1, impacts would remain above SCAQMD thresholds. If other stationary sources, such as backup generators, are installed on-site, they would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the Basin. Backup generators would be used only in emergency situations, and would not contribute a substantial amount of emissions capable of exceeding SCAQMD thresholds. Due to the exceedance of SCAQMD thresholds for NO_X, impacts from area source emissions would be considered significant.

Table 5.1-6
Long-Term Operational Air Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Unmitigated Area Source Emissions[2]	85.26	3.56	252.18	0.49	32.43	32.42
Mitigated Area Source Emissions[2]	*20.54*	*0.59*	*50.92*	*0.00*	*0.28*	*0.28*
Unmitigated Energy Emissions	0.55	4.76	2.16	0.03	0.38	0.38
Mitigated Energy Emissions	*0.48*	*4.14*	*1.88*	*0.03*	*0.33*	*0.33*
Unmitigated Mobile Emissions	35.40	82.49	317.41	0.82	91.53	5.38
Mitigated Mobile Emissions	*27.38*	*62.36*	*224.39*	*0.54*	*59.53*	*3.56*
Total Unmitigated Emissions	121.21	90.81	571.75	1.34	124.34	38.18
Total Mitigated Emissions	*48.40*	*67.09*	*277.19*	*0.57*	*60.14*	*4.17*
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded? (Significant Impact?)	*No*	*YES*	*No*	*No*	*No*	*No*

Notes:
1. Based on CalEEMod modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.
2. Area source excludes the use of fireplaces and wood burning stoves.
3. Refer to Appendix 12.4, *Air Quality and Greenhouse Gas Data*, for assumptions used in this analysis.

PROJECT ALTERNATIVE

Mobile Source Emissions

According to the *Traffic Impact Analysis*, the Project Alternative would generate 6,748 daily trips after buildout. As depicted in Table 5.1-7, *Project Alternative Long-Term Operational Air Emissions*, unmitigated emissions generated by vehicle traffic associated with the proposed project would exceed established SCAQMD thresholds for ROG, NO_X, CO, and PM_{10}. Mitigation Measure GHG-1 requires the Project Alternative to provide pedestrian connections to the off-site circulation network, implement a trip reduction program, and provide a ride sharing program in order to reduce mobile source emissions. However, despite implementation of Mitigation Measure GHG-1, NO_X emissions would remain above SCAQMD thresholds. Therefore, impacts in this regard would be significant.

Stationary Source Emissions

As indicated in Table 5.1-6, stationary source emissions from the Project Alternative would exceed SCAQMD thresholds for NO_X when combined with mobile source emissions. Mitigation Measure GHG-1 requires the project to implement various energy efficiency measures that would reduce stationary source emissions. However, despite the implementation of Mitigation Measure GHG-1, impacts would remain above SCAQMD thresholds.

Table 5.1-7
Project Alternative Long-Term Operational Air Emissions

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Unmitigated Area Source Emissions[2]	111.74	4.87	345.50	0.67	44.43	44.42
Mitigated Area Source Emissions[2]	*23.07*	*0.80*	*69.77*	*0.00*	*0.38*	*0.38*
Unmitigated Energy Emissions	0.64	5.51	2.34	0.04	0.45	0.45
Mitigated Energy Emissions	*0.56*	*4.80*	*2.04*	*0.03*	*0.39*	*0.39*
Unmitigated Mobile Emissions	29.79	69.76	272.46	0.71	79.89	4.68
Mitigated Mobile Emissions	*23.28*	*53.44*	*197.01*	*0.49*	*53.94*	*3.21*
Total Unmitigated Emissions	142.17	80.14	620.30	1.42	124.77	49.55
Total Mitigated Emissions	*46.91*	*59.04*	*268.82*	*0.52*	*54.71*	*3.98*
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded? (Significant Impact?)	*No*	*YES*	*No*	*No*	*No*	*No*

Notes:
1. Based on CalEEMod modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.
2. Area source excludes the use of fireplaces and wood burning stoves.
3. Refer to Appendix 12.4, *Air Quality and Greenhouse Gas Data*, for assumptions used in this analysis.

