

APPENDIX 3.0
AIR QUALITY ANALYSIS



FINAL - 02-02-2022

Clinton Keith Marketplace

AIR QUALITY IMPACT ANALYSIS

CITY OF WILDOMAR

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LIST OF ABBREVIATED TERMS

%	Percent
°F	Degrees Fahrenheit
(1)	Reference
µg/m ³	Microgram per Cubic Meter
AB 2595	California Clean Air Act
AQ	Air Quality
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
BACM	Best Available Control Measures
BAAQMD	Bay Area Air Quality Management District
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Wildomar
CO	Carbon Monoxide
COHb	Carboxyhemoglobin
CR	Commercial Retail
EIR	Environmental Impact Reports
EMFAC	EMissions FACtor Model
EPA	Environmental Protection Agency
g/L	Grams per Liter
GHG	Greenhouse Gas
H ₂ S	Hydrogen Sulfide
HI	Hazard Index
hp	Horsepower
I-15	Interstate 15
lbs/day	Pounds Per Day

LST	Localized Significance Threshold
LST METHODOLOGY	Final Localized Significance Threshold Methodology
MFR	Multiple-Family Residential
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measure
mph	Miles Per Hour
N ₂	Nitrogen
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NB	Northbound
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
O ₂	Oxygen
O ₃	Ozone
Pb	Lead
PM	Particulate Matter
PM ₁₀	Particulate Matter 10 microns in diameter or less
PM _{2.5}	Particulate Matter 2.5 microns in diameter or less
ppm	Parts Per Million
Project	Clinton Keith Marketplace
Rd.	Road
RECLAIM	Regional Clean Air Incentives Market
ROG	Reactive Organic Gases
RTP/SCS	Regional Transportation Plan/ Sustainable Communities Strategy
Rule 403	Fugitive Dust
Rule 1113	Architectural Coating
SB	Southbound
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF	Square Feet
SIPs	State Implementation Plans
SO ₂	Sulfur Dioxide
SO ₄	Sulfates
SO _x	Sulfur Oxides
SRA	Source Receptor Area

St.	Street
TIA	Traffic Impact Analysis
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
TSF	Thousand Square Feet
C ₂ H ₃ Cl	Vinyl Chloride
VOC	Volatile Organic Compounds
VPH	Vehicles Per Hour

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Clinton Keith Marketplace Air Quality Impact Analysis* are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	<i>Less Than Significant</i>	<i>n/a</i>
Localized Construction Emissions	3.6	<i>Potentially Significant</i>	<i>Less Than Significant</i>
Regional Operational Emissions	3.5	<i>Less Than Significant</i>	<i>n/a</i>
Localized Operational Emissions	3.7	<i>Less Than Significant</i>	<i>n/a</i>
CO "Hot Spot" Analysis	3.9	<i>Less Than Significant</i>	<i>n/a</i>
Air Quality Management Plan	3.10	<i>Less Than Significant</i>	<i>n/a</i>
Sensitive Receptors	3.11	<i>Less Than Significant</i>	<i>n/a</i>
Odors	3.12	<i>Less Than Significant</i>	<i>n/a</i>
Cumulative Impacts	3.13	<i>Less Than Significant</i>	<i>n/a</i>

ES.2 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any development permits. South Coast Air Quality Management District (SCAQMD) Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings) (2) (3). It should be noted that these Best Available Control Measures (BACMs) are not mitigation as

they are standard regulatory requirements. As such, credit for Rule 403 and Rule 1113 have been taken.

BACM AQ-1

The contractor shall adhere to applicable measures contained in Table 1 of Rule 403 including, but not limited to (2):

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are limited to 15 mph or less.

BACM AQ-2

The following measures shall be incorporated into Project plans and specifications as implementation of SCAQMD Rule 1113 (3):

- Only “Low-Volatile Organic Compounds (VOC)” paints (no more than 50 gram/liter (g/L) of VOC) consistent with SCAQMD Rule 1113 shall be used.

