Section 4.2:
AIR QUALITY

4.2 AIR QUALITY

This section addresses air emissions generated by construction and operation of the proposed Project and the potential impacts to air quality. The analysis also addresses the Project's consistency with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) *2012 Air Quality Management Plan*. The analysis of Project-generated air emissions focuses on whether the Project would cause an exceedance of an ambient air quality standard or SCAQMD significance threshold. Air quality technical data is included as Appendix B, *Air Quality/Greenhouse Gas Emissions Data,* of this EIR.

ENVIRONMENTAL SETTING

SOUTH COAST AIR BASIN

GEOGRAPHY

The Project site is located in the South Coast Air Basin (Basin), a 6,600-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 non-desert 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 semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The climate consists of a

semi-arid 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.

The local climate is typically warm during summer when temperatures tend to be in the 70s and cool during winter when temperatures tend to be in the 60s. The warmest month of the year is August with an average maximum temperature of 79°F, while the coldest months of the year are December to March with an average minimum temperature of 51°F. The annual average precipitation in Los Angeles is 18.67 inches. Rainfall occurs most frequently in February, with an average rainfall of 5.4 inches.[1]

LOCAL AMBIENT AIR QUALITY

The SCAQMD monitors air quality at 37 monitoring stations throughout the Basin. Each monitoring station is located within a Source Receptor Area (SRA). The communities within an SRA are expected to have similar climatology and ambient air pollutant concentrations. The Project site is located within SRA 12, South Central LA County, and the closest air monitoring station is the Compton Monitoring Station, located approximately 3.25 miles southeast of the Project site. The air pollutants measured at the Compton monitoring station site include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), and fine particulate matter ($PM_{2.5}$). The nearest station to the Project site measuring coarse particulate matter (PM_{10}) is the North Long Beach monitoring station, which is located approximately 7.65 miles northwest of the Project site. The nearest station to the Project site measuring sulfur dioxide (SO_2) is the Long Beach- 2425 Webster Street monitoring station, which is located approximately 8.50 miles southeast of the Project site. The air quality data monitored at the Compton, North Long Beach, and Long Beach- 2425 Webster Street stations from 2012 to 2014 are presented in Table 4.2-1.

[1] U.S. climate data, *Climate Los Angeles – California,* http://www.usclimatedata.com/climate/los-angeles/california/united-states/usca1339, accessed March 31, 2015.

Table 4.2-1
Measured Air Quality Levels

Pollutant	California Standard	Federal Primary Standard	Year	Maximum Concentration[4]	Days (Samples) State/Federal Std. Exceeded
Ozone (O_3)[1] (1-hour)	0.09 ppm for 1 hour	NA[7]	2012	0.086 ppm	0/0
			2013	0.090	0/0
			2014	0.094	0/0
Ozone (O_3)[1] (8-hour)	0.070 ppm for 8 hours	0.075 ppm for 8 hours	2012	0.071 ppm	1/0
			2013	0.080	1/1
			2014	0.082	4/2
Carbon Monoxide (CO)[1] (1-hour)	20 ppm for 1 hour	35 ppm for 1 hour	2012	5.19 ppm	0/0
			2013	5.83	0/0
			2014	5.80	0/0
Carbon Monoxide (CO)[1] (8-hour)	9.0 ppm for 8 hours	9.0 ppm for 8 hours	2012	3.96 ppm	0/0
			2013	NM	NA/NA
			2014	NM	NA/NA
Nitrogen Dioxide (NO_2)[1]	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2012	0.079 ppm	0/0
			2013	0.069	0/0
			2014	0.068	0/0
Sulfur Dioxide (SO_x) [3]	0.25 ppm for 1 hour	0.075 ppm for 1 hour	2012	0.004 ppm	NA/NA
			2013	0.004	NA/NA
			2014	NM	NA/NA
Fine Particulate Matter ($PM_{2.5}$)[1, 5]	No Separate Standard	35 µg/m³ for 24 hours	2012	51.2 µg/m³	NA/1
			2013	52.1	NA/1
			2014	35.8	NA/1
Particulate Matter (PM_{10})[2, 5, 6]	50 µg/m³ for 24 hours	150 µg/m³ for 24 hours	2012	45.0 µg/m³	0/0
			2013	37.0	0/0
			2014	NM	NA/NA

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

Notes:

1. Data collected from the Compton Monitoring Station located at 700 North Bullis Road, Los Angeles, California 90221.
2. Data collected from the North Long Beach Monitoring Station located at 3648 North Long Beach Boulevard, Long Beach, California 90807.
3. Data collected from the Long Beach-2425 Webster Street Monitoring Station located at 2425 Webster Street, Long Beach, California 90810.
4. Maximum concentration is measured over the same period as the California Standards.
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.
7. The Federal standard was revoked in June 2005.

Source: Aerometric Data Analysis and Measurement System (ADAM), summaries from 2012 to 2014, http://www.arb.ca.gov/adam., accessed on July 28, 2015.

Carbon Monoxide (CO). 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). Ozone 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), nitrogen oxides (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 (NO_2). 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.

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 U.S. 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 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. 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.

Sulfur Dioxide (SO_2). 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 uses within the immediate Project area include residential uses to the north, east, and west, and Animo Watts Charter High School and New Designs Charter School to the southwest. Additional existing sensitive receptors located in the Project vicinity include hospitals, health care facilities, child care facilities, schools, a library, parks, and places of worship; refer to Table 4.2-2. Table 4.2-2, lists the distances and locations of sensitive receptors within the Project vicinity.