Mitigation Measures: Refer to Mitigation Measures GHG-1.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

LOCALIZED HOT-SPOT EMISSIONS

AQ-3 DEVELOPMENT ASSOCIATED WITH THE PROJECT WOULD NOT RESULT IN LOCALIZED CO OR PARTICULATE MATTER EMISSIONS IMPACTS OR EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

Impact Analysis:

Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects. The SCAQMD provides the LST lookup tables for one, two, and five acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. The project is located within Sensitive Receptor Area (SRA) 19, Saddleback Valley.

The closest sensitive receptor to the proposed site are the residential uses located to the southwest at a distance of approximately 100 feet (30 meters). Table 5.1-8, Localized Significance of Emissions, depicts the mitigated construction-related emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ compared to the LSTs for SRA 19, Saddleback Valley. Additionally, for project operations, the conservative five-acre threshold for receptors of 25 meters away was utilized. The LST analysis only includes on-site sources; therefore, the operational emissions shown include area sources. As shown in Table 5.1-8, construction and operational emissions would not exceed the LSTs for SRA 19 with the implementation of Mitigation Measures AQ-1, AQ-2, and GHG-1. Therefore, localized significance impacts would be less than significant.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affect residents, school children, hospital patients, the elderly, etc.). The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service LOS D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hotspots are typically produced at intersections. Table 5.1-9, *Project Buildout Carbon Monoxide Concentrations*, provides the CO hotspot analysis results for the study intersection that warranted a CO hotspot analysis.

Table 5.1-8
Localized Significance of Emissions

Source	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
CONSTRUCTION				
2013				
Total Mitigated On-Site Emissions	37.12	22.15	4.19	3.17
Localized Significance Threshold	*197*	*1,804*	*12*	*8*
Thresholds Exceeded?	*No*	*No*	*No*	*No*
2014				
Total Mitigated On-Site Emissions	45.66	30.18	4.76	3.70
Localized Significance Threshold	*197*	*1,804*	*12*	*8*
Thresholds Exceeded?	*No*	*No*	*No*	*No*
2015				
Total Mitigated On-Site Emissions	83.24	49.03	6.72	5.03
Localized Significance Threshold	*197*	*1,804*	*12*	*8*
Thresholds Exceeded?	*No*	*No*	*No*	*No*
2016				
Total Mitigated On-Site Emissions	38.45	28.75	4.29	3.23
Localized Significance Threshold	*197*	*1,804*	*12*	*8*
Thresholds Exceeded?	*No*	*No*	*No*	*No*
2017				
Total Mitigated On-Site Emissions	24.08	22.64	1.39	1.39
Localized Significance Threshold	*197*	*1,804*	*12*	*8*
Thresholds Exceeded?	*No*	*No*	*No*	*No*
2018				
Total Mitigated On-Site Emissions	25.24	18.86	3.44	2.42
Localized Significance Threshold	*197*	*1,804*	*12*	*8*
Thresholds Exceeded?	*No*	*No*	*No*	*No*
2019				
Total Mitigated On-Site Emissions	17.50	17.79	0.91	0.91
Localized Significance Threshold	*197*	*1,804*	*12*	*8*
Thresholds Exceeded?	*No*	*No*	*No*	*No*
OPERATIONS				
Area Source Emissions	0.59	50.92	0.28	0.28
Localized Significance Threshold	*197*	*1,804*	*3.0*	*2.0*
Thresholds Exceeded?	*No*	*No*	*No*	*No*

Note:
1. The Localized Significance Threshold was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (approximately 5 acres; therefore the 5-acre threshold was used), the total acreage for operational (conservatively uses the 5-acre threshold), the distance to sensitive receptors (25 meters), and the source receptor area (SRA 19).

Table 5.1-9
Project Buildout Carbon Monoxide Concentration

Intersection	1-hour CO (ppm)[1]		8-Hour CO (ppm) [1]	
	1-hour Standard	Future + Project	8-hour Standard	Future + Project
Lake Forest Drive and Trabuco Road	20 ppm	1.8	9 ppm	1.35

Note:
1. As measured at a distance of 10 feet from the corner of the intersection predicting the highest value. Presented 1 hour CO concentrations include a background concentration of 1.5 ppm. Eight-hour concentrations are based on a persistence of 0.75 of the 1-hour concentration. Refer to Appendix 12.4, *Air Quality and Greenhouse Gas Data*.