ES.3 CONSTRUCTION-SOURCE MITIGATION

It should be noted that mitigation is not needed to reduce estimated maximum daily construction regional emissions. However, MM AQ-1 would be required to decrease localized emissions.

MM AQ-1

For construction equipment greater than 150 horsepower (>150 hp), the Construction Contractor shall ensure that off-road diesel construction equipment that complies with Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 3 emissions standards and shall ensure that all construction equipment is tuned and maintained in accordance with the manufacturer’s specifications.

ES.4 OPERATIONAL-SOURCE MITIGATION MEASURES

The Project would not exceed regional thresholds of significance established by the SCAQMD during operations. As such, no mitigation is required.

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1 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) prepared by Urban Crossroads, Inc., for the proposed Clinton Keith Marketplace (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the proposed Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

1.1 SITE LOCATION

The proposed Clinton Keith Marketplace Project is generally located on the northwest corner of Hidden Springs Road and Clinton Keith Road in the City of Wildomar as shown on Exhibit 1-A. The Project site is currently vacant. Nearby existing single-family residential homes are located west of the Project site. The Bear Creek Village commercial retail center is located east of the Project site. The City of Wildomar General Plan designates the Project site for commercial retail (CR) land uses. The CR land use designation allows for the development of CR uses at a neighborhood, community and regional level, as well as for professional office and tourist-oriented commercial uses (4).

1.2 PROJECT DESCRIPTION

The Project is to consist of 4,800 square feet of fast food with drive-thru window, 22,000 square foot grocery store, 7,700 square feet of retail shops, 7,600 square foot automotive retail store, 13,000 square foot pharmacy with drive-through window (first floor), 8,000 square feet of professional business/medical office (second floor), 3,590 square foot car wash, and 4,800 square foot restaurant as shown on Exhibit 1-B.