Table 4.2-2
Surrounding Off-Site Sensitive Receptors

Type	Name	Distance from Project Site (feet)	Direction from Project Site
Residential	Residential Uses	Adjacent	North
		90	North
		90	South
		Adjacent	East
		Adjacent	West
Child Care Facilities	Toddler Town	515	West
	Cuddles Creative Child Care	1,990	South
	CDI Head Start	2,770	South
	Kedren Watts IV	3,095	Northeast
	Kedren Head Start	3,915	North
Schools	Animo Watts Charter High School	Adjacent	Southwest
	New Designs Charter Schools	Adjacent	Southwest
	Los Angeles Adventist Academy	85	South
	Centennial High School	730	Southeast
	122nd Street Elementary School	910	West
	Carver Elementary School	1,500	Northeast
	116th Street Elementary School	1,650	North
	McNair Elementary School	2,190	Southeast
	Vanguard Learning Center Middle School	2,415	Southwest
	Jack H Skirball Middle School	2,670	North
	118th Street Elementary School	2,770	Northwest
	King Drew Magnet High School	3,030	Northeast
	Lincoln Elementary School	3,475	Northeast
	Nickerson Gardens Sage Center	3,545	Northeast
	Watts Learning Center Middle School	3,635	Northeast
	Charles R. Drew University of Medicine and Science	3,775	Northeast
Schools	112th Street Elementary School	3,805	Northeast
	Samuel Gompers Middle School	3,885	Northwest
	Verbum Dei High School	3,905	Northeast
	Avalon Gardens Elementary School	4,155	Southwest

Type	Name	Distance from Project Site (feet)	Direction from Project Site
	Willowbrook Middle School	4,215	Southeast
	Barack Obama Charter School	4,250	Northeast
	Lovelia P. Flournoy Elementary School	4,585	Northeast
	Locke Children's Center	4,675	Northwest
	109th Street Elementary School	4,750	North
	Alain Leroy Locke High School	4,785	North
	Banneker Elementary School	4,950	Southwest
	Lovelia P. Flournoy Elementary School	5,150	Northeast
Places of Worship	Southwood Baptist Church	165	West
	Saint Mark African Methodist Episcopal Church	825	Southwest
	Prayer Assembly Church of God in Christ	850	Southwest
	Bel-Vue Presbyterian Church	1,135	North
	Fuente De Agua Viva	1,220	North
	Greater Pearl Baptist Church	1,500	South
	El Bethel Missionary Baptist Church	1,995	North
	Mount Tabor Missionary Baptist Church	2,085	Southwest
	Cornerstone Community Church	2,300	South
	Living Hope Baptist Church	2,380	West
	Faith Jerusalem Baptist Church	2,540	West
	Christ Full Gospel Baptist Church	2,560	West
	Agape Christian Fellowship	2,600	West
	Carver Park-Jehovah Witnesses	2,625	West
	Community Lutheran Church	2,725	South
	Greater Berean Baptist Church	2,735	West
	Goodwill Missionary Baptist Church	2,790	West
	Tabernacle of Faith Baptist Church	2,910	Northeast
	Faith Temple Church of God	2,940	West
	Ajalon Temple of Truth Baptist Church	2,950	East
	New Mt. Olive Church of God	3,015	West
	Avalon Church of Christ	3,380	South

Type	Name	Distance from Project Site (feet)	Direction from Project Site
	Unity Church of God In Christ	3,620	North
	Imperial Church of Christ	3,820	Northwest
	New Way Missionary Baptist Church	4,010	Northeast
	Mt. Beulah Baptist Church	4,390	Northeast
	Centro Cristiano Agape	4,580	Southwest
Hospital/Health Care Facilities	View Heights Convalescent Hospital	110	West
	Avalon Villa Care Center	700	West
	Graceful Senescence Adult Day Health Care Inc.	3,020	West
	King Drew Medical Center	3,970	East
	Drew Charles R University of Medicine & Science: OB-Gyn	4,220	Northeast
	Dare U To Care	4,300	West
Libraries	A C Bilbrew Library	2,310	West
Parks	Enterprise Park	975	South
	George Washington Carver Park	2,015	Northeast
	Sibrie Park	3,690	East
	Athens Park	4,050	West
Note: 1. Distances are measured from the exterior project boundary only and not from individual construction projects/areas within the interior of the project site.			
Source: Google Earth, 2015.			

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 sulfur oxides (SO_X), PM_{10}, $PM_{2.5}$, and lead (Pb); refer to Table 4.2-3.

Table 4.2-3
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[3,4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	**Nonattainment**	N/A	N/A[5]
	8 Hours	0.070 ppm (137 µg/m^3)	N/A	0.075 ppm (147 µg/m^3)	**Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 µg/m^3	**Nonattainment**	150 µg/m^3	Attainment/ Maintenance
	Annual Arithmetic Mean	20 µg/m^3	**Nonattainment**	N/A	N/A
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 µg/m^3	**Nonattainment**
	Annual Arithmetic Mean	12 µg/m^3	**Nonattainment**	12.0 µg/m^3	**Nonattainment**
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment/ Maintenance
	1 Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment/ Maintenance
Nitrogen Dioxide	Annual Arithmetic	0.030 ppm (57 µg/m^3)	Attainment	53 ppb (100 µg/m^3)	Attainment/ Maintenance

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[3,4]	Attainment Status
(NO_2)[5]	Mean				
	1 Hour	0.18 ppm (339 µg/m³)	Attainment	100 ppb (188 µg/m³)	Attainment/ Maintenance
Lead (Pb)[7,8]	30 days Average	1.5 µg/m³	Attainment	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 µg/m³	**Nonattainment**
	Rolling 3-Month Average	N/A	N/A	0.15 µg/m³	**Nonattainment**
Sulfur Dioxide (SO_2)[6]	24 Hours	0.04 ppm (105 µg/m³)	Attainment	0.14 ppm (for certain areas)	Attainment
	3 Hours	N/A	N/A	N/A	Attainment
	1 Hour	0.25 ppm (655 µg/m³)	Attainment	75 ppb (196 µg/m³)	N/A
	Annual Arithmetic Mean	N/A	N/A	0.30 ppm (for certain areas)	Attainment
Visibility-Reducing Particles[9]	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		
Vinyl Chloride[7]	24 Hour	0.01 ppm (26 µg/m³)	N/A		

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

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and 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.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site 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/m³ is equal to or less than one. 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 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.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
5. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of ppb. California standards are in units of ppm. To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[3,4]	Attainment Status

6. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of ppb. California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
7. 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.
8. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
9. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board and U.S. Environmental Protection Agency, June 4, 2013.

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 4.2-3, 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 AQMPs also serve as the basis for preparation of the State Implementation Plan (SIP) for the State of California.

