3.6 AIR QUALITY

3.6.1 INTRODUCTION

This section of the PEIR discusses potential air quality impacts associated with the proposed project. Discussions of impacts related to construction- and operational-related air quality emissions are provided. The following discussion presents a programmatic analysis of air quality issues associated with implementation of the proposed project. Given the programmatic nature of the PEIR, specific impacts resulting from individual development projects are not identified or known at this time.

The closely-related topics associated with global climate change are addressed in Section 3.7 (Greenhouse Gas Emissions) of this PEIR.

3.6.2 ENVIRONMENTAL SETTING

The information contained in this Environmental Setting section is based upon information contained in the City of Lake Elsinore General Plan Background Reports (see Chapter 4 – Air Quality). This document is attached as Appendix B to this PEIR.

The City of Lake Elsinore planning area lies in the South Coast Air Basin (SCAB), which encompasses all of Orange County and portions of Los Angeles, San Bernardino, and Riverside Counties. The SCAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

CLIMATE AND METEOROLOGY

The topography and climate of southern California combine to create an area of high air pollution potential in the SCAB. During the summer months, a warm air mass frequently descends over the cool, moist marine layer, forming a cup over the cool marine layer that prevents polluted air from dispersing upward. This inversion allows pollutants to accumulate in the lower layer. Light winds during the summer further limit ventilation, exacerbating the concentration of pollutants.

The low average wind speeds in the summer and a persistent daytime temperature inversion create an opportunity for emissions of hydrocarbons and oxides of nitrogen to combine with sunlight in a complex series of reactions. These reactions produce a photochemical oxidant commonly known as smog. Because the SCAB experiences more days of sunlight than any other major urban areas in the United States except Phoenix, Arizona, the smog potential in the region is higher than in most other areas of the nation.

The major factors affecting local air pollution conditions in the planning area itself are the extent and types of both region-wide and local emissions, climate, and meteorology. The general climate of Lake Elsinore is characterized by sparse winter rainfall and hot summers tempered by cool ocean breezes. The climate in and around Lake Elsinore, as well as most of southern

California, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. This high-pressure cell produces a typical Mediterranean climate with warm summers, mild winters, and moderate rainfall. This pattern is infrequently interrupted by periods of extremely hot weather brought in by Santa Ana winds originating in the desert. Most of the area's precipitation occurs intermittently between November and April, but the area is still dominated by sunny or partly sunny conditions during these months. Cyclic land and sea breezes are the primary factors affecting the region's mild climate. Daytime winds are normally sea breezes, predominantly from the west, that flow at relatively low velocities.

The Elsinore Convergence Zone, the zone where the two major airstreams in western Riverside County meet, acts as an invisible boundary, obstructing much of the inland basin air pollutants from continuing south beyond the Lake Elsinore area. Coastal winds in the Elsinore Convergence Zone are the primary factor in the obstruction and allow for air pollutants to be dispersed just south of the convergence zone, but also allow their accumulation in the Lake Elsinore area, including surrounding communities to the north and east.

AIR POLLUTION CONSTITUENTS

Federal and state agencies have established ambient air quality standards for seven pollutants called criteria pollutants: ozone (O_3), carbon monoxide (CO), oxides of nitrogen (NO_X) and nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and lead (Pb). The State of California has also established ambient standards for lead, hydrogen sulfide (H_2S), vinyl chloride, and sulfates. O_3 and NO_2 are considered to be regional pollutants because they or their precursors affect air quality on a regional scale: NO_2 reacts photochemically with reactive organic gases (ROG) to form O_3, and this reaction occurs at some distance downwind of the source of pollutants. Pollutants such as CO, SO_2, and lead are considered to be local pollutants because they tend to disperse rapidly with distance from the source. Particulates such as PM_{10} and $PM_{2.5}$ are considered to be localized pollutants as well as regional pollutants.

Criteria Pollutants

Air pollutants are recognized to have a variety of health effects on humans. Research by the California Air Resources Board (CARB) shows that exposure to high concentrations of air pollutants can trigger respiratory diseases, such as asthma, bronchitis, and other respiratory ailments; and cardiovascular diseases. A healthy person exposed to high concentrations of air pollutants may become nauseated or dizzy, develop a headache or cough, or experience eye irritation and/or a burning sensation in the chest. Ozone is a powerful irritant that attacks the respiratory system, leading to the damage of lung tissue. Inhaled particulate matter, nitrogen dioxide, and sulfur dioxide can directly irritate the respiratory tract, constrict airways, and interfere with the mucous lining of the airways. Exposure to carbon monoxide, when absorbed into the bloodstream, can endanger the hemoglobin, the oxygen-carrying protein in blood, by reducing the amount of oxygen, which reaches the heart, brain, and other body tissues. When air pollutant levels are high, a common occurrence in southern California, children, the elderly,

and people with respiratory problems are advised to remain indoors. Outdoor exercise also is discouraged because strenuous activity may cause shortness of breath and chest pains. A brief description of the criteria pollutants and their effects on human health and the environment is provided below and in **Table 3.6-1, Health Effects Summary of the Major Criteria Air Pollutants**.

Carbon Monoxide (CO)

CO is a colorless and odorless gas that is directly emitted as a by-product of combustion. CO is harmful because it is readily absorbed through the lungs into the blood, where it interferes with the transfer of oxygen to the human heart, brain and other tissues. Motor vehicles are the dominant source of CO emissions in most areas. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. High CO levels in the planning area develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning), resulting in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. CO hotspots are high concentrations of CO emission that accumulate around areas of stalled traffic, such as at busy intersections and roadway segments during peak traffic periods.

Ozone (O_3)

O_3 is a colorless toxic gas that is the chief component of urban smog. In humans, it interferes with the transfer of oxygen to the brain and heart tissues and is a severe eye, nose, and throat irritant. High O_3 concentration also can damage plants, synthetic rubber, textiles, and other material. Ozone is formed by a photochemical reaction in the atmosphere among O_3 precursors, which include ROG and NOx. Ozone precursors are commonly associated with internal combustion engines such as those in automobiles and stationary factory equipment. The photochemical reaction creating O_3 depends on the intensity of ultraviolet light and air temperature; high O_3 concentrations in the planning area are most common during summer and early fall.

Oxides of Nitrogen (NO_X)

NO_X, including NO_2, are brownish gases that irritate the lungs and combine to form O_3. Like O_3, NO2 is not directly emitted but is created by photochemical reaction in the atmosphere when nitric oxide (NO) combines with atmospheric oxygen. NO_2 also contributes to the formation of PM10 (see below). On their own, NO_X and NO_2 emissions in the South Coast Air Basin (SCAB) have been trending downward since 1985 as a result of enhanced vehicle emissions technology and increasingly stringent emissions standards. The SCAB is one of only a few areas in California where NO_2 has been a problem. NOx emissions remain an area of particular concern because of their contribution to the formation of O_3 and particulate matter. NOx is one of the six greenhouse gases identified in Section 38505 of the California Health and Safety Code (the "California Global Warming Solutions Act" or "AB32.").

Table 3.6-1, Health Effects Summary of the Major Criteria Air Pollutants

POLLUTANTS	SOURCES	PRIMARY EFFECTS
Ozone	Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	Aggravation of respiratory and cardiovascular diseases. Irritation of eyes. Impairment of cardiopulmonary function. Plant leaf injury.
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust. High temperature stationary combustion. Atmospheric reactions.	Aggravation of respiratory illness. Reduced visibility. Reduced plant growth. Formation of acid rain.
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon containing substances, such as motor exhaust. Natural events, such as decomposition of organic mater.	Reduced tolerance for exercise. Impairment of mental function. Impairment of fetal development. Death at high levels of exposure. Aggravation of some heart diseases (angina).
Particulate Matter ($PM_{2.5}$ and PM_{10})	Stationary combustion of solid fuels. Construction activities. Industrial processes. Atmospheric chemical reactions.	Reduced lung function. Aggravation of the effects of gaseous pollutants. Aggravation of respiratory and cardio respiratory diseases. Increased cough and chest discomfort. Soiling. Reduced visibility.
Sulfur Dioxide (SO_2)	Combustion of sulfur-containing fossil fuels. Smelting of sulfur bearing metal ores. Industrial processes.	Aggravation of respiratory diseases (asthma, emphysema). Reduced lung function. Irritation of eyes. Reduced visibility. Plant injury. Deterioration of metals, textiles, leather, finishes, coatings, etc.
Lead (Pb)	Contaminated soil.	Impairment of blood function and nerve construction. Behavioral and hearing problems in children.
Source: California Air Resources Board, *The California Almanac of Emissions and Air Quality*, 2009 Edition. (http://www.arb.ca.gov/aqd/almanac/almanac.htm)		

Particulate Matter ($PM_{2.5}$ and PM_{10})

Particulate Matter (PM) is dust, smoke, and other solid matter that is commonly released into the atmosphere from ground disturbance or direct emissions from various sources, including factories and internal combustion engines. PM is a mixture of substances that includes elements such as carbon and metals; compounds such as nitrates, sulfates and other organic compounds; and complex mixtures such as diesel exhaust and soil. The federal and state ambient air quality standards for particulate matter apply to two classes of particulates: $PM_{2.5}$ and PM_{10}. Particulates can damage human health when inhaled into the lungs by aggravating a number of respiratory illnesses. High concentrations of particulates in the air can reduce visibility, may corrode some materials, and can retard plant growth.