EXHIBIT 1-A: LOCATION MAP

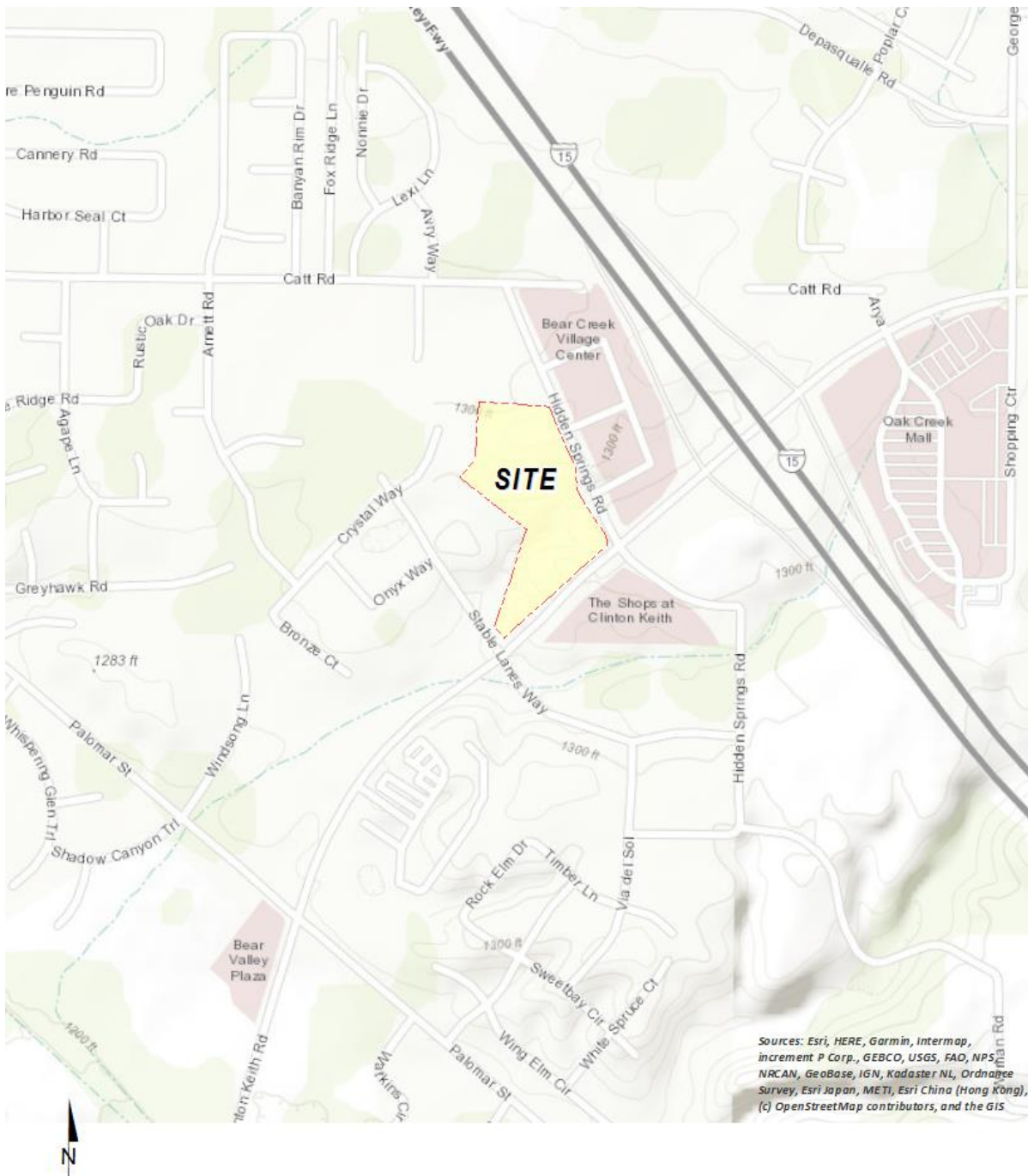
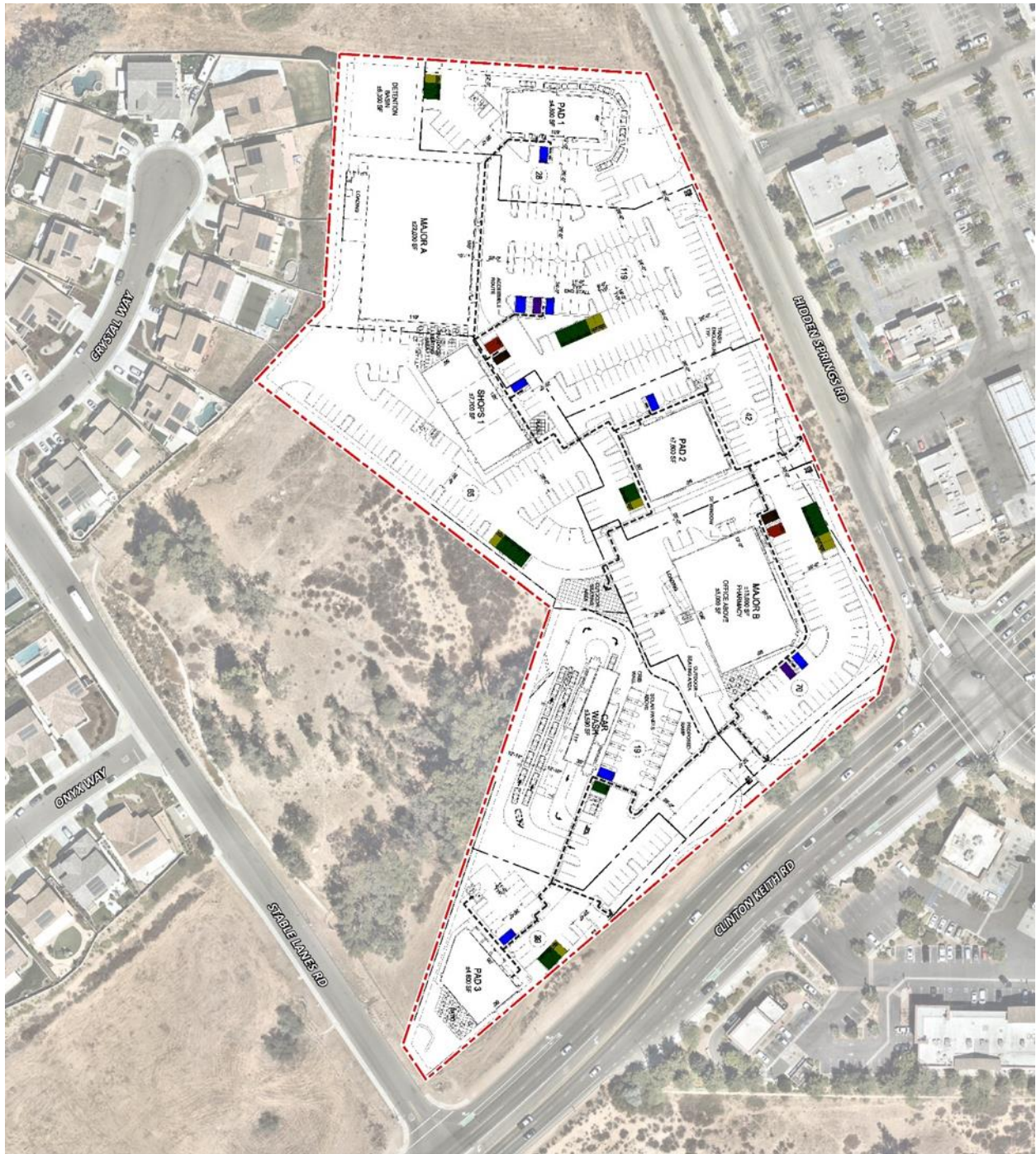