Like the EPA, 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. On December 7, 2012, the SCAQMD Governing Board approved the *2012 Air Quality Management Plan (2012 AQMP)*, which outlines its strategies for meeting the NAAQS for $PM_{2.5}$ and ozone. The *2012 AQMP* relies on a multi-level partnership of governmental agencies at the federal, state, regional, and local level. The *2012 AQMP* proposes policies and measures to achieve federal and state standards for improved air quality in the South Coast Air Basin and those portions of the Salton Sea Air Basin that are under SCAQMD jurisdiction.

The *2012 AQMP* includes new information on key elements such as:

- Current air quality;
- Improved emission inventories, especially significant increases 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.

Since the adoption of the SCAQMD's first AQMP in 1996, air quality in the Basin has improved significantly as a result of comprehensive control strategies implemented to reduce pollution from mobile and stationary sources. For example, the total number of days that the Basin experiences high O_3 levels has decreased dramatically over the last two decades. The maximum 8-hour O_3 levels measured in the Basin were well above 200 parts per billion (ppb) in the early 1990s and are now less than 140 ppb. As Table 4.2-4

indicates, emissions have decreased from 1987 to 2008 by 67 percent for ROGs, 42 percent for NO_X, 66 percent for CO, 57 percent for SO_X, and 67 percent for PM_{10}, and are projected to decrease even further despite population growth.

In addition to the *2012 AQMP* and its rules and regulations, the SCAQMD published the *CEQA Air Quality Handbook*. The SCAQMD *CEQA Air Quality Handbook* provides guidance to assist local government agencies and consultants in developing the environmental documents required by CEQA. With the help of the *CEQA Air Quality Handbook*, local land use planners and other consultants are able to analyze and document how proposed and existing projects affect air quality and should be able to fulfill the requirements of the CEQA review process. The SCAQMD is in the process of developing an *Air Quality Analysis Guidance Handbook* to replace the current *CEQA Air Quality Handbook* approved by the SCAQMD Governing Board in 1993.

Table 4.2-4
South Coast Air Basin Reductions by Source Category

Source Category	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$[1]
Percent Reductions from 1987 - 2008						
Stationary / Area Sources	64%	61%	-23%	66%	74%	-
Mobile Sources	70%	38%	67%	52%	-4%	-
Total	**67%**	**42%**	**66%**	**57%**	**67%**	**-**
Percent Reductions from 1987 – 2014 (Projected)						
Stationary / Area Sources	67%	68%	-47%	71%	74%	-
Mobile Sources	80%	60%	77%	93%	24%	-
Total	**75%**	**61%**	**75%**	**86%**	**69%**	**-**

Note:
1. The 1997 SCAQMD AQMP did not include emissions for $PM_{2.5}$

Sources: South Coast Air Quality Management District. *Final 1997 Air Quality Management Plan*. November 1996.
South Coast Air Quality Management District. *Final 2012 Air Quality Management Plan*. February 2013.

LOS ANGELES COUNTY

LOS ANGELES COUNTY GENERAL PLAN

The *County of Los Angeles General Plan* (1980) Conservation and Open Space Element includes the following objectives and policies related to the improvement of air quality.

Conservation and Open Space Element

Objective: Support local efforts to improve air quality.

Improve air quality

Air quality in Los Angeles County is severe enough to threaten health. Unfocused development and the dependence of the population on the automobile contribute to the problem.

Policy 1: Actively support strict air quality regulations for mobile and stationary sources, and continued research to improve air quality. Promote vanpooling, carpooling, and improved public transportation.

COUNTY OF LOS ANGELES MUNICIPAL CODE

The County of Los Angeles Municipal Code Chapter 4.30, *Mobile Source Air Pollution Reduction*, addresses air quality by establishing a fund to support the SCAQMD's imposition of the motor vehicle registration fees and to bring the county into compliance with the requirements set forth in Section 44243 of the Health and Safety Code, in order to receive fee revenues for the purpose of implementing mobile source air pollution reduction to reduce air pollution from motor vehicles.

CITY OF LOS ANGELES GENERAL PLAN

The City of Los Angeles General Plan Air Quality Element and Housing Element includes the following goals, objectives, and policies related to improving air quality.

Air Quality Element

Goal 1:	Good air quality and mobility in an environment of continued population growth and healthy economic structure.
Objective 1.3	It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites.
Policy 1.3.1	Minimize particulate emissions from construction sites.
Policy 1.3.2	Minimize particulate emissions from unpaved roads and parking lots which ore associated with vehicular traffic.
Goal 4:	Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.
Objective 4.2	It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.
Policy 4.2.2	Improve accessibility for the City's residents to places of employment, shopping centers and other establishments.
Policy 4.2.3	Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.
Policy 4.2.4	Require that air quality impacts be a consideration in the review and approval of all discretionary projects.
Policy 4.2.5	Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.
Goal 5:	Energy efficiency through land use and transportation planning, the use of renewable resources and less polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting.

Objective 5.1	It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments.
Policy 5.1.4	Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling.
Objective 5.3	It is the objective of the City of Los Angeles to reduce the use of polluting fuels in stationary sources.
Policy 5.3.1	Support the development and use of equipment powered by electric or low-emitting fuels.
Goal 6:	Citizen awareness of the linkages between personal behavior and air pollution, and participation in efforts to reduce air pollution.
Objective 6.1	It is the objective of the City of Los Angeles to make air quality education and citizen participation a priority in the City's effort to achieve clean air standards.
Policy 6.1.1	Raise awareness through public information and education programs of the actions that individuals can take to reduce air emissions.

Housing Element

Goal 2:	Safe, Livable, and Sustainable Neighborhoods
Objective 2.3	Promote sustainable buildings, which minimize adverse effects on the environment and minimize the use of non-renewable resources.
Policy 2.3.4	Promote and facilitate reduction of waste in construction and building operations.