Sulfur Dioxide (SO_2)

SO_2 is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment, and from industrial processes. Continued exposure to elevated levels of SO_2 can result in increased incidence of pulmonary disease and symptoms, such as wheezing and shortness of breath. EPA and California Air Resources Board (CARB) consider the SCAB an SO_2 federal and state attainment area. Though SO_2 concentrations have been reduced to levels well below state and federal standards, further reductions in SO_2 emissions are needed because SO_2 is a precursor to sulfate and PM10. (SCAQMD 1993)

Lead (Pb)

Sources of lead emissions in California include a variety of industrial activities and re-suspension of lead particles in soils from past use of leaded fuels. Lead can adversely affect the reproductive, digestive, immune, and blood-forming systems. Both the EPA and CARB designate the SCAB as an attainment area for lead for national and state ambient air quality standards (SCAQMD 1993).

Other Air Pollutants

Sulfates

In California, emissions of sulfur compounds occur primarily from the combustion of gasoline and diesel fuel that contain sulfur. Effects of sulfate exposure include decreased ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardiopulmonary disease. Sulfates particularly affect visibility, and the acidity can harm ecosystems and damage materials and property. The SCAB is in attainment with state standards for sulfates.

Hydrogen Sulfide (H_2S)

Hydrogen sulfide (H_2S) at levels above the standard would result in a very disagreeable odor. H_2S can result in dangerous health effects, including mortality, with exposure to large amounts. The SCAB is currently unclassified (data incomplete) for attainment status with state standards for hydrogen sulfide.

Volatile Organic Compounds (VOCs)

Volatile Organic Compounds (VOCs) are combustible chemicals commonly associated with household or industrial products such as paints, paint strippers and other solvents, wood preservatives, aerosol sprays, cleansers and disinfectants, insect repellents, air fresheners, and stored fuels and automotive products. In high concentrations, VOCs can be hazardous to human health, particularly in confined indoor spaces; outdoors, high concentrations can produce chemical reactions that contribute to the formation of O_3. VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM10 and lower visibility levels. There are no state or federal ambient air quality standards for VOCs.

Toxic Air Contaminants (TACs)

Toxic Air Contaminants (TACs) are any pollutants that may be expected to result in an increase in mortality or serious illness in humans, according to Section 39655 of the California Health and Safety Code. Health effects commonly associated with TACs include cancer, birth defects, neurological damage, etc. There are no ambient air quality standards for TACs; therefore, they are considered non-criteria pollutants. The CARB maintains a TAC-monitoring network that provides air quality data in support of general population exposures; therefore, localized impacts, often referred to as near-source or neighborhood exposures, are not included in CARB's TAC evaluations. The CARB, in conjunction with the Office of Environmental Health Hazard Assessment (OEHHA), has screened hundreds of TACs and identified ten TACs as posing the greatest health risk in California, based primarily on ambient air quality data. These ten TACs are: acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, chromium, hexavalent, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter.

EXISTING AIR QUALITY

Coterminous with California's largest metropolitan region, the SCAB contains some of the highest air pollutant concentrations statewide. On-road motor vehicles are the largest contributors to CO, NOX, and ROG emissions in the SCAB; other on-road and off-road mobile emission sources are also significant contributors of CO and NOX emissions. Area-wide and stationary sources contribute to the remainder of air pollutant emissions in the SCAB. While high growth rates are often associated with corresponding increases in emissions and pollutant concentrations, aggressive emission control programs in the SCAB have resulted in emission decreases and a continuing improvement in air quality.

The SCAQMD exercises jurisdiction over air quality in the SCAB. The 14 general forecast areas in the SCAB are further broken down into 38 air monitoring areas. The City and SOI are in the Elsinore Air Monitoring Area (Area No. 25) of the Hemet/Elsinore General Forecast Area. The system of delineation is determined by a combination of jurisdictional boundaries and geographic/topographic conditions that determine air quality. The SCAQMD uses the system for monitoring and reporting purposes, with the SCAQMD reporting daily air quality conditions for each area and subarea.

Monitoring in the SCAQMD jurisdiction is accomplished by a network of 30 monitoring stations throughout the SCAB to monitor 27 source receptor areas (SRAs) in the expansive region. The SCAB relies on one or more monitoring stations to document local air pollutant concentration levels in each SRA. Concentration levels vary widely at each SRA, depending on location and time of year. The highest levels of O_3 and particulate matter recorded in SRAs in the interior valleys generally occur during warm, stable periods in summer and autumn. Recorded CO concentrations are highest near heavy traffic on freeways or near large business districts. The Lake Elsinore area (SRA 25) is monitored by four stations: Lake Elsinore–W. Flint Street, Perris, Riverside-Magnolia, and Riverside-Rubidoux.

Criteria Pollutants

Federal and state agencies have established ambient air quality standards for seven criteria pollutants: CO, O_3, NO_2, SO_2, particulates (both PM_{10} and $PM_{2.5}$), and lead. Ozone and NO_2, are generally considered to be regional pollutants, as these pollutants or their precursors affect air quality on a regional scale. Pollutants such as CO, SO_2, lead, and particulates are considered to be local pollutants that tend to accumulate in the air locally but are not found in substantial concentrations on a regional level. PM_{10} and $PM_{2.5}$ are considered to be localized pollutants as well as regional pollutants.

An area's ambient air quality is evaluated by measuring the concentrations of the regulated pollutants (criteria air pollutants) and comparing their recorded levels with relevant federal and state air quality standards. If a pollutant concentration is lower than the relevant standard, the area is classified as an attainment area for that pollutant. If a pollutant concentration exceeds the standard, the area is considered a nonattainment area; nonattainment can also be conditioned as serious, severe, or extreme, depending on the level of excess. If data are insufficient to determine whether a pollutant concentration exceeds the standard, the area is designated unclassified. The attainment status of western Riverside County, including the planning area, in relation to criteria pollutants of concern is summarized in **Table 3.6-2, State and Federal Attainment Designations for Criteria Pollutants in Western Riverside County**. The state and federal ambient air quality standards are shown in **Table 3.6-3, Ambient Air Quality Standards Applicable in California**.

Table 3.6-2, State and Federal Attainment Designations for Criteria Pollutants in Western Riverside County

POLLUTANT	FEDERAL STANDARDS	STATE STANDARDS
O_3 (1-hour)	N/A	Extreme nonattainment
O_3 (8-hour)	Extreme nonattainment	Nonattainment
CO	Serious maintenance	Attainment
PM_{10}	Serious nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
NO_2	Primary Maintenance	Attainment
SO_2	Attainment	Attainment
Sulfates	N/A	Attainment
Lead	Attainment	Attainment
H_2S	N/A	Unclassified
Sources: CARB, Area Designations Maps/State and National Web Site and United States EPA, *The Green Book Nonattainment Areas for Criteria Pollutants*.		

Table 3.6-3, Ambient Air Quality Standards Applicable in California

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS[1]	NATIONAL STANDARDS[2]	
		CONCENTRATION	PRIMARY[3]	SECONDARY[4]
Ozone (O_3)*	1 Hour	0.09 ppm	N/A	N/A
	8 Hours	0.070 ppm	0.075 ppm	Same as Primary Standard
Carbon monoxide (CO)	8 Hours	9.0 ppm	9 ppm	None
	1 Hour	20 ppm	35 ppm	
	8 Hour (Lake Tahoe)	6 ppm	N/A	N/A
Nitrogen dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Same as Primary Standard
	1 Hour	0.18 ppm	N/A	
Sulfur dioxide (SO_2)	Annual Arithmetic Mean	N/A	0.030 ppm	N/A
	24 Hour	0.04 ppm	0.14 ppm	N/A
	3 Hour	N/A	N/A	0.5 ppm
	1 Hour	0.25 ppm	N/A	N/A
Hydrogen	1 Hour	0.03 ppm	N/A	N/A

Pollutant	Average Time	California Standards[1]	National Standards[2]	
		Concentration	Primary[3]	Secondary[4]
sulfide (H_2S)				
Vinyl chloride (C_2H_3Cl)	24 Hour	0.04 ppm	N/A	N/A
Particulate matter (PM_{10})	24 Hour	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³	N/A	
Fine particulate matter ($PM_{2.5}$)	24 Hour	N/A	35 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³	15 µg/m³	
Sulfate particles (SO_4)	24 Hour	25 µg/m³	N/A	N/A
Lead (Pb)	30 Day Average	1.5 µg/m³	N/A	N/A
	3 Month Average	N/A	0.15 µg/m³	Same as Primary Average

Sources: California Air Resources Board, *The California Almanac of Emissions and Air Quality*, 2009 Edition, page 1-22, Table 1-5 (http://www.arb.ca.gov/aqd/almanac/almanac.htm); and California Air Resources Board, *California Ambient Air Quality Standards (CAAQA) Web Site*. (http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm)
1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, 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 averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, 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. Contact U.S. EPA for further clarification and current federal policies.
3. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
4. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

As shown in **Table 3.6-2**, western Riverside County is in attainment of the state CO standard and of the federal and state lead standards. Western Riverside County is in various levels of nonattainment of the other criteria pollutant standards. There have been no violations of the state CO standard in SCAB in the past 5 years, although the area is listed as serious maintenance of the federal standard for that same pollutant.