EXHIBIT 1-B: SITE PLAN



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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (5). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO₂) to sulfates (SO₄) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los

Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed “Santa Anas” each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the “Catalina Eddy,” a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_x) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and

low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (6):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O ₃), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O ₂) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O ₂ transport and competing with O ₂ to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O ₂ supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O ₂ deficiency) as seen at high altitudes.

Criteria Pollutant	Description	Sources	Health Effects
SO ₂	SO ₂ is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO ₂ oxidizes in the atmosphere, it forms SO ₄ . Collectively, these pollutants are referred to as sulfur oxides (SO _x).	Coal or oil burning power plants and industries, refineries, diesel engines	<p>A few minutes of exposure to low levels of SO₂ can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO₂. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO₂.</p> <p>Animal studies suggest that despite SO₂ being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.</p> <p>Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO₂ levels. In these studies, efforts to separate the effects of SO₂ from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.</p>

Criteria Pollutant	Description	Sources	Health Effects
NO _x	<p>NO_x consist of nitric oxide (NO), nitrogen dioxide (NO₂) and nitrous oxide (N₂O) and are formed when nitrogen (N₂) combines with O₂. Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. NO_x is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO₂ is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO₂ is the most abundant in the atmosphere. As ambient concentrations of NO₂ are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO₂ than those indicated by regional monitoring station.</p>	<p>Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.</p>	<p>Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO₂ at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO₂ in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.</p> <p>In animals, exposure to levels of NO₂ considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O₃ exposure increases when animals are exposed to a combination of O₃ and NO₂.</p>
O ₃	<p>O₃ is a highly reactive and unstable gas that is formed when VOCs and NO_x, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O₃ concentrations are generally highest during the summer</p>	<p>Formed when reactive organic gases (ROG) and NO_x react in the presence of sunlight. ROG sources include any source</p>	<p>Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O₃ effects. Short-term exposure (lasting for a</p>

Criteria Pollutant	Description	Sources	Health Effects
	months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	<p>few hours) to O₃ at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O₃ levels are associated with increased school absences. In recent years, a correlation between elevated ambient O₃ levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O₃ levels.</p> <p>O₃ exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O₃ may be more toxic than exposure to O₃ alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.</p>
Particulate Matter (PM)	PM ₁₀ : A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. PM pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light	Sources of PM ₁₀ include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO _x , SO _x ,	A consistent correlation between elevated ambient fine PM (PM ₁₀ and PM _{2.5}) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks

Criteria Pollutant	Description	Sources	Health Effects
	<p>and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM₁₀ is considered a criteria air pollutant.</p> <p>PM_{2.5}: A similar air pollutant to PM₁₀ consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO₄ formed from SO₂ release from power plants and industrial facilities and nitrates that are formed from NO_x release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM_{2.5} is a criteria air pollutant.</p>	<p>organics). Incomplete combustion of any fuel.</p> <p>PM_{2.5} comes from fuel combustion in motor vehicles, equipment and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_x, SO_x, organics).</p>	<p>and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer.</p> <p>Daily fluctuations in PM_{2.5} concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to PM.</p> <p>The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM₁₀ and PM_{2.5}.</p>
VOC	<p>VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O₃ to the same extent when exposed to photochemical</p>	<p>Organic chemicals are widely used as ingredients in household products. Paints, varnishes and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic</p>	<p>Breathing VOCs can irritate the eyes, nose and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.</p>

Criteria Pollutant	Description	Sources	Health Effects
	<p>processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O₃, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.</p>	<p>chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.</p>	
ROG	<p>Similar to VOC, ROG are also precursors in forming O₃ and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_x react in the presence of sunlight. ROG are a criteria pollutant since they are a precursor to O₃, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.</p>	<p>Sources similar to VOCs.</p>	<p>Health effects similar to VOCs.</p>
Lead (Pb)	<p>Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid</p>	<p>Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.</p>	<p>Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.</p> <p>Pb poisoning can cause anemia, lethargy, seizures, and death; although it</p>

Criteria Pollutant	Description	Sources	Health Effects
	<p>battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.</p>		<p>appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.</p>
<p>Odor</p>	<p>Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (7).</p>	<p>Odors can come from many sources including animals, human activities, industry, natures, and vehicles.</p>	<p>Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.</p>

2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (8).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May ,4 2016 and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂, PM₁₀, and PM_{2.5} are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the Environmental Protection Agency (EPA) or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (9).

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,8}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM2.5) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

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TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, 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 the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O₃, PM₁₀, PM_{2.5}, NO₂, and SO₂ which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (10). On February 21, 2019, CARB posted the 2018 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (11). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation
O ₃ – 1-hour standard	Nonattainment	--
O ₃ – 8-hour standard	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO ₂	Attainment	Unclassifiable/Attainment
SO ₂	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb ¹	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SCAB
 "--" = The national 1-hour O₃ standard was revoked effective June 15, 2005.

2.7 LOCAL AIR QUALITY

The Project site is located within the Source Receptor Area (SRA) 25. Within SRA 25, the SCAQMD Lake Elsinore monitoring station, located 7.27 miles northwest of the Project site, is the nearest long-term air quality monitoring station for O₃, CO, NO₂, and PM₁₀. The Lake Elsinore monitoring station does not include data for PM_{2.5}. As such, the next nearest monitoring stations will be used. The Saddleback Valley monitoring station, located in SRA 19, is the next nearest monitoring station for PM_{2.5}, and is located approximately 24.38 miles west of the Project site. It should be noted that the Saddleback Valley monitoring stations was utilized in lieu of the Lake Elsinore monitoring station only in instances where data was not available.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O₃, CO, NO₂, PM₁₀, and PM_{2.5} for 2018 through 2020 was obtained from the SCAQMD Air Quality Data Tables (12). Additionally,

¹ The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

data for SO₂ has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO₂ concentrations.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2018-2020