CITY OF LOS ANGELES CEQA THRESHOLDS

The City of Los Angeles provides California Environmental Quality Act (CEQA) significance thresholds to be used in air quality analyses. Although the City has not adopted a citywide significance threshold for construction emissions, the City refers to the *CEQA Air Quality Handbook* for appropriate thresholds. The significant thresholds for operational air quality impacts are detailed below in accordance with the *CEQA Air Quality Handbook*. In addition, the City states a specific Toxic Air Contaminants (TAC) significance threshold. The SCAQMD has stated that a proposed project would generate significant emissions of TACs that exceed a Maximum Incremental Cancer Risk of 10 in a million, a Cancer Burden of 0.5 excess cancer cases, or a Chronic or Acute Hazard Index of 1.0.[2]

IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

REGIONAL AIR QUALITY

In its *CEQA Air Quality Handbook* (November 1993), the SCAQMD has established significance thresholds to assess the impact of project-related air pollutant emissions. Table 4.2-5 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.

[2] South Coast Air Quality Management District, *Air Quality Significance Thresholds,* March 2011.

Table 4.2-5
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 California Emissions Estimator Model (CalEEMod), as recommended by the SCAQMD. CalEEMod 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 County. Where appropriate, CalEEMod defaults were utilized. CalEEMod assumptions are provided in Appendix B.

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 proposed Project. Mobile source emissions calculations in CalEEMod were supplemented with traffic trips within the *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

Localized Significance Thresholds (LSTs) were developed in response to the SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (revised July 2008) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with proposed projects. The SCAQMD provides the LST lookup tables for one-, two-, and five-acre projects emitting CO, NO_X, PM_{10}, and $PM_{2.5}$. 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.

LOCALIZED CO

In addition, a project would result in a local air quality impact if it 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 parts per million (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 a project are lower than the standards, then there is no significant impact. If future CO concentrations with a project are above the standard, then the project would have a significant local air quality impact.

CUMULATIVE EMISSIONS

The SCAQMD's *2012 AQMP* was prepared to accommodate growth, meet state and federal air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. According to the SCAQMD *CEQA Air Quality Handbook*, project-related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary.

If a project exceeds these emission thresholds, the SCAQMD *CEQA Air Quality Handbook* states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

THRESHOLDS OF SIGNIFICANCE

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 County and the City of Los Angeles 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:

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation (refer to Impact Statement 4.2-1 and 4.2-2);
- Expose sensitive receptors to substantial pollutant concentrations (refer to Impact Statement 4.2-1 and 4.2-3);
- Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact Statement 4.2-4);
- Create objectionable odors affecting a substantial number of people (refer to Impact Statement 4.2-5);
- 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) (refer to Section 4.2.5, *Cumulative Impacts*).

Based on these significance thresholds and criteria, the Project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant

level through the application of mitigation, it is categorized as a significant unavoidable impact.

PROJECT IMPACTS AND MITIGATION

Threshold:	*Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Air Quality Standards – Short Term

Impact 4.2-1 **Implementation of the Project would not violate air quality standards or substantially contribute to an existing or projected air quality violation during construction. This impact would be *less than significant with mitigation incorporated.***

Short-term air quality impacts are predicted to occur during demolition, site preparation, grading, paving and construction activities associated with implementation of the proposed Project. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from site preparation, grading and building construction; and
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew.

Potential odors could arise from the diesel construction equipment used on-site, as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Additionally, odors generated during construction activities would be temporary and are not considered to be a significant impact.

The Project proposes a Master Plan including the construction of recreation land uses (i.e., equestrian facilities center, aquatic center, multi-purpose stadium, outdoor athletic fields, group picnic areas, amphitheater, skate park, outdoor basketball areas, children's play area, lake, wedding pavilion, dog park, sculpture garden, civic plaza, walking trails,

and exercise equipment station areas), and office uses on the approximately 126-acre site. For the purposes of analysis, the proposed Project is anticipated to begin construction in June 2018 and occur over several years, with Project buildout anticipated to occur by 2035.

Project construction would require concrete/industrial saws, excavators, rollers, rubber tired dozers, and tractors/loaders/backhoes during demolition; excavators, graders, paving equipment, rollers, rubber tired dozers, scrapers, and tractors/loaders/backhoes during grading; graders, signal boards, surfacing equipment, pavers, paving equipment, rollers, and tractors/loaders/backhoes during paving; cranes, forklifts, generator sets, tractors/loaders/backhoes, welders, bore/drill rigs, off-highway trucks, surfacing equipment, and trenchers during construction. Emissions for each construction phase have been quantified based upon the phase durations and equipment types. The analysis of daily construction emissions has been prepared utilizing CalEEMod; refer to Appendix B for the CalEEMod outputs and results.

Table 4.2-6 presents the anticipated daily short-term construction emissions.

Table 4.2-6
Maximum Daily Pollutant Emissions During Construction

Emissions Source	Daily Pollutant Emissions (lbs/day)[1]					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Year 1 (2018)						
Unmitigated	4.15	42.05	36.98	0.05	2.40	2.08
Mitigated[2]	4.15	42.05	36.98	0.05	2.40	2.08
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 2 (2019)						
Unmitigated	9.30	96.10	82.68	0.12	11.76	7.86
Mitigated[2]	9.30	96.10	82.68	0.12	7.74	5.75
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 3 (2020)						
Unmitigated	16.47	99.67	204.83	0.53	32.15	10.68
Mitigated[2]	16.47	99.67	204.83	0.53	32.15	10.68
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 4 (2021)						
Unmitigated	15.53	86.87	196.64	0.53	31.80	10.35
Mitigated[2]	15.53	86.87	196.63	0.53	31.80	10.35
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 5 (2022)						
Unmitigated	14.68	77.07	188.89	0.53	31.51	10.08
Mitigated[2]	14.68	77.07	188.89	0.53	31.51	10.08
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 6 (2023)						
Unmitigated	13.78	66.15	181.04	0.53	31.33	9.91
Mitigated[2]	13.78	66.15	181.04	0.53	31.33	9.91
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***