Over the past 30 years, direct emissions of PM_{10} in the SCAB have been increasing, while direct emissions of $PM_{2.5}$ have decreased slightly. Area-wide emissions of both PM_{10} and $PM_{2.5}$ have been increasing. The increase in PM_{10} and $PM_{2.5}$ has been attributed to increased emissions from area-wide sources—primarily fugitive dust from paved and unpaved roads and other sources. The increase in activity of these area-wide sources reflects the increased growth in the SCAB.

The CARB considers the SCAB an NO_2 state attainment area, and emissions have been trending downward. The federal standard has not been exceeded since 1991. NO_X emissions remain of concern because of their contribution to the formation of O_3 and particulate matter.

The EPA and the CARB consider the SCAB an SO_2 federal and state attainment area. Though SO_2 concentrations have been reduced to levels well below state and federal standards, further reductions in SO_2 emissions are needed because SO_2 is a precursor to sulfate and PM10.

Sulfates are not listed as a federal criteria pollutant. State standards consider sulfate emissions to be in attainment for the area. Lead emissions are considered to be in attainment by both the EPA and the CARB. H_2S emissions are not listed as a federal criteria pollutant and are currently considered unclassified by the CARB.

Ambient air pollutant concentrations in SRA 25 are monitored by the SCAQMD using composite data collected from four local monitoring stations: Lake Elsinore–West Flint St. (506 West Flint Street, Lake Elsinore), Perris (237 North D Street, Perris), Riverside-Magnolia (7002 Magnolia Avenue, Riverside), Riverside-Rubidoux (5888 Mission Boulevard, Riverside).

Pollutants of particular concern in the Lake Elsinore area are O_3, CO, and particulate matter. A comparison of recent air quality monitoring data collected from the local monitoring stations to the state and federal standards for criteria pollutants is provided below **in Table 3.6-4, Ambient Air Quality Monitoring Data from Western Riverside County SRA Stations**. The high concentration of stationary sources of air contaminants in the western portion of the SCAB and mobile sources throughout the SCAB contribute to generally poor air quality in the region.

Table 3.6-4, Ambient Air Quality Monitoring Data from Western Riverside County SRA Stations

POLLUTANT STANDARDS	2005	2006	2007	2008	2009
Ozone (O_3) Lake Elsinore-Flint Street					
Maximum 1-hour concentration (ppm)	0.149	0.14	0.130	0.139	0.128
Maximum 8-hour concentration (ppm)	0.119	0.109	0.108	0.118	0.105
Number of Days Standard Exceeded					
CAAQS 1-hour (>0.09 ppm)	37	40	26	49	24
CAAQS 8-hour (>0.07 ppm)	46	58	55	92	65
NAAQS 1-hour (>0.12 ppm)[a]	4	3	3	6	1
NAAQS 8-hour (>0.075 ppm)	15	24	35	69	37
Carbon Monoxide (CO) Lake Elsinore-Flint Street					
Maximum 1-hour concentration (ppm)	2	1	2	1	1
Maximum 8-hour concentration (ppm)	1.0	1.0	1.4	1.0	0.7
Number of Days Standard Exceeded					
CAAQS 1-hour (≥20 ppm)	0	0	0	0	0
CAAQS 8-hour (>9.0 ppm)	0	0	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0	0	0
NAAQS 8-hour (>9.0 ppm)	0	0	0	0	0
Nitrogen Dioxide (NO_2) Lake Elsinore-Flint Street					
Maximum 1-hour concentration (μg/m³)	0.07	0.07	0.06	0.06	0.06
Annual Arithmetic Mean concentration (μg/m³)	0.0142	0.0151	0.0174	0.0129	0.0129
Number of Days Standard Exceeded					
CAAQS 1-hour (≥18 ppm)[b]	0	0	0	0	0
Particulate Matter (PM_{10}) Perris					
Maximum 24-hour concentration (μg/m³)	80	125	120	85	80
Annual Arithmetic Mean concentration (μg/m³)	39.2	45.0	54.8	38.3	34.8
Number of Days Standard Exceeded					
NAAQS 24-hour (>150 μg/m³)	0	0	0	0	0
CAAQS 24-hour (>50 μg/m³)	19	19	32	12	9
Particulate Matter ($PM_{2.5}$) Riverside-Rubidoux					
Maximum 24-hour concentration (μg/m³)	98.7	68.5	75.7	57.7	47.2
Annual Arithmetic Mean concentration (μg/m³)	21.0	19.0	19.1	16.4	15.3
Number of Days Standard Exceeded					
NAAQS 24-hour (>35 μg/m³)[c]	4[c]	32	33	14	12

ppm = parts per million parts of air, by volume.
μg/m³ = micrograms per cubic meter of air.
NAAQS = national ambient air quality standards.
CAAQS = California ambient air quality standards.

[a] The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2005. U.S. EPA revised the federal 8-hour ozone standard from 0.084 ppm to 0.075 ppm; effective May 27, 2008.

[b] The California Air Resources Board revised the NO_2 1-hour state standard from 0.25 ppm to 0.18 ppm effective March 20, 2008.

[c] The U.S. EPA revised the federal 24-hour M2.5 standard from 65 μg/m³ to 35 μg/m³; effective December 17, 2006.

Sources: SCAQMD, *Air Quality Data*. (Available at www.aqmd.gov/smog/historicaldata.htm)

Toxic Air Contaminants

As discussed above, the state monitors ambient concentrations of ten major TACs in order to track potential health risks. The ten TACs, their associated estimated unit cancer risk, and 2007 total emissions of the TACs in Western Riverside County are listed in **Table 3.6-5, TAC Estimated Cancer Risk, Concentrations, and Emissions**.

Table 3.6-5, TAC Estimated Cancer Risk, Concentrations, and Emissions

TOXIC AIR CONTAMINANT	HEALTH RISK[1]	SCAB 2007 ANNUAL AVERAGE CONCENTRATION	SCAB (RIVERSIDE COUNTY) TAC EMISSIONS (TONS/YEAR)
Acetaldehyde	5	1.11 ppb	214
Benzene	44	0.474 ppb	302
1,3-Butadiene	54	0.145 ppb	77
Carbon Tetrachloride[2]	25	0.093 ppb	0
Chromium, Hexavalent	16	0.106 ng/m^3	0
para-Dichlorobenzene[3]	10	0.15 ppb	63
Formaldehyde	26	3.51 ppb	502
Methylene Chloride	2	0.62 ppb	234
Perchloroethylene	2	0.053 ppb	216
Diesel Particulate Matter	300[4]	--	856

Source: California Air Resources Board, *The California Almanac of Emissions and Air Quality*, 2009 Edition, pages 5-4, C-12 and C-16, Tables 5-1, C-18 and C-20.

ppb = parts per billion.

1 Health Risk represents the number of excess cancer cases per million people based on a lifetime (70-year) exposure to the annual average concentration.

2 No data for 2007. Data from 2003 used.

3 No data for 2007. Data from 2006 used.

4 A diesel particulate matter unit risk value of 300 is used as a reasonable estimate in the *"Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles"* (CARB October 2000)

Table 3.6-6, Facility Types That Emit TACs and Other Air Pollutants of Concern, identifies common TAC sources and typical pollutants emitted, as identified by the state. Many of these facilities are found in the planning area. It should be noted that this table is a generalization and that not all facilities will emit the listed pollutants of concern.

Table 3.6-6, Facility Types That Emit TACs and Other Air Pollutants of Concern

CATEGORIES	FACILITY TYPE	AIR POLLUTANTS OF CONCERN
Commercial	Auto Body Shops	Metals, Solvents
	Furniture Repair	Solvents[1], Methylene Chloride
	Film Processing Services	Solvents, Perchloroethylene
	Distribution Centers	Diesel Particulate Matter
	Printing Shops	Solvents
	Diesel Engines	Diesel Particulate Matter
Industrial	Construction	Particulate Matter, Asbestos
	Manufacturers	Solvents, Metals
	Metal Platers, Welders, Metal	Hexavalent Chromium, Nickel
	Spray (flame spray) Operations	Metals
	Chemical Producers	Solvents, Metals
	Furniture Manufacturers	Solvents
	Shipbuilding and Repair	Hexavalent Chromium and Other Metals
	Rock Quarries and Cement	Solvents
	Manufacturers	Particulate Matter, Asbestos
	Hazardous Waste Incinerators	Dioxin, Solvents, Metals
	Power Plants	Benzene, Formaldehyde
	Research and Development	Particulate Matter
	Facilities	Solvents, Metals, etc.
Public	Landfills	Benzene, Vinyl Chloride, Diesel
	Waste Water Treatment Plants	Particulate Matter
	Medical Waste Incinerators	Hydrogen Sulfide
	Recycling, Garbage Transfer	Dioxin, Benzene, PAH, PCBs
	Stations	1,3-Butadiene
	Municipal Incinerators	Diesel Particulate Matter, Dioxin, Benzene, PAH, PCBs, 1,3-Butadiene
Transportation	Truck Stops	Diesel Particulate Matter
Agricultural Operations	Farming Operations	Diesel Particulate Matter, VOCs, NOx, PM_{10}, CO, SO_x, Pesticides
	Livestock and Dairy Operations	Ammonia, VOCs, PM_{10}

Source: CARB, *Air Quality and Land Use Handbook: A Community Health Perspective*, page 33, Table 1-3.
[1] Some solvents may emit toxic air pollutants, but not all solvents are toxic air contaminants.