The projected traffic volumes were modeled using the BREEZE ROADS dispersion model. The resultant values were then added to an ambient concentration. A receptor height of 1.8 meters was used in accordance with the EPA's recommendations. The calculations assume a meteorological condition of almost no wind (0.5 meters/second), a flat topological condition between the source and the receptor and a mixing height of 1,000 meters. A standard deviation of five degrees was used for the deviation of wind direction. The suburban land classification was used for the aerodynamic roughness coefficient. This follows the BREEZE ROADS user's manual definition of suburban as "regular coverage with large obstacles, open spaces roughly equal to obstacle heights, villages, mature forests." All of the above parameters are based on the standards stated in the *Transportation Project-Level Carbon Monoxide (CO Protocol)*, December 1997.

For the purposes of this analysis, the ambient concentration used in the modeling was the highest one-hour measurement (the highest concentration of the last three years data was available) of SCAQMD monitoring data at the Mission Viejo Monitoring Station. Actual future ambient CO levels may be lower due to emissions control strategies that would be implemented between now and the proposed project buildout date. Due to changing meteorological conditions over an eight-hour period which diffuses the local CO concentrations, the eight-hour CO level concentrations have been found to be typically proportional and lower than the one-hour concentrations, where it is possible to have stable atmospheric conditions last for the entire hour. Therefore, eight-hour CO levels were calculated using the locally derived persistence factor as stated in the CO Protocol. The local persistence factor is derived by calculating the highest ratio of eight-hour to one-hour maximum locally measured CO concentrations from the most recent three years of data. Of the most recent three years of data, the highest eight-hour to one-hour ratio was 0.75.

The intersection listed in Table 5.1-9 currently operates at an LOS D for peak hour activities. At proposed project buildout, these intersections would continue to operate at LOS D and project implementation would increase the volume-to-capacity ratio by 0.02 (two percent) in an unmitigated condition, requiring a CO hotspot analysis. As indicated in Table 5.1-9, CO concentrations would be well below the State and Federal standards. The modeling results are compared to the CAAQS for CO of 9 ppm on an eight-hour average and 20 ppm on a one-hour average. Neither the one-hour average nor the eight-hour average would be equaled or exceeded. Impacts in regards to CO hotspots would be less than significant.

PROJECT ALTERNATIVE

The development of the Project Alternative would exclude the Civic Center, allowing in its place the development of additional residential uses. Construction emissions associated with the Project Alternative would be similar to the proposed project due to similar phasing and timing. Therefore, construction LST impacts associated with the Project Alternative would be similar to the proposed project. As described above, the Project Alternative would generate 6,748 daily vehicle trips which is less than the 8,770 daily trips associated with the proposed project. Therefore, similar to the proposed project, operational (area source) LST impacts and intersection CO hotspot impacts for the Project Alternative would be less than significant.

Mitigation Measures: Refer to Mitigation Measure AQ-1, AQ-2, and GHG-1.

Level of Significance After Mitigation: Less Than Significant Impact.

CONSISTENCY WITH REGIONAL PLANS

AQ-4 DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT WOULD BE CONSISTENT WITH REGIONAL PLANS.

Impact Analysis: The proposed project is located within the South Coast Air Basin (Basin), which is governed by the SCAQMD. Consistency with the *2007 Air Quality Management Plan for the South Coast Air Basin* (*2007 AQMP*) means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the Federal and State air quality standards. According to the SCAQMD *CEQA Air Quality Handbook*, in order to determine consistency with the *2007 AQMP*, two main criteria must be addressed.

Criterion 1: Would the project result in an increase in the frequency or severity of existing air quality violations?

Based on the air quality modeling analysis contained in this report, there would not be significant localized short-term construction or long-term operational impacts due to the project based on the SCAQMD thresholds of significance. Emissions generated during construction and operation would not exceed SCAQMD's LST criteria, and therefore, it is unlikely that development of the project would increase the frequency or severity of existing air quality violations in the immediate vicinity of the project. Further, the project is not projected to result in any exceedances due to traffic volume increases at nearby intersections. Project operation and construction is projected to increase regional NO_X emissions greater than the SCAQMD significance threshold but this increase is a very small fraction of the total Basin NO_X emissions and would contribute only slightly to ozone formation. The LST analysis demonstrates that the project would not cause a localized exceedance of the NO_2 standard. Therefore, proposed project is not projected to contribute to the exceedance of any air pollutant concentration standards. Thus, the project is found to be consistent with the AQMP for the first criterion.