Emissions Source	Daily Pollutant Emissions (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Year 7 (2024)						
Unmitigated	2.70	24.27	30.88	0.05	1.36	1.11
Mitigated[2]	2.70	24.27	30.88	0.05	1.35	1.11
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 8 (2025)						
Unmitigated	4.06	34.78	48.08	0.08	8.21	4.86
Mitigated[2]	4.06	34.78	48.08	0.08	4.25	2.75
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 9 (2026)						
Unmitigated	16.61	96.37	219.02	0.62	33.24	11.34
Mitigated[2]	16.61	96.37	219.02	0.62	33.23	11.34
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 10 (2027)						
Unmitigated	15.95	92.96	204.17	0.61	39.06	14.45
Mitigated[2]	15.95	92.96	204.17	0.61	35.16	12.36
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 11 (2028)						
Unmitigated	11.96	58.94	160.52	0.53	31.04	9.64
Mitigated[2]	11.96	58.94	160.52	0.53	31.04	9.64
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 12 (2029)						
Unmitigated	14.16	79.56	186.57	0.58	32.22	10.58
Mitigated[2]	14.16	79.56	186.57	0.58	32.21	10.58
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 13 (2030)						
Unmitigated	2.15	10.44	24.38	0.05	0.72	0.51

Emissions Source	Daily Pollutant Emissions (lbs/day)[1]					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Mitigated[2]	2.15	10.44	24.38	0.05	0.72	0.51
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 14 (2031)						
Unmitigated	11.52	46.99	152.68	0.54	30.37	9.04
Mitigated[2]	11.52	46.99	152.68	0.54	30.37	9.04
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 15 (2032)						
Unmitigated	11.32	46.73	150.89	0.54	30.37	9.04
Mitigated[2]	11.32	46.73	150.89	0.54	30.37	9.04
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 16 (2033)						
Unmitigated	6.16	27.36	59.79	0.14	7.72	4.55
Mitigated[2]	6.16	27.36	59.79	0.14	3.91	2.46
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 17 (2034)						
Unmitigated	10.99	46.30	147.98	0.54	30.37	9.05
Mitigated[2]	10.99	46.30	147.98	0.54	30.37	9.05
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 18 (2035)						
Unmitigated	10.63	44.07	146.75	0.54	30.24	8.92
Mitigated[2]	10.63	44.07	146.75	0.54	30.24	8.92
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.

Emissions Source	Daily Pollutant Emissions (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
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 three times daily; cover stock piles with tarps; water all haul roads three times daily; and limit speeds on unpaved roads to 15 miles per hour.						
Refer to Appendix B, *Air Quality/Greenhouse Gas Emissions Data*, for assumptions used in this analysis.						

Air pollutants would be emitted by construction equipment and fugitive dust would be generated during demolition, grading, and construction activities. 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.

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 Project completion. 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.

CalEEMod calculates PM_{10} and $PM_{2.5}$ fugitive dust as part of the site earthwork activity emissions; refer to Table 4.2-6. Maximum particulate matter emissions would occur during the initial stages of construction, when grading activities would occur. Mitigation Measure AQ-1 requires that construction activities comply with SCAQMD Rule 403, such that excessive fugitive dust emissions shall be controlled by regular watering or other

dust prevention measures. In addition, SCAQMD Rule 402 is required for implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site and after implementation would reduce short-term fugitive dust impacts on nearby sensitive receptors. These are standard dust control measures that the SCAQMD requires for all projects. With adherence to Mitigation Measures AQ-1 and AQ-2, the maximum mitigated particulate matter concentration would be 35.16 pounds per day (lbs/day) for PM_{10} and 12.36 lbs/day for $PM_{2.5}$ in construction Year 10. 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, Mitigation Measures AQ-1 and AQ-2 have been included to help ensure fugitive dust emissions are minimized as the Basin is nonattainment for PM_{10} and $PM_{2.5}$.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. As shown in Table 4.2-6, ROG emissions would be below SCAQMD thresholds and impacts would be less than significant.

Construction Exhaust Emissions

Exhaust emissions would be generated by the operation of vehicles and equipment on the construction site, such as tractors, dozers, backhoes, cranes, and trucks. The majority of construction equipment and vehicles would be diesel powered, which tends to be more efficient than gasoline-powered equipment. Diesel-powered equipment produces lower carbon monoxide and hydrocarbon emissions than gasoline equipment, but produces greater amounts of NO_X, SO_X, and particulates per hour of activity. The transportation of machinery, equipment, and materials to and from the Project site, as well as construction worker trips, would also generate vehicle emissions during construction. Standard SCAQMD regulations, such as maintaining all construction equipment in proper tune, shutting down equipment when not in use for extended periods of time, and implementing SCAQMD Rule 403 would be adhered to. As noted in Table 4.2-6,

construction equipment exhaust would not exceed SCAQMD thresholds. Therefore, impacts would be 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 less than significant.

Total Daily Construction Emissions

In accordance with the SCAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Construction would occur over several months, with the greatest emissions being generated during the first few years of construction. CalEEMod allows the user to input mitigation measures such as watering the construction area to limit fugitive dust and applying soil stabilizers to the project area. Mitigation measures selected within CalEEMod allow for certain reduction credits and result in a decrease of pollutant emissions. Reduction credits are based upon studies developed by CARB, SCAQMD, and other air quality management districts throughout California, and were programmed within CalEEMod. As indicated in Table 4.2-6, CalEEMod calculates the reduction associated with recommended mitigation measures.

Although the unmitigated particulate matter levels are below the SCAQMD thresholds, and therefore are less than significant, Mitigation Measures AQ-1 and AQ-2 have been included to help ensure fugitive dust emissions are minimized as the Basin is nonattainment for PM10 and PM2.5.

Mitigation Measures:

MM AQ-1 *Prior to issuance of any Grading Permit, the Grading Plan, Building Plans, and specifications shall stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:*

- *All active portions of the construction site shall be watered every three hours during daily construction activities and when dust is observed migrating from the project site to prevent excessive amounts of dust;*
- *Pave or apply water every three hours during daily construction activities or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;*
- *Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;*
- *All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;*
- *Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;*
- *Track-out devices such as gravel bed track-out aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt track out from unpaved truck exit routes. Alternatively a wheel washer shall be used at truck exit routes;*
- *On-site vehicle speed shall be limited to 15 miles per hour;*
- *All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site; and*
- *If construction activities occur during drought conditions the use of non-toxic soil stabilizers shall be used instead of additional watering to the greatest extent feasible.*

MM AQ-2 *Any trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.*

Air Quality Standards – Long Term

Impact 4.2-2 **Implementation of the Project would not violate air quality standards or substantially contribute to an existing or projected air quality violation during long-term operations. This impact would be *less than significant.***

Operational emissions generated by both stationary and mobile sources would result from normal daily activities on the Project site after completion (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. Emissions associated with each of these sources were calculated and 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 CalEEMod. 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 B. According to the *Traffic Impact Analysis*, the proposed Project would generate a net increase of 3,489 daily trips at buildout. Table 4.2-7 presents the anticipated mobile source emissions.[3]

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; refer to Table 4.2-7. This assumption is based on the assumption 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.