3.6.3 REGULATORY SETTING

This section discusses the federal, state, and local policies and regulations that are relevant to the analysis of air quality in the proposed project area.

Air pollution control programs were established in California before federal requirements were enacted. However, the federal Clean Air Act (CAA) legislation in the 1970s resulted in a gradual merging of state and federal air quality programs, particularly those relating to industrial sources. Air quality management programs developed by California since the late 1980s have generally responded to requirements established by the CAA.

The enactment of the California Clean Air Act (CCAA) in 1988 and the federal CAA Amendments of 1990 has produced additional changes in the structure and administration of air quality management programs. The CCAA requires preparation of an air quality attainment plan for any area that violates state standards for CO, SO_2, NO2, or ozone. Locally prepared attainment plans are not required for areas that violate the state standards for PM10, but CARB is currently addressing PM10 attainment issues.

The air quality management agencies of direct importance in Riverside County are the EPA, CARB, and SCAQMD. The EPA has established federal standards for which the CARB and the SCAQMD have primary implementation responsibility. The CARB and the SCAQMD are responsible for ensuring that state standards are met. The SCAQMD is responsible for implementing strategies for air quality improvement and recommending mitigation measures for new growth and development. At the local level, air quality is managed through land use and development planning practices, and is implemented in the county through the general planning process. The SCAQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws.

California and the federal government have established standards for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). State and federal standards for a variety of pollutants are summarized above in **Table 3.6-3, Ambient Air Quality Standards Applicable in California.**

FEDERAL

Federal Clean Air Act

The federal Clean Air Act (CAA), enacted in 1963 and amended several times thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The CAA directs the EPA to establish ambient air standards for six pollutants: ozone, CO, lead, nitrogen dioxide, particulate matter, and sulfur dioxide. The standards are divided into primary and secondary standards. Primary standards are designed to protect human health, including the health of sensitive populations such as asthmatics, children, and the elderly,

within an adequate margin of safety. Secondary standards are designed to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The primary legislation that governs federal air quality regulations is the Clean Air Act Amendments of 1990 (CAAA). The CAAA delegates primary responsibility for clean air to the EPA. The EPA develops rules and regulations to preserve and improve air quality, as well as delegating specific responsibilities to state and local agencies.

Areas that do not meet the federal ambient air quality standards shown above in **Table 3.6-3** are called nonattainment areas. For these nonattainment areas, the CAA requires states to develop and adopt State Implementation Plans (SIPs), which are air quality plans showing how air quality standards will be attained. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. In cases where the SIP is submitted by the state but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan.

STATE

California Clean Air Act

The California Clean Air Act (CCAA) was enacted in 1988. The CCAA substantially added to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA focuses on attainment of the state ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards.

The CCAA requires designation of attainment and nonattainment areas with respect to state ambient air quality standards. The CCAA also requires that local and regional air districts expeditiously adopt and prepare an air quality attainment plan if the district violates state air quality standards for CO, SO_2, NO_2, or ozone. These Clean Air Plans are specifically intended to attain these standards and must be designed to achieve an annual 5% reduction in district-wide emissions of each nonattainment pollutant or its precursors. Where an air district is unable to achieve a 5% annual reduction in district-wide emissions of each nonattainment pollutant or its precursors, the adoption of "all feasible measures" on an expeditious schedule is acceptable as an alternative strategy (Health and Safety Code Section 40914(b)(2)). No locally prepared attainment plans are required for areas that violate the state PM10 standards, but CARB is currently addressing PM10 attainment issues.

The CCAA requires that the state air quality standards be met as expeditiously as practicable but, unlike the federal CAA, does not set precise attainment deadlines. Instead, the act

established increasingly stringent requirements for areas that will require more time to achieve the standards.

The CCAA emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures (TCMs). The CCAA does not define indirect and area-wide sources. However, Section 110 of the federal CAA defines an indirect source as:

- a facility, building, structure, installation, real property, road, or highway, which attracts, or may attract, mobile sources of pollution. Such term includes parking lots, parking garages, and other facilities subject to any measure for management of parking supply.

TCMs are defined in the CCAA as "any strategy to reduce trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing vehicle emissions."

California Air Resources Board

Responsibility for achieving California's air quality standards, which are more stringent than federal standards, is placed on the CARB and local air districts, and is to be achieved through district-level air quality management plans that will be incorporated into the SIP. In California, the EPA has delegated authority to prepare SIPs to the CARB, which in turn has delegated that authority to individual air districts.

The CARB has traditionally established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emissions inventories, collecting air quality and meteorological data, and approving SIPs.

Responsibilities of air districts include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by CEQA.

The CARB's Air Quality and Land Use Handbook: A Community Health Perspective (2005) provides CARB recommendations for the siting of new sensitive land uses (including residences) near freeways, distribution centers, ports, refineries, chrome plating facilities, dry cleaners, and gasoline stations. The handbook recommends that new development be placed at distances from such facilities. The recommendations set forth in the Air Quality and Land Use Handbook are not required by any regulations and are entirely voluntary.

On September 27, 2007, the CARB adopted its revised State Strategy for California's 2007 State Implementation Plan, which identifies a number of near-term control measures aimed at reducing emissions from mobile sources and consumer products. The adopted State Strategy

includes emission reduction commitments for $PM_{2.5}$ attainment by year 2014 and for ozone attainment by year 2023. The 2023 commitment for ozone also includes long-term emission reductions under the "new technology" provisions of the Clean Air Act (Section 182(e)(5)).

California Department of Education

The California Department of Education maintains special air pollution regulations to protect its schools' students and employees from receiving air pollutants that are toxic or of hazardous concentrations. California Education Code §17213(b) and Public Resources Code §21151.8(a)(1)(2) require school districts to consider off-site sources of hazardous air emissions before acquiring property for a school site. The California Toxic Emissions Near Schools Program requires new or modified sources of air contaminants located within 1,000 feet of the outer boundary of an existing school to give public notice to the parents of school children before granting an AQMD permit to construct. A school district's new school siting process and the environmental review process for a proposed school or new pollutant emitter proposed near a school usually addresses such regulations.

LOCAL

Southern California Association of Governments

Although the SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. It's Regional Comprehensive Plan and Guide (RCPG) provides growth forecasts that are used in the development of air quality–related land use and transportation control strategies by the SCAQMD. The RCPG is a framework for decision-making for local governments, assisting them in meeting federal and state mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes through the year 2015, and beyond. Policies in the RCPG include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

Regional Comprehensive Plan and Guide

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties. It addresses regional issues relating to transportation, economy, community development, and environment. The SCAG is the federally designated metropolitan planning organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, the SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG) for the SCAG region, which includes Growth Management and Regional Mobility chapters, which form the basis for the land use and transportation components of the AQMP. These chapters are utilized in the preparation of air quality forecasts and the consistency analysis that is included in the AQMP.

South Coast Air Quality Management District

As discussed above, air quality is most directly managed by the SCAQMD, a subsidiary of the CARB. As the local air pollution control district, the SCAQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws. Enforcement is partially accomplished by the maintenance of the Air Quality Management Plan (AQMP), which provides a comprehensive framework for the SCAQMD to bring nonattainment areas into compliance with all federal and state air quality planning requirements. The SCAQMD rules and regulations specify the actions and practices that the district employs to reach the goals and objectives of the AQMP. The California CAA requires AQMPs to be updated triennially to incorporate the most recent available technical information; additionally, the EPA requires that transportation conformity budgets be established based on the most recent planning assumptions. The most recently adopted AQMP for the SCAQMD was published in 2007, using SCAG population growth projections published in their 2004 RTP. The Final 2007 AQMP mandates a variety of strategies to improve air quality while maintaining a healthy economy. To ensure continued progress toward clean air and comply with state and federal requirements, the Final 2007 AQMP employs the most up-to-date science and analytical tools, and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on- and off-road mobile sources. The Final 2007 AQMP acknowledges that recent emissions control measures have reduced per-capita emissions in the planning area, but that continued population increase generates new sources of air pollution.

In adopting the Final 2007 AQMP, the SCAQMD committed to analyzing 11 additional long-term control measures, such as requiring more stringent gasoline and diesel fuel specifications, removing high emitting vehicles, retrofitting heavy-duty trucks, requiring more stringent emission standards for new and existing ocean-going vessels and harbor craft, increasing the use of renewable energy, and implementing concurrent emission reduction technologies for criteria pollutants and greenhouse gas pollutants. The AQMP also forwarded to the CARB and the USEPA a list of more than 30 specific measures for consideration to further reduce emissions from on- and off-road mobile sources and consumer products. The AQMP identifies 31 stationary and 30 mobile source air pollution control measures to be adopted by the SCAQMD to further reduce emissions from businesses, industries, and paints. It also identifies measures to be adopted by the CARB and the USEPA to further reduce pollution from cars, trucks, construction equipment, aircraft, ships, and consumer products.