Criterion 2: Would the Project Exceed Assumptions in the AQMP?

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the AQMP.

The AQMP consistency analysis within the OSA PEIR concluded that the change of land uses under the OSA would result in a reduction in overall emissions when compared with the land use designations under the previous General Plan. Compared to the previous General Plan, the OSA included residential uses, mixed-use development, public facilities, and additional parkland acreages while eliminating the development of light industrial uses. The uses in the OSA would result in an overall reduction in traffic generation and would not include significant stationary emissions sources. Thus, the land use changes under the OSA would result in an overall reduction in mobile and stationary source emissions. As the project is consistent with the current General Plan, the project is considered consistent with the region's AQMP. Therefore, project-related emissions are accounted for in the AQMP, which is crafted to bring the Basin into attainment for all criteria pollutants.

As described above, the proposed project would be consistent with the 2007 AQMP as it would satisfy the two key indicators of consistency identified by the SCAQMD's *CEQA Handbook*. The proposed project would not contribute to the exceedance of an air pollutant concentration standard, as its localized impacts would be below significance thresholds. Additionally, the project would not exceed the assumptions in the AQMP. As a result, the proposed project would be consistent with the 2007 AQMP and impacts would be less than significant.

PROJECT ALTERNATIVE

The development of the Project Alternative would exclude the Civic Center, allowing in its place the development of additional residential uses. Implementation of the Project Alternative would be consistent with the City's General Plan. Additionally, the Project Alternative would result in fewer vehicle trips than the proposed project, thereby generating fewer mobile source emissions. As with the proposed project, the Project Alternative would result in less than significant impacts with regard to localized concentrations during project operations. As the Project Alternative is consistent with the current General Plan, it is considered consistent with the region's AQMP. Therefore, project-related emissions are accounted for in the AQMP, which is crafted to bring the Basin into attainment for all criteria pollutants. As a result, the proposed project would be consistent with the 2007 AQMP and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.1.5 CUMULATIVE IMPACTS

- **DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT AND RELATED CUMULATIVE PROJECTS WOULD RESULT IN SIGNIFICANT AIR QUALITY IMPACTS AND MAY EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.**

Impact Analysis:

Threshold: Conflict with or obstruct implementation of the applicable air quality plan.

The City of Lake Forest is subject to the SCAQMD's 2007 AQMP. Additionally, the City is located within the Orange County subregion of the SCAG *2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future* (2008 RCP), which governs population growth. The General Plan is consistent with the 2008 RCP, and since the 2008 RCP is consistent with the 2007 AQMP, growth under the *General Plan* is consistent with the 2007 AQMP. Therefore, development in the City would not conflict or obstruct the 2007 AQMP. Also, as the proposed project would not exceed the growth assumptions in the 2007 AQMP, the project would not cumulatively contribute to impacts in this regard.

PROJECT ALTERNATIVE

As with the proposed project, the Project Alternative is consistent with the City's General Plan and is therefore consistent with the growth projections in the 2007 AQMP. Additionally, the City's General Plan is consistent with the 2008 RCP and the growth projections in the 2007 AQMP. Therefore, development in the City would not conflict or obstruct the 2007 AQMP. Also, as the Project Alternative would be consistent with the 2007 AQMP, the project would not cumulatively contribute to impacts in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation:

Overall Cumulative Impact – Less Than Significant Impact.

Project Cumulative Contribution – Less Than Significant Impact.

Threshold: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Threshold: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Threshold: Exposes sensitive receptors to substantial pollutant concentrations.

Construction Impacts

The SCAQMD neither recommends quantified analyses of cumulative construction or operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed using the same significance criteria as those for project-specific impacts. Therefore, individual development projects that generate construction-related or operational emissions that exceed the SCAQMD recommended daily thresholds for project-specific impacts would also cause a cumulative considerable increase in emissions for those pollutants for which the Basin is nonattainment.

Of the projects that have been identified within the project study area, there are a number of related projects that have not been built or are currently under construction. Since the project Applicant has no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain the daily construction emissions that assumes multiple, concurrent construction would be speculative. Based on the projects identified in Section 4.0, *Basis of Cumulative Analysis*, the City anticipates several construction projects. The total amount of construction and development within the City would exceed the SCAQMD's recommended thresholds of significance, resulting in a cumulative impact.