Table 4.2-7
Long-Term Operational Air Emissions

Emissions Source	Emissions (pounds per day)[1, 2]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Emissions						
Area	28.77	0.00	0.01	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	11.73	31.48	123.50	0.25	18.07	5.11
Total Existing Emissions	***40.50***	***31.48***	***123.51***	***0.25***	***18.07***	***5.11***
Proposed Unmitigated Emissions						
Area	36.37	0.00	0.02	0.00	0.00	0.00
Energy	0.37	3.37	2.83	0.02	0.26	0.26
Mobile	14.57	30.40	142.93	0.56	38.91	10.91

[3] The Revised *Traffic Impact Analysis* dated August 12, 2015 identifies a net increase in daily trips of 3,489 from the Project at buildout. The Long-Term Operational Air Emissions in Table 4.2-7 are based on a net increase in daily trips of 4,197 identified in the initial Traffic Impact Analysis. If the emissions were re-calculated with the reduced daily trip number they are anticipated to be slightly less than the quantities identified in Table 4.2-7. Therefore, quantities identified in Table 4.2-7 are conservative estimates.

Emissions Source	Emissions (pounds per day)[1, 2]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Total Proposed Unmitigated Emissions	***51.32***	***33.78***	***145.78***	***0.58***	***39.16***	***11.16***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Unmitigated Net Increase Over Existing Emissions	*10.82*	*2.30*	*22.27*	*0.33*	*21.09*	*6.05*
Is Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Based on CalEEMod results, worst-case seasonal emissions for area and mobile emissions have been modeled.
2. The numbers may be slightly off due to rounding.
3. Refer to Appendix B, *Air Quality and Greenhouse Gas Emissions Data*, for assumptions used in this analysis.

As indicated in Table 4.2-7, the unmitigated operational emissions from the proposed Project would remain below SCAQMD thresholds for all criteria pollutants. Therefore, impacts in this regard would be less than significant.

Threshold:	*Would the Project expose sensitive receptors to substantial pollutant concentrations?*

Localized Significance Thresholds

Impact 4.2-3 **Development associated with implementation of the proposed project could result in localized emissions impacts or expose sensitive receptors to substantial pollutant concentrations. This impact would be *less than significant.***

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 Project site is located within Sensitive Receptor Area (SRA) 12, South Central LA County. The closest sensitive receptors to the Project site are residential uses, located immediately adjacent to the north, south, east, and west, and Animo Watts Charter High School and New Designs Charter School, located adjacent to the southwest. If receptors are within 25 meters of the site, the methodology document states that the threshold for the 25-meter distance should be used. Since the Project site is 126 acres, the construction and operation thresholds conservatively use the 5-acre thresholds. Table 4.2-8 depicts the mitigated construction-related emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ compared to the LSTs for SRA 12 South Central LA County. As shown in Table 4.2-8, construction emissions would not exceed the LSTs. Additionally, operational emissions would not exceed the LSTs for SRA 12. Therefore, localized significance impacts for proposed Project operations would be less than significant.

Table 4.2-8
Localized Significance of Emissions

On-Site Sources	Pollutant (pounds/day)			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
CONSTRUCTION [1]				
Year 1 (2018)				
Total Mitigated On-Site Emissions	41.95	35.99	2.17	2.02
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 2 (2019)				
Total Mitigated On-Site Emissions	66.23	49.28	5.55	4.17
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 3 (2020)				
Total Mitigated On-Site Emissions	41.29	30.66	2.05	1.91
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 4 (2021)				
Total Mitigated On-Site Emissions	36.57	32.42	1.77	1.65
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 5 (2022)				

On-Site Sources	Pollutant (pounds/day)			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Total Mitigated On-Site Emissions	47.06	43.86	4.50	3.26
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 6 (2023)				
Total Mitigated On-Site Emissions	28.60	28.86	1.32	1.23
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 7 (2024)				
Total Mitigated On-Site Emissions	24.20	30.22	1.13	1.05
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 8 (2025)				
Total Mitigated On-Site Emissions	33.44	40.01	3.84	2.63
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 9 (2026)				
Total Mitigated On-Site Emissions	24.64	28.48	1.06	0.98
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 10 (2027)				
Total Mitigated On-Site Emissions	33.44	40.00	3.81	2.62
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 11 (2028)				
Total Mitigated On-Site Emissions	24.64	28.48	1.06	0.98
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 12 (2029)				
Total Mitigated On-Site Emissions	33.44	40.01	3.79	2.62
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 13 (2030)				
Total Mitigated On-Site Emissions	10.38	23.73	0.44	0.44
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***

On-Site Sources	Pollutant (pounds/day)			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Year 14 (2031)				
Total Mitigated On-Site Emissions	13.66	27.94	0.38	0.38
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 15 (2032)				
Total Mitigated On-Site Emissions	13.66	27.94	0.40	0.40
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 16 (2033)				
Total Mitigated On-Site Emissions	16.86	34.80	2.88	1.86
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 17 (2034)				
Total Mitigated On-Site Emissions	13.66	27.94	0.44	0.44
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 18 (2035)				
Total Mitigated On-Site Emissions	11.58	27.87	0.25	0.25
Localized Significance Threshold	*98*	*630*	*13*	*7*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
OPERATIONS [1]				
Area Source Emissions	0.00	0.02	0.00	0.00
Localized Significance Threshold	*98*	*630*	*4*	*2*
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Notes:

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 conservatively uses the 5 acre threshold, the distance to sensitive receptors (25 meters), and the source receptor area (SRA 12).

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.

The County is located in the Basin, which is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the *Federal Attainment Plan for Carbon Monoxide* (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin, and would likely experience the highest CO concentrations. Therefore, CO analysis within the CO Plan is utilized in a comparison to the proposed Project, since it represents a worst-case scenario with heavy traffic volumes within the Basin.