SCAQMD Rules

The City will be required comply with applicable SCAQMD rules and regulations.

SCAQMD Rule 403 includes a menu of fugitive dust control measures to which the proposed project must adhere, including, but not limited to:

- Active construction areas shall be watered at least three times daily.
- All haul trucks shall be covered or shall maintain at least two feet of freeboard.
- All unpaved parking or staging areas shall be watered four times daily.

- Site access points shall be swept or washed within 30 minutes of any visible dirt deposition on any public roadway.
- On-site stockpiles of debris, dirt, or other dusty material shall be covered or watered three times daily.
- Operations on any unpaved surface shall be suspended if winds exceed 25 miles per hour.
- Any cleared area that is to remain inactive for more than 96 hours after clearing shall be stabilized.

Rule 431.2 limits the sulfur content in liquid fuels and prohibits the purchase or sale of fuels that do not comply with this rule. Rule 1113 limits the volatile organic compound (VOC) content of architectural coatings by providing numeric standards for VOC concentrations per volume of coating. The applicability of this rule includes any person who applies or solicits the application of any architectural coatings used within the SCAQMD. Rule 1186 lists maintenance guidelines for paved and unpaved public roads, with a goal of reducing the amount of particulate matter generated as a result of vehicular travel on public roads. Rule 1186.1 further stipulates that any street sweepers used in compliance with Rule 1186 be fueled by alternative fuel or less-polluting sweepers shall be obtained.

In addition, the project would be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Rule 402 states that "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

County of Riverside/City of Lake Elsinore

At the local level, air quality conditions are managed through the City's and County's land use and development planning practices/regulations. Land use and development must generally comply with the SCAQMD's AQMP and other air quality rules and regulations. Implementation of the AQMP's strategies requires a cooperative partnership of governmental agencies at the federal, state, regional, and local level. Local governments (cities and counties) are responsible in the support of the plan through participation in voluntary programs and also are responsible for implementing several plan measures. Examples of the City's responsibilities to AQMP Control Measures are listed in **Table 3.6-7, City Responsibility for AQMP Control Measures**, below.

Table 3.6-7, City Responsibility for AQMP Control Measures

CONTROL MEASURE	CONTROL MEASURE NAME
MCS-01	Facility Modernization (NO_x, VOC, and $PM_{2.5}$)
MCS-03	Energy Efficiency and Conservation (All Pollutants)
MCS-04	Emissions Reduction from Green Waste Composting (VOC, $PM_{2.5}$)
CMB-03	Further NO_x Reduction from Space Heaters (NO_x)
EGM-01	Emission Reductions from New or Redevelopment Projects (NO_x, VOC, $PM_{2.5}$)
Source: SCAQMD Air Quality Management Plan 2007.	

In addition to their mandatory compliance with the AQMP regulations, local governments have the authority to control or mitigate air pollution locally through the establishment and enforcement of ordinances and general plan policies. A new proposed control measure, Emission Growth Management, addresses emission reduction from new or redevelopment projects. Since all new development projects will evaluate significant air emissions pursuant to CEQA, the SCAQMD will encourage developers and local agencies to participate in a mitigation program. The purpose of this new proposed control measure is two-fold: (1) compliance with the "all feasible measures" requirement of the state law, and (2) capturing emission reduction opportunities during project development phase. The SCAQMD has convened a working group made up of stakeholders from industry, local governments, and community representatives. The goal of the working group meetings is to develop a plan that contains a control measure, which will establish criteria for new or redevelopment projects and will involve the selection of mitigation measures from a menu of technically feasible mitigation options.

3.6.4 GENERAL PLAN UPDATE GOALS AND POLICIES

The City of Lake Elsinore General Plan Update addresses Air Quality in Chapter 3.0 (Public Safety and Welfare). The air quality goals, policies and implementation programs are listed in **Table 3.6-8, General Plan Air Quality Goals, Policies and Implementation Programs**. The intent of these goals, policies and implementation programs is to improve regional air quality.

Table 3.6-8, General Plan Air Quality Goals, Policies and Implementation Programs

GENERAL PLAN GOALS, POLICIES AND IMPLEMENTATION PROGRAMS
Chapter 2.0 – Community Form (Section 2.4 - Circulation)
Goal 6 Optimize the efficiency and safety of the transportation system within the City of Lake Elsinore.
Policy 6.4 Maintain the system of bike lanes and multi use trails throughout the City. Encourage the implementation of the network of Class I, II, and III bike lanes on all development projects through construction of the facility as described in the Bike Lane Master Plan and/or the Trails Master Plan.
Chapter 2.0 - Community Form (Section 2.5 – Growth Management)
Goal 7 Maintain orderly, efficient patterns of growth that enhance the quality of life for the residents of Lake Elsinore.
Policy 7.1 Encourage mixed-use developments to reduce public service costs and environmental impacts through compatible land use relationships, and efficient circulation and open space systems.
Implementation Program As part of the project review and the CEQA processes, the City shall evaluate growth impacts from individual and cumulative projects to determine their effect on quality of life within the City.
Chapter 3.0 - Public Safety and Welfare (Section 3.2 – Air Quality)
Goal 1 Continue to coordinate with the Air Quality Management District and the City's Building Department to reduce the amount of fugitive dust that is emitted into the atmosphere from unpaved areas, parking lots, and construction sites.
Policy 1.1 Continue to implement requirements identified in the National Pollutant Discharge Elimination System (NPDES).
Implementation Program The City shall continue to condition projects to comply with the South Coast Air Quality Management District rules and regulations
Goal 2 Work with regional and state governments to develop effective mitigation measures to improve air quality.
Policy 2.1 Support the SCAQMD in its development of improved ambient air quality monitoring capabilities and establishment of standards, thresholds, and rules to address, and where necessary mitigate, the air quality impacts of new development.
Policy 2.2 Support programs that educate the public about regional air quality issues, opportunities, and solutions.
Policy 2.3 Evaluate the purchase of alternative fuel vehicles for official City vehicles.
Implementation Program The City shall coordinate with the South Coast Air Quality Management District regarding effective methods for improving local air quality.
Chapter 4.0 - Resource Protection and Preservation (Section 4.9 – Sustainable Environment)
Policy 14.2 Measures shall be established that aim to reduce emissions generated from City uses, community uses (community actions) and new development (City discretionary actions).

There are no special air quality policies in any of the District Plans.

3.6.5 SIGNIFICANCE THRESHOLDS

The City of Lake Elsinore has not established local CEQA significance thresholds as described in Section 15064.7 of the State CEQA Guidelines. However, Appendix G of the State CEQA Guidelines indicates that impacts to air quality may be considered potentially significant if the project would:

- conflict or obstruction of implementation of the applicable air quality plan.
- violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- expose sensitive receptors to substantial pollutant concentrations.
- create objectionable odors affecting a substantial number of people.

Appendix G of the State CEQA Guidelines states that, where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to assess the foregoing criteria. The SCAQMD has established air pollutant emission thresholds to assist lead agencies in determining whether the construction or operation of a project results in significant impacts. If the lead agency finds that a project has the potential to exceed these thresholds, the project is considered to have a significant impact on air quality. **Table 3.6-9, SCAQMD Air Quality Significance Thresholds**, summarizes the thresholds of significance established by the SCAQMD that are used in this analysis to determine the potential for impacts on air quality.

Table 3.6-9, SCAQMD Air Quality Significance Thresholds

MASS DAILY THRESHOLDS		
POLLUTANT	**CONSTRUCTION**	**OPERATION**
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
TOXIC AIR CONTAMINANTS (TACS) AND ODOR THRESHOLDS		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥10 in 1 million Cancer Burden > 0.5 excess cancer cases (in acres ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO2eq for industrial projects	
AMBIENT AIR QUALITY FOR CRITERIA POLLUTANTS[a]		
NO_2 1-hour average Annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM_{10} 24-hour average Annual average	10.4 µg/m³ (construction)[b] & 2.5 µg/m³ (operation) 1.0 µg/m³	
$PM_{2.5}$ 24-hour average	10.4 µg/m³ (construction)[b] & 2.5 µg/m³ (operation)	
SO2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate		
24-hour average	25 µg/m³ (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-month average Quarterly average	1.5 µg/m³ (state) 0.15 µg/m³ (federal) 1.5 µg/m³ (state)	

[a] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
[b] Ambient air quality threshold based on SCAQMD Rule 403.
lbs/day = pounds per day.
ppm = parts per million.
µg/m3 = microgram per cubic meter.
≥ = greater than or equal to.
Source: *SCAQMD Air Quality Significance Thresholds*, March 2011 (http://www.aqmd.gov/ceqa/handbook/signthres.pdf.)