With respect to the proposed project's construction-period air quality emissions and cumulative Basin conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2007 AQMP pursuant to FCAA mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures. In addition, the proposed project would comply with adopted 2007 AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted 2007 AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include each of the related projects listed in Section 4.0, *Basis of Cumulative Analysis*.

Although compliance with SCAQMD rules and regulations would reduce construction-related impacts, the project-related construction emissions have been concluded to be significant and unavoidable for NO_X emissions during construction. Thus, it can be reasonably inferred that the project-related construction activities, in combination with those from other projects in the area, would deteriorate the local air quality and lead to cumulative construction-related impacts.

PROJECT ALTERNATIVE

As with the proposed project, the Project Alternative construction emissions have been concluded to be significant and unavoidable for NO_X even with the reduction of construction-related impacts through compliance with SCAQMD rules and regulations and Mitigation Measures AQ-1 and AQ-2. Thus, it can be reasonably inferred that the construction activities associated with the Project Alternative, in combination with those from other projects in the area, would deteriorate the local air quality and lead to cumulative construction-related impacts.

***Mitigation Measures*:** Refer to Mitigation Measures AQ-1 and AQ-2.

Level of Significance After Mitigation:

Overall Cumulative Impact – Significant and Unavoidable Impact despite the implementation of Mitigation Measures AQ-1 and AQ-2.

Project Cumulative Contribution – Significant and Unavoidable Impact despite the implementation of Mitigation Measures AQ-1 and AQ-2.

Cumulative Operational Impacts

Due to the Basin's nonattainment status for O_3, $PM_{2.5}$, and PM_{10}, additional emissions in excess of SCAQMD thresholds under a long-term condition for ROG, NO_X, $PM_{2.5}$, and PM_{10} would be considered significant and unavoidable for cumulative impacts. NO_X emissions are projected to be above the significance thresholds for buildout conditions. Despite the implementation of Mitigation Measure GHG-1, project-related operational emissions have been concluded to be significant and unavoidable for NO_X. Thus, it can be reasonably inferred that the project-related operational activities, in combination with those from other projects in the area, would deteriorate the local air quality and lead to cumulative operational-related significant and unavoidable impacts.

PROJECT ALTERNATIVE

As with the proposed project, the Project Alternative construction emissions have been concluded to be significant and unavoidable for operational NO_X emissions despite the implementation of reduction measures included in Mitigation Measure GHG-1. Thus, it can be reasonably inferred that the operational activities associated with the Project Alternative, in combination with those from other projects in the area, would deteriorate the local air quality and lead to cumulative operational-related significant and unavoidable impacts.

***Mitigation Measures*:** Refer to Mitigation Measure GHG-1.

Level of Significance After Mitigation:

Overall Cumulative Impact – Significant Unavoidable Impact despite the implementation of Mitigation Measure GHG-1.

Project Cumulative Contribution – Significant Unavoidable Impact despite the implementation of Mitigation Measure GHG-1.

5.1.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in a significant and unavoidable impact for the following areas:

- Regional Construction Related Emissions – Activities related to construction of the project would exceed the SCAQMD daily emission threshold for regional NO_X after implementation of all feasible mitigation measures. Therefore, the construction of the

project would have a significant and unavoidable impact on regional air quality. Construction emissions would not exceed the SCAQMD significance threshold for ROG, CO, SO_X, PM_{10}, and $PM_{2.5}$.

- Regional Operational NO_X Emissions – During the operational phase, the project would result in a net increase in regional emissions from the operation of both stationary and mobile sources. Mitigation Measure GHG-1 would reduce the potential air quality impacts to the degree technically feasible, but NO_X emissions would remain above SCAQMD significance thresholds. Therefore, operation of the proposed project would have a significant and unavoidable impact on regional air quality.

- Cumulative Emissions – As stated above, construction and operational activities would create a significant and unavoidable impact due to exceedances of SCAQMD thresholds for NO_X. Implementation of recommended mitigation measures AQ-1 through AQ-2 and GHG-1 would reduce impacts; however a significant and unavoidable impact would remain.

If the City of Lake Forest approves the project, the City shall be required to adopt findings of fact in accordance with Section 15091 of the CEQA Guidelines, as well as adopt a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines.

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