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in the City of Los Angeles experienced the highest CO concentration (4.6 ppm), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an average daily

traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections within the County and the City of Los Angeles near the Project site due to the low volume of traffic (3,489 net daily trips) that would occur as a result of Project implementation. Therefore, impacts would be less than significant.

Threshold:	*Would the Project conflict with or obstruct implementation of the applicable air quality plan?*

Impact 4.2-4 **Implementation of the Project would not conflict with or obstruct implementation of applicable air quality plans. This impact would be *less than significant with mitigation incorporated.***

On December 7, 2012, the SCAQMD Governing Board approved the *2012 AQMP*, which outlines its strategies for meeting the NAAQS for $PM_{2.5}$ and ozone. The *2012 AQMP* was forwarded to CARB for inclusion into the California State Implementation Plan (SIP) on January 2013. Subsequently, the *2012 AQMP* was submitted to the EPA on February 13, 2013 as the 24-hour $PM_{2.5}$ SIP addressing the 2006 $PM_{2.5}$ NAAQS and as a limited update to the approved 8-hour ozone SIP. The 1-hour ozone attainment demonstration and vehicle miles traveled (VMT) emissions offset demonstration will also be submitted through CARB to the EPA. According to the SCAQMD's *2012 AQMP*, two main criteria must be addressed.

Criterion 1

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) *Would the project result in an increase in the frequency or severity of existing air quality violations?*

   Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of a project's

pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency.

As previously discussed, localized concentrations of CO, NO_X, PM_{10}, and $PM_{2.5}$ would be less than significant during proposed Project operations. Therefore, the proposed Project would not result in an increase in the frequency or severity of existing air quality violations. Because ROGs are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROG plays in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

b) Would the project cause or contribute to new air quality violations?

As previously discussed, proposed Project operations would result in emissions that would not exceed the SCAQMD operational thresholds. Therefore, the proposed Project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

The proposed Project would result in less than significant impacts with regard to localized concentrations during operations. Therefore, the proposed Project would not delay the timely attainment of air quality standards or *2012 AQMP* emissions reductions.

Criterion 2

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. Therefore, 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 *2012 AQMP*.

Determining whether or not a project exceeds the assumptions reflected in the *2012 AQMP* involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?

In the case of the *2012 AQMP*, four sources of data form the basis for the projections of air pollutant emissions: the County General Plan, Although the unmitigated particulate matter levels are below the SCAQMD thresholds in the absence of specific dust reduction measures, Mitigation Measures AQ-1 and AQ-2 have been included to help ensure fugitive dust emissions are minimized as the Basin is nonattainment for PM_{10} and $PM_{2.5}$., SCAG's *Growth Management Chapter of the Regional Comprehensive Plan (RCP)*, and SCAG's *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*. The RTP/SCS also provides socioeconomic forecast projections of regional population growth.

The Project site is designated Open Space (O-S), Single Family Residence (R-1), minimum lot area of 5,000 square feet (R-1 5000), Limited Multiple Residence, 20 units per net acre (R-3-20U), and Neighborhood Business (C-2) by the County Zoning. In addition, the Project site is designated Open Space by the City General Plan. The proposed Project is considered consistent with the General Plan designations and policies as the Project involves development of recreation, open space, and office uses. The recreation land uses include equestrian facilities, aquatic center, multi-purpose stadium, outdoor athletic fields, group picnic areas, amphitheater, skate park, outdoor basketball areas, children's play area, lake, wedding pavilion, dog park, sculpture garden, civic plaza, walking trails, and exercise equipment station areas while office uses would encompass the DPR South Agency Headquarters (SAH). Additionally, as described in Chapter 7.0, *Growth Inducing Impacts*, of this EIR, the Project does not include residential land uses. The proposed Project would not be considered growth inducing with respect to fostering population growth through additional housing.

Therefore, the proposed Project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the RCP. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the County and the City; these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into the *2012 AQMP*, it can be concluded that the proposed Project would be consistent with the projections.

Would the project implement all feasible air quality mitigation measures?

The proposed Project would be required to comply with applicable emission reduction measures identified by the SCAQMD. These measures have been included as Mitigation Measures AQ-1 and AQ-2. Therefore, the proposed Project meets this *AQMP* consistency criterion.

b) Would the project be consistent with the land use planning strategies set forth in the AQMP?

The proposed Project would serve to implement various County, City, and SCAG policies. The Project is located within a developed portion of the County, and is considered to be an infill development. The Project site is bounded by 120th Street to the north, Avalon Boulevard to the west, El Segundo Boulevard to the south, and Clovis Avenue to the east, and within the vicinity of a mix of uses including residential, institutional, and commercial.

In conclusion, the determination of *2012 AQMP* consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The proposed Project would be consistent with the goals and policies of the *AQMP* for control of fugitive dust. As discussed above, the proposed Project's long-term influence would also be consistent with the SCAQMD and SCAG's goals and policies and is, therefore, considered consistent with the *2012 AQMP*.

Threshold:	*Would the Project create objectionable odors affecting a substantial number of people?*

Impact 4.2-5 **Implementation of the Project would not create objectionable odors affecting a substantial number of people. This impact would be *less than significant with mitigation incorporated.***

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project does not propose development of any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the Project could generate detectable odors from heavy-duty equipment exhaust. It is noted that emissions produced during grading and construction activities are short-term and disperse rapidly from the source, as they occur only for the duration of construction. Additionally, the odors would occur during the actual operation of heavy-duty equipment, which would move around within the site and would generally not be confined to one area for long periods of time. Construction odors would not concentrate near existing or future sensitive uses.

Additionally, the proposed equestrian facilities center could be considered potential sources of odors. These facilities are proposed in the western portion of the Project site. The occurrence and severity of odor impacts would depend on numerous factors, including the source's nature, frequency, and intensity; wind speed and direction; and the receptors' sensitivity. While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to violate the SCAQMD standards. Compliance with SCAQMD rules and regulations related to permitting and nuisance rules related to odors would help to control odorous emissions from the proposed equestrian facilities center. For instance, SCAQMD Rule 402 (Nuisance) prohibits the discharge of air contaminants or other

materials which cause injury, detriment, nuisance, or annoyance to any considerable numbers of persons.