3.6.6 IMPACT ANALYSIS

METHODOLOGY

Implementation of the proposed project would result in construction and operational air quality impacts. Construction-related impacts cannot be quantified without knowing the specifics regarding individual development projects in terms of their scale, duration, and proximity to sensitive receptors; therefore, such impacts are discussed in general terms in this PEIR. Operational impacts of general plan buildout would be dominated by vehicular emissions, but would also include any stationary sources such as factories, other direct industrial generators, and common emitters associated with residential and commercial development such as natural gas usage, fireplaces, landscaping activities, consumer product usage, and application of architectural coatings. Stationary-source emissions from factories and similar major emitters also cannot be quantified without specific knowledge of their scale and location; therefore, such impacts are also discussed in general terms in this PEIR. Computer modeling can provide estimates of emissions based on the acreage of certain types of land uses contained in the GPU. The proposed Land Use Plan was reviewed and the California Emissions Estimator Model (CalEEMod) Version 2011.1.1 software was used to estimate operational air quality impacts commonly associated with the types of land uses proposed by the Land Use Plan. The results of the CalEEMod modeling are included as Appendix F to this document.

Threshold: Would the project conflict or obstruction of implementation of the applicable air quality plan.

Threshold: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation.

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

Analysis

Construction-Related Emissions

New development and increased growth that would be accommodated over the next 20 years under the GPU would result in construction activity that would cause an increase in temporary construction-related emissions (particulate matter, CO, NOx, SO_2, and VOCs) by the operation of construction equipment. Fugitive dust (PM10) would be emitted by activities that disturb the ground, such as grading and excavation, road construction, and building construction. These emissions could result in temporary or intermittent health and nuisance-type impacts in the immediate vicinity of individual construction sites.

The proposed GPU identifies the future land uses planned for the City and its SOI, but does not identify specific development proposals that will implement the proposed Land Use Plan.

Inasmuch as development project-related air quality impacts cannot be quantified without knowing the specifics regarding individual development projects in terms of their scale, duration and proximity to sensitive receptors; construction-related air quality impacts at any point in the future would be speculative and cannot be accurately determined as part of this PEIR. Information regarding the impacts associated with specific projects, including soil types and the locations of sensitive receptors, would need to be analyzed as individual development plans are designed. Although air emissions impacts associated with individual construction projects are temporary and short-term in nature but they can be considered potentially significant depending on their scale and duration.

Construction emissions would not directly obstruct implementation of the AQMP, but construction projects associated with implementation of the proposed Land Use Plan have the potential to exceed emissions thresholds established by the SCAQMD. Exceeding these thresholds would be a significant air quality impact. Implementation of individual projects in accordance with the Land Use Plan could result in inconsistency with the AQMP.

Construction projects associated with implementation of the proposed project would also emit O_3 and particulate matter, for which the SCAB is a nonattainment area. Excessive emissions of these pollutants would be considered a significant impact. Therefore, implementation of individual projects anticipated in accordance with the proposed Land Use Plan could result in potentially significant short-term impacts associated with construction emissions and inconsistency with SCAQMD thresholds.

Operational Emissions

The proposed GPU Land Use Plan (**Figure 2.0-4, Land Use Plan**) and the General Plan 2030 Land Use Summary (**Table 2.0-2**) set forth the proposed development level at project buildout. The development shown in the proposed Land Use Plan will generate additional regional area- and mobile-source emissions over time from both stationary sources and mobile sources. Operational and area source emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2011.1.1 software, which provides a methodology for estimating emissions from land use projects. Operational emissions refer to on-road motor vehicle emissions from project buildout. Area-source emissions include emissions from the use of natural gas, fireplaces, and consumer products.

Table 3.6-10, General Plan Buildout (2030) Daily Air Pollutant Emissions Estimates, below, presents summer, winter and annual estimates of daily (pounds per day) unmitigated emissions resulting from buildout of the GPU (including existing and projected development), as determined by application of land use projections in the CalEEMod model. These estimates consider vehicular operations and other emissions typical of residential, commercial, and industrial development but do not consider major industrial emitters (e.g., factory smoke stacks) that cannot be quantified without specific information regarding scale and location.

Table 3.6-10, General Plan Buildout (2030) Daily Air Pollutant Emissions Estimates

EMISSION SOURCE	POLLUTANT					
	ROG	NO_x	CO	SO_2	PM_{10} TOTAL	$PM_{2.5}$ TOTAL
Summer Emissions (Lbs/Day)						
Area Sources	15,007.00	565.96	40,159.69	77.95	5,171.07	5,169.91
Energy Sources (Natural Gas)	108.15	932.15	451.40	5.90	74.72	74.72
Operational (Mobile Sources)	4,876.05	12,205.50	43,395.59	150.17	16,207.88	872.18
Summer Emission Totals	19,991.20	13,703.61	84,006.68	234.02	21,453.67	6,116.81
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Winter Emissions(Lbs/Day)						
Area Sources	15,007.00	565.96	40,159.69	77.95	5,171.07	5,169.91
Energy Sources (Natural Gas)	108.15	932.15	451.40	5.90	74.72	74.72
Operational (Mobile Sources)	4,812.74	12,199.10	41,047.37	136.18	16,211.30	875.59
Winter Emission Totals	19,927.89	13,697.21	81,658.46	220.03	21,457.09	6,120.22
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Annual Emissions (Tons/Year)						
Area Sources	1,177.12	24.96	2,080.75	1.05	103.48	103.44
Energy Sources (Natural Gas)	19.74	170.12	82.38	1.08	13.64	13.64
Operational (Mobile Sources)	732.78	1,932.49	6,670.88	22.50	2,378.42	140.07
Annual Emission Totals	1,929.64	2,127.57	8,834.01	24.63	2,495.54	257.15
SCAQMD Threshold	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Threshold Exceeded?	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

EMISSION SOURCE	POLLUTANT					
	ROG	NO_x	CO	SO_2	PM_{10} TOTAL	$PM_{2.5}$ TOTAL
ROG = reactive organic gases. NO_x = oxides of nitrogen. CO = carbon monoxide. SO_2 = sulfur dioxide. PM_{10} = particulate matter less than 10 microns in diameter. N/A = Not Applicable (As shown on **Table 3.6-9**, SCAQMD has not established an annual thresholds of significance for operational emissions.)						

As shown in the **Table 3.6-10**, GPU buildout would drastically exceed project-level emissions thresholds established by the SCAQMD. The discrepancy between thresholds and estimated emissions are somewhat misleading, however, as the thresholds are intended to identify individual projects that emit excessive amounts of regulated pollutants, and the GPU is a much larger endeavor than a stand-alone development project. Nevertheless, the estimates have been presented for informational purposes.

The 2007 AQMP established a program to reduce the SCAB's emissions based on 2004 SCAG population projections. As discussed in Section 3.1 (Land Use and Planning) and Section 3.13 (Population and Housing) of this PEIR, the GPU would accommodate a population increase that surpasses current SCAG projections. The GPU would obstruct implementation of the AQMP by not contributing to its goals of regional reductions of air pollutant emissions in the region, and it would conflict with the AQMP in its inconsistency with AQMP projections for pollutant emissions. Control measures in the AQMP include: promotion of lighter color roofing and road materials; requiring clean fuels, supporting alternative fuels, and reducing petroleum dependency; pursuit of long-term advanced technologies measures; process modifications and improvements; best management practices; and market incentives. However, no mitigation is available that would make the GPU consistent with the AQMP and reduce this impact to a less-than-significant level. This obstruction and conflict are a significant air quality impact that cannot be mitigated through implementation of the air quality–related measures set forth in the GPU.

Non-vehicular operational emissions resulting from activities associated with residential and nonresidential development anticipated under the GPU would incrementally add to total air emissions. Implementation of the policies set forth in the GPU would reduce operational emissions impacts associated with future development in the City; however, considering that the region is in federal and state nonattainment status for certain criteria pollutants, such policies do not ensure that future development and associated emissions will not continue to contribute to regional nonattainment status for these pollutants. As a result, the contribution of development and associated operational emissions anticipated with buildout of the GPU to

violation of state and federal ambient air quality standards would be a significant impact on air quality.

The City must coordinate with the SCAQMD to make sure that their population and development projects associated with the GPU are incorporated into the 2007 AQMP to ensure proper planning of air quality management necessities for the region's future.

Buildout of the GPU would also result in emission of pollutants for which the SCAB is in nonattainment of federal and/or state standards, as discussed below.

Carbon Monoxide Impacts

New development anticipated under the GPU would increase traffic in the City, its SOI and the region overall. Increased traffic, lower average speeds, and increased idling times can lead to an increase in local CO concentrations. On a regional level, CO emissions are not found in substantial concentrations. Currently, CO levels are in attainment under state standards in western Riverside County and identified as being under serious maintenance under federal standards (See **Table 3.6-2**).

The goals, policies and implementation programs contained within the proposed GPU, including those listed in **Table 3.6-8** and in **Table 3.4-5, District Plan Transportation and Circulation Goals, Policies and Implementation Programs,** include measures that will reduce CO emissions, including the reduction of vehicle trips through compatible land use planning, encouragement of alternative transportation methods, and improvement of traffic infrastructure to increase efficiency through coordination with regional and state governments. Future development projects in the City will be evaluated for conformance with the GPU policies related to air quality.

The GPU proposes development of many varieties that would bring more residents, employees, and visitors to the City. As a result, traffic would continue to increase and remain the major source of CO for Lake Elsinore. (Traffic impacts are discussed in Section 3.4 of this PEIR.) Development in the City would contribute CO emissions to the SCAB, which is in serious maintenance under federal standards for that pollutant.