POLLUTANT	STANDARD	YEAR		
		2018	2019	2020
O ₃				
Maximum Federal 1-Hour Concentration (ppm)		0.116	0.108	0.130
Maximum Federal 8-Hour Concentration (ppm)		0.095	0.089	0.100
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	16	4	18
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	30	28	52
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	1.1	1.6	0.9
Maximum Federal 8-Hour Concentration	> 20 ppm	0.8	0.7	0.7
NO ₂				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.041	0.038	0.044
Annual Average		0.009	0.007	0.009
PM ₁₀				
Maximum Federal 24-Hour Concentration (µg/m ³)	> 150 µg/m ³	104	93	84
Annual Federal Arithmetic Mean (µg/m ³)		22.4	18.7	22
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m ³	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m ³	9	5	7
PM _{2.5}				
Maximum Federal 24-Hour Concentration (µg/m ³)	> 35 µg/m ³	20.80	20.80	35
Annual Federal Arithmetic Mean (µg/m ³)		8.31	7.11	8.81
Number of Days Exceeding Federal 24-Hour Standard	> 35 µg/m ³	0	0	0

µg/m³ = Microgram per Cubic Meter

Source: Data for O₃, CO, NO₂, PM₁₀, and PM_{2.5} was obtained from SCAQMD Air Quality Data Tables.

2.8 REGULATORY BACKGROUND

2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O₃, CO, NO_x, SO₂, PM₁₀, and Pb (13). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal

air quality standards, the NAAQS, and specifies future dates for achieving compliance_(14). The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (15) (16). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O₃, NO₂, SO₂, PM₁₀, CO, PM_{2.5}, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O₃ and to adopt a NAAQS for PM_{2.5}. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_x. NO_x is a collective term that includes all forms of NO_x which are emitted as byproducts of the combustion process.

2.8.2 CALIFORNIA REGULATIONS

CARB. The CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO₄, visibility, hydrogen sulfide (H₂S), and vinyl chloride (C₂H₃Cl). However, at this time, H₂S and C₂H₃Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (17) (13).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;

- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROG_s, NO_x, CO and PM₁₀. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

Title 24 Energy Efficiency Standards and California Green Building Standards. California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards which became effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided, they establish a minimum 65% diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official.

Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2020.

The 2019 Title 24 standards will result in less energy use, thereby reducing air pollutant emissions associated with energy consumption in the SCAB and across the State of California. For example, the 2019 Title 24 standards will require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting requirements for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7% less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will use about 53% less energy than homes built under the 2016 standards. Nonresidential buildings (such as the Project) will use approximately 30% less energy due to lighting upgrade requirements (18).

The 2019 CALGreen standards are applicable to the Project and require, among other items (19):

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
 - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
 - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
 - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
 - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building

or within an addition that is project to consume more than 1,000 gal/day (5.303.1.1 and 5.303.1.2).

- Outdoor water use in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.8.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the NAAQS and CAAQs (20). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.10.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard, contribute to an existing or projected air quality violation, or determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine consistency with the applicable AQMP, exposure of sensitive receptors to substantial pollutant concentrations, and the impacts of odors. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. affecting a substantial number of people.

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (21). The SCAQMD's CEQA Air Quality Significance Thresholds (April 2019) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Construction Regional Thresholds	Operational Regional Thresholds
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
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ANALYZE AIR QUALITY

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In June 2021 the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model (CalEEMod) Version 2020.4.0. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation (22). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. CalEEMod output for construction and operational activity are provided in Appendix 3.1.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

Grading Activities

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. This analysis assumes that earthwork activities are expected to require up to 33,000 cubic yards of soil import.

Construction Worker Vehicle Trips

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on information from CalEEMod defaults.

3.4.1 CONSTRUCTION DURATION

It is anticipated that construction would commence in 2022 and will last through 2023. The construction schedule utilized in the analysis, shown in Table 3-2, represents a “worst-case”

analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.² The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA Guidelines.

TABLE 3-2: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	01/29/2022	02/11/2022	10
Grading	02/12/2022	03/11/2022	20
Building Construction	03/12/2022	01/27/2023	230
Paving	01/28/2023	02/24/2023	20
Architectural Coating	02/25/2023	03/24/2023	20

Source: CalEEMod