Horse facility owners are required to develop a water management plan to reduce odors (as well as ensure clean and safe facilities, protect creeks and groundwater, and reduce insect breeding opportunities). The EPA and the Regional Water Quality Control Board (RWQCB) have regulations related to water quality and Concentrated Animal Feeding Operations (CAFOs). National Pollutant Discharge Elimination System (NPDES) Code of Federal Regulations 1 Section 122.23 Title 40, defines CAFOs as operations where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and where vegetation is not sustained in the confinement area during the normal growing season. CAFOs are defined by the federal Clean Water Act (CWA) as point sources, and are subject to NPDES permitting requirements. Additional discussion regarding potential water quality impacts is provided in Section 4.8, *Hydrology and Water Quality*.

Mitigation Measure AQ-3 requires the Project Applicant to provide manure management measures to control objectionable odors created by animal waste generated from the proposed Project. Further, the EPA and the RWQCB frequently update rules and regulations pertaining to water quality and CAFOs. Therefore, the Applicant would be subject to compliance with these rules and regulations, which would be verified through the County's development review process. Compliance with SCAQMD rules and regulations and implementation of Mitigation Measure AQ-3 would ensure the Project would result in a less than significant impact involving the creation of objectionable odors.

Mitigation Measures:

MM AQ-3 *Prior to issuance of occupancy permits for any equestrian related facility, the County shall prepare a program that includes the following measures to control objectionable odors:*

- *Each horse stall shall be cleaned twice per day, seven days per week by facility staff;*
- *The manure and soiled bedding shall be gathered along with any waste, bedding, or feed that might be in the barn aisle pathways and hauled to the manure storage bins for haul-out;*
- *Manure storage areas shall have a concrete (or similar) bottom and shall be covered during rain.*
- *Provide berm or other design solution to keep runoff away from manure storage areas;*
- *Storage bins shall be covered at all times; and*
- *Storage bins shall be removed and emptied by a commercial manure removal company no less than three times per week. During peak facility operation times, such as horse shows, the storage bins shall be removed and emptied daily.*

CUMULATIVE IMPACTS

Table 4.13-16 identifies the related projects and other possible development in the area determined as having the potential to interact with the Project to the extent that a significant cumulative effect may occur. The following discussions are included per topic area to determine whether a significant cumulative effect would occur.

Short-Term Construction Air Emissions

Impact 4.2-6 **Short-term construction activities associated with the implementation of the proposed project and other related cumulative projects, would not result in significant air pollutant emission impacts. This impact would be *less than significant with mitigation incorporated*.**

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.

Since the Project applicant has no control over the timing or sequencing of the related projects, any quantitative analysis to determine the daily construction emissions that assumes multiple, concurrent construction would be speculative. In addition, construction-related criteria pollutant emissions are temporary in nature and would cease upon Project completion. Although the unmitigated particulate matter levels are below the SCAQMD thresholds, and therefore are less than significant, Mitigation Measures AQ-1 and AQ-2 have been included to help ensure fugitive dust emissions are minimized as the Basin is nonattainment for PM10 and PM2.5. 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 *AQMP* emissions control measures) would also be imposed on construction projects throughout the Basin, which would include each of the related projects listed in Table 4.13-16.

Since cumulative projects would be required to reduce their emissions per SCAQMD rules and mandates, cumulative construction emissions would not contribute to an exceedance of the Federal or California NAAQS, and would comply with the goals of the *2012 AQMP*. Therefore, Project-related construction activities, in combination with those from other projects in the area, would not deteriorate the local air quality. Therefore, the Project would not contribute to cumulative impacts, and impacts in this regard are not cumulatively considerable.

Long-Term Operational Air Emissions

Impact 4.2-7 **Development associated with implementation the proposed project and other related cumulative projects would not result in significant impacts pertaining to operational air emissions. This impact would be *less than significant*.**

As discussed previously, the proposed Project would not result in long-term air quality impacts, since emissions would not exceed the SCAQMD adopted operational thresholds. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. As a result, the proposed Project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with implementation of the proposed Project would be less than significant.

Consistency with Regional Plans

Impact 4.2-8 **Development associated with the proposed project and other related cumulative projects would not conflict with or obstruct implementation of the applicable air quality plan. This impact would be *less than significant*.**

The County and the City of Los Angeles are subject to the SCAQMD's *2012 AQMP*. Additionally, the proposed Project is located within the Los Angeles County subregion

of the SCAG *2012-2035 RTP/SCS*, which governs population growth. The County General Plan is consistent with the *2012-2035 RTP/SCS*, and since the *2012-2035 RTP/SCS* is consistent with the *2012 AQMP*, growth under the General Plan is consistent with the *2012 AQMP*. The County Zoning Ordinance designates the Project site as O-S, R-1, R-1 5000, R-3-20U, and C-U, and the City General Plan designates the Project site as Open Space. The proposed Project would result in less growth than that allowed by the General Plans, and therefore, would not increase the amount of growth assumed in the *2012 AQMP*. Therefore, development in the County and the City would not conflict or obstruct the *2012 AQMP*. Also, since the Project would be consistent with the *2012 AQMP* (refer to the discussion above), the Project would not cumulatively contribute to impacts.

Objectionable Odors

Impact 4.2-9 **Development associated with the proposed project and other related cumulative projects would not create objectionable odors affecting a substantial number of people. This impact would be *less than significant*.**

Construction activities in accordance with the projects identified in Table 4.13-16 and the proposed Project have the potential to generate airborne odors due to the construction equipment. However, these emissions would occur during daytime hours and would be isolated to the vicinity of the construction site. Odor emissions would be of short duration and temporary in nature.

As stated previously, the Project proposes an equestrian facilities center which could be considered potential sources of odors. Project compliance with EPA and the RWQCB rules and regulations and Mitigation MM Measure AQ-3 would reduce odor-related impacts to less than significant levels. Additionally, adherence to EPA and the RWQCB rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis, as applicable. Therefore, odor impacts associated with cumulative projects would not be cumulatively considerable.