Implementation of the GPU policies related to air quality do not ensure that increased traffic and operational emissions associated with buildout of the General Plan would not contribute to future nonattainment of federal and state standards for CO. Therefore the impact of buildout of the GPU related to increased operational CO emissions is considered to be significant and not fully mitigated.

However, as discussed in Section 3.4, implementation of the GPU would lead to progressive improvements to the circulation system such that no intersections would operate at an unacceptable level. As such, the project would facilitate the elimination of CO hot spots by improving intersections where substantial traffic congestion currently occurs.

Control measures in the AQMP include: truck stop electrification; natural gas fuel specifications; emission reductions from in-use off-road vehicles and equipment; expansion of carpool lanes, rail track, express busways, park & ride lots, bus stations, and bicycle and pedestrian facilities; require clean fuels, support alternative fuels, and reduce petroleum dependency; pursue long-term advanced technology measures; economic incentive programs; and mitigation fee programs for federal sources. These measures would reduce emissions, but no mitigation is available that would reduce this impact to a less-than-significant level. Nevertheless, all applicants for future development shall comply with AQMP control measures so as to reduce this impact to the greatest extent possible.

Ozone Impacts

Additional development under the GPU would contribute to regional growth and increase O_3 concentrations in the SCAB. Emission sources would increase with additional development. The emission sources from anticipated development by the GPU would include stationary sources, consumer products, and mobile sources. The emissions associated with mobile sources would be attributable to a population increase, causing increased traffic within the City limits and trips originating outside the City limits. The additional vehicles would emit O_3 precursors and would incrementally add to the O_3 concentration in the region.

The goals, policies and implementation programs contained within the proposed GPU, including those listed in **Table 3.6-8** and in **Table 3.4-5, District Plan Transportation and Circulation Goals, Policies and Implementation Programs,** include measures that will reduce emissions that could lead to increased O_3 concentrations. These measures include cooperating with regional and state governments to develop mitigation measures region-wide, and reducing air quality emissions from future development.

The policies would reduce the impact of implementation of the GPU in association with the future development process. However, the regional and cumulative impacts on O_3 concentrations related to conflicts or obstruction of the applicable air quality plan, violation of air quality standards set forth by the SCAQMD AQMP, and contributions to a cumulatively considerable net increase of a criteria pollutant in a nonattainment region would be considered significant.

Control measures in the AQMP for CO emissions may apply to O_3 and include: truck stop electrification; natural gas fuel specifications; emission reductions from in-use off-road vehicles and equipment; expansion of carpool lanes, rail track, express busways, park & ride lots, bus stations, and bicycle and pedestrian facilities; require clean fuels, support alternative fuels, and reduce petroleum dependency; pursue long-term advanced technology measures; economic incentive programs; and mitigation fee programs for federal sources. Even though these measures would reduce emissions, no mitigation is available that would reduce this impact to a less-than-significant level. Nevertheless, all applicants for future development shall comply with AQMP control measures so as to reduce this impact to the greatest extent possible.

Particulate Matter (PM) Emissions Impacts

Particulate matter is commonly released into the atmosphere from ground disturbance, such as fugitive dust from paved and unpaved roads, and direct emissions, such as from factories and internal combustion engines. New development under the GPU would contribute to an increase in particulate matter emissions from such activities. Construction activities and an increase in the number of vehicles and trips in the City are potential sources that would contribute to the increase in particulate matter emissions.

Western Riverside County is in nonattainment for $PM_{2.5}$ and PM_{10} under both federal and state ambient air quality standards. Both types of particulate matter are considered to be both localized pollutants and regional pollutants. The policies and implementation program under the Public Safety and Welfare Chapter, Air Quality Section, Goal 1 of the GPU are designed to contribute to decrease particulate matter emissions through several methods. The policies under Goal 1 result in decreased concentrations of particulate matter by limiting fugitive dust and other construction-related emissions as sources. The policies under Goal 2 of the Public Safety and Welfare Chapter, Air Quality Section, would result in the reduction of concentrations of particulate matter by working with regional and state governments to develop effective mitigation measures to improve air quality.

The policies would reduce the impact of implementation of the GPU in association with the future development process. However, the regional and cumulative impacts on particulate matter concentrations related to conflicts or obstruction of the applicable air quality plan, violation of air quality standards set forth by the SCAQMD AQMP, and contributions to a cumulatively considerable net increase of a criteria pollutant in a nonattainment region would be considered significant.

Control measures in the AQMP include: emission reductions from petroleum restaurant operations, fugitive dust sources, wood-burning fireplaces and stoves, in-use off-road vehicles and equipment; road dust suppression; watering or revegetation of disturbed surface areas; chemical stabilization of unpaved areas; track-out prevention; reduced vehicular speeds on unpaved roads; economic incentive programs; and mitigation fee programs for federal sources. Even though these measures would reduce emissions, no mitigation is available that would reduce this impact to a less-than-significant level. Nevertheless, all applicants for future development shall comply with AQMP control measures so as to reduce this impact to the greatest extent possible.

Other Criteria Air Pollutant Impacts

Other criteria pollutants such as NOx, NO_2, SO_2, sulfates, lead, and H_2S could increase in concentration with new development under the GPU. Concentrations could increase because of the increase in vehicles and vehicle trips and the potential increase in commercial and industrial activity. The goals, policies and implementation programs contained within the proposed GPU, including those listed in **Table 3.6-8** and in **Table 3.4-5, District Plan Transportation and**

Circulation Goals, Policies and Implementation Programs, include measures that will decrease emissions that could contain criteria pollutants. Such measures include: land use and transportation planning principles, agency cooperation to develop mitigation measures, limiting emissions during construction and conservation practices to decrease emissions overall. While these criteria pollutants are in primary maintenance or attainment (or the status is unclassified) with state or federal standards, the potential to increase concentrations exists with the new development under the GPU.

The policies would reduce the impact of implementation of the GPU in association with the future development process. However, the regional and cumulative impacts on other criteria pollutants concentrations related to conflicts or obstruction of the applicable air quality plan, violation of air quality standards set forth by the SCAQMD AQMP, and contributions to a cumulatively considerable net increase of a criteria pollutant in a nonattainment region would be considered significant.

Control measures for NOx emissions in the AQMP include: truck stop electrification; natural gas fuel specifications; emission reductions from in-use off-road vehicles and equipment; expansion of carpool lanes, rail track, express busways, park & ride lots, bus stations, and bicycle and pedestrian facilities; require clean fuels, support alternative fuels, and reduce petroleum dependency; pursue long-term advanced technology measures; economic incentive programs; and mitigation fee programs for federal sources.

Even though these measures would reduce emissions, no mitigation is available that would reduce this impact to a less-than-significant level. Nevertheless, all applicants for future development shall comply with AQMP control measures so as to reduce this impact to the greatest extent possible.

Toxic Air Contaminants (TACs) and Volatile Organic Compounds (VOCs) Impacts

New development under the GPU could result in an increase in emissions sources of TACs and VOCs in residential, commercial, industrial, and public institutional developments. The goals, policies and implementation programs contained within the proposed GPU, including those listed in **Table 3.6-8** and in **Table 3.4-5, District Plan Transportation and Circulation Goals, Policies and Implementation Programs,** include measures to decrease the number of vehicles and trips to reduce emissions, such as diesel particulate matter, decrease construction-related particulate matter emissions, encourage agency participation for air pollution mitigation, and reduce emissions through energy efficiency.

The policies would reduce the impact of implementation of the GPU in association with the future development process. However, the regional and cumulative impacts on TAC and VOC concentrations related to conflicts or obstruction of the applicable air quality plan and violation of air quality standards set forth by the SCAQMD AQMP would be considered significant.

The AQMP does not list specific measures to prevent air quality impacts from TACs. The policies in the GPU mitigate the impacts of TACs. The measures in the AQMP for VOCs may apply to TACs.

Control measures in the AQMP include: emission reductions from architectural coatings and cleanup solvents, industrial process operations, fugitive emission sources, composting, in-use off-road vehicles and equipment; and emission charges of $5,000 per ton of VOC for stationary sources emitting more than 10 tons per year. Even though these measures would reduce emissions, no mitigation is available that would reduce this impact to a less-than-significant level. Nevertheless, all applicants for future development shall comply with AQMP control measures so as to reduce this impact to the greatest extent possible.

District Plans

Impacts on air quality are a local issue for the City of Lake Elsinore and a regional issue for SCAB. The land uses of each district would contribute to the overall effects that the GPU would have on air quality; however, determining each district's potential impacts at buildout cannot be measured because the monitoring stations cannot differentiate pollutant concentrations by district. Some land use designations can be assumed to contribute certain pollutants.

Commercial and industrial land uses can be assumed to emit air pollutants based on industrial processes and increased traffic volumes in these areas. The districts that have commercial and industrial land use designations include Riverview, Ballpark, Historic, Lake Elsinore Hills, and Business. The policies for each District Plan include measures to reduce air pollution impacts from transportation/circulation. Emissions from industrial land uses are monitored and regulated by the SCAQMD.

Interstate 15 and its interchanges are areas of high vehicular activity that can contribute to high pollutant emissions. I-15 could affect sensitive receptors and land uses in the districts adjacent to the freeway. These districts are Northwest Sphere, Alberhill, North Central Sphere, Business, Historic Downtown, Lake Elsinore Hills, and Ballpark. The policies in these district plans include transportation/circulation measures to reduce emissions, and to reduce impacts on sensitive receptors through the use of buffers and design standards.

Alberhill District currently has mining operations that would be phased out into residential land uses under the GPU. While development occurs in this area, fugitive dust and particulate matter from previously disturbed soils and construction equipment emissions could affect air quality. Policies under the Public Safety and Welfare Chapter, Air Quality Section, Goal 1 include measures to reduce the amount of fugitive dust from operational activities and to enforce air quality control measures during construction.

The regional and cumulative impacts on CO, NOx, and O_3 concentrations related to conflicts or obstruction of the applicable air quality plan, violation of air quality standards set forth by the SCAQMD AQMP, and contributions to a cumulatively considerable net increase of a criteria pollutant in a nonattainment region would be considered significant.

3rd Street Annexation

The land use designation changes would result in more commercial areas, which could increase traffic emissions. Development proposed in accordance with the Land Use Plan within the 3rd Street Annexation could result in short- and long-term impacts related to air quality that would be considered significant.

Mitigation Measures

Construction Impacts

MM Air Quality 1: Individual projects implemented pursuant to the Land Use Plan will be required to demonstrate their avoidance of significant impacts on air quality from construction activities through implementation of regulatory requirements and the goals and policies set forth in the proposed GPU. Where project-specific analysis determines that air quality standards may be exceeded, the City shall require mitigation measures that will reduce the emissions to the greatest extent practicable.

Operational Emissions

MM Air Quality 2: Individual projects implemented pursuant to the Land Use Plan will be required to demonstrate a reduction in impacts on air quality from operational emissions through implementation of goals and policies listed within the General Plan. Where project-specific analysis determines that air quality standards may be exceeded, the City shall require mitigation measures that will reduce the emissions to the greatest extent practicable. All applicants for future development shall comply with AQMP control measures so as to reduce this impact to the greatest extent possible.

District Plans

MM Air Quality 3: Individual projects implemented pursuant to the Land Use Plan within each District Plan will be required to demonstrate a reduction in impacts on air quality from operational emissions through implementation of the General Plan's goals and policies. Where project-specific analysis determines that air quality standards may be exceeded, the City shall require mitigation measures that will reduce the emissions to the greatest extent practicable. All applicants for future development shall comply with AQMP control measures so as to reduce this impact to the greatest extent possible.

3rd Street Annexation

MM Air Quality 4: Individual projects implemented pursuant to the Land Use Plan within the 3rd Street Annexation will be required to demonstrate a reduction in impacts on air quality from operational emissions through compliance with the General Plan's goals and policies. Where project-specific analysis determines that air quality standards may be exceeded, the City shall require mitigation measures that will reduce the emissions to the greatest extent practicable. All applicants for future development shall comply with AQMP control measures so as to reduce this impact to the greatest extent possible.

Level of Significance

With implementation of GPU goals, policies and implementation measures, potential short-term impacts on air quality associated with construction of projects proposed in accordance with the GPU and Land Use Plan would be less than significant. However, although these measures would reduce operational emissions, no mitigation is available that would reduce this impact to a less-than-significant level.

Threshold: Would the project expose sensitive receptors to substantial pollutant concentrations.

Analysis

Poor air quality affects some individuals more than others. Groups of people that are generally more susceptible to the negative effects of air pollution than the general population are children, the elderly, and people with serious health issues. Locations in which these sensitive groups are found are deemed sensitive land uses, which include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential communities.

New development under the GPU could result in the exposure of sensitive receptors to air pollutants. Commercial land uses are planned in proximity to sensitive receptors such as residential and recreational land uses (see **Figure 2.0-4, Land Use Plan**). The SCAQMD and the CARB monitor most stationary sources of air pollutants that would be associated with commercial and industrial development through the issuance of emissions permits and monitoring of operations. Goals and policies within the GPU would mitigate the potential effects of exposure of sensitive receptors to air pollutants by providing buffers between emissions sources and sensitive receptors and requiring that air quality mitigation measures are incorporated into design features for sensitive receptors.

Development proposed in accordance with the proposed Land Use Plan could result in emissions on sensitive land uses that would be considered potentially significant. The AQMP does not list specific measures to prevent air quality impacts on sensitive land uses.

Mitigation Measures

MM Air Quality 5: Individual projects implemented pursuant to the Land Use Plan will be required to demonstrate avoidance of significant impacts on air quality emissions associated with sensitive land uses. Where project-specific analysis determines that air quality emissions will adversely affect sensitive receptors, the City shall require mitigation measures that will reduce the emissions to the greatest extent practicable.

Level of Significance

Even with the assessment of implementing development projects for potential air quality impacts upon sensitive receptors, implementation of mitigation measure MM Air Quality 5 and compliance with the goals, policies and implementation programs of the proposed GPU, impacts related to exposure of sensitive receptors to substantial pollutant concentrations may

not be reduced to below the level of significance. Therefore, this impact would be considered to be significant.

Threshold: Would the project create objectionable odors affecting a substantial number of people.

Analysis

Quantification of the potential of the proposed project to create objectionable odors cannot be determined because odor sensation is a personal response. Not all people are equally sensitive, and they do not always agree about the severity of an odor once it is detected. Precise documentation of the strength and nature of an odor is generally unavailable because of the large number of gases involved and their effects on each other. However, the proposed GPU will allow the types and quantity of land uses that have the potential to create objectionable odors. For example, the proposed locations of commercial and industrial land uses provided by the GPU in proximity to sensitive receptors such as residential uses could result in incompatibility issues related to odors.

As development proposals occur, project-level analysis of odor impacts will be addressed. Additionally, future industrial and commercial development which implements the proposed Land Use Plan that could generate potentially objectionable odors will be subject to SCAQMD Rule 402 governing odor emissions. Any objectionable odor may be reported to the SCAQMD, which resolves complaints through investigation. A Notice to Comply/Notice of Violation will be issued when necessary.

Mitigation Measures

MM Air Quality 6: Through the City's project review process, individual projects implemented pursuant to the Land Use Plan will be evaluated to determine their potential for creating objectionable odors that would potentially impact a substantial number of persons.. Where project-specific analysis determines that objectionable odors will occur, the City shall require mitigation measures that will reduce the emissions to the greatest extent practicable.

Level of Significance

Through implementation of mitigation measure MM Air Quality 6, potential impacts associated with objectionable odors will be reduced to less-than-significant levels.

3.6.7 Level of Significance after Mitigation

While the policies set forth in the proposed GPU would mitigate air quality impacts, it is not possible to ensure that they would result in a reduction of emissions impacts based on the current high pollutant concentrations in the region. All future development projects will conduct a project-level air quality analysis with performance objectives to determine impacts and mitigation.

The policies set forth in the GPU would decrease impacts regarding construction-related air quality emissions and odors to a level below significance. Impacts of emissions of CO, O_3, particulate matter, other criteria pollutants, TACs, and VOCs, would be alleviated by the policies set forth in the GPU; however, existing and cumulative impacts would remain significant and unavoidable.

3.6.8 REFERENCES

In addition to other reference documents, the following references were used in the preparation of this section of the EIR:

California Air Resources Board, Area Designations Maps/State and National Web Site. (Available at http://www.arb.ca.gov/desig/adm/adm.htm; accessed on August 9, 2011.)

California Air Resources Board, *California Ambient Air Quality Standards (CAAQA) Web Site*. (Available at http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm; accessed on August 10, 2011.)

California Air Resources Board, Resolution No. 07-28 (Adopting 2007 State Strategy), September 27, 2007. (Available at http://www.arb.ca.gov/planning/sip/2007sip/state_strategy_reso_07-28.pdf; accessed on August 9, 2011.)

California Air Resources Board, *The California Almanac of Emissions and Air Quality*, 2009 Edition. (Available at http://www.arb.ca.gov/aqd/almanac/almanac.htm; accessed on August 9, 2011.

City of Lake Elsinore, General Plan Background Reports, prepared by Mooney•Jones & Stokes, January 2006. (Appendix B)

South Coast Air Quality Management District, *Air Quality Data*. (Available at www.aqmd.gov/smog/historicaldata.htm; accessed on June 10, 2011.)

South Coast Air Quality Management District, *Air Quality Handbook*, April 1993. (Available at South Coast Air Quality Management District, 21865 East Copley Drive, Diamond Bar, CA 91765-4182. (SCAQMD 1993)

South Coast Air Quality Management District, *Final 2007 Air Quality Management Plan*, June 2007. (Available at http://www.aqmd.gov/aqmp/07aqmp/index.html; accessed on August 5, 2011.)

South Coast Air Quality Management District, *SCAQMD Air Quality Significance Thresholds*, March 2011. (Available at http://www.aqmd.gov/ceqa/handbook/signthres.pdf; accessed on August 5, 2011.)

United States Environmental Protection Agency, *The Green Book Nonattainment Areas for Criteria Pollutants*. (Available at http://www.epa.gov/oaqps001/greenbk/index.html; accessed on August 9, 2011.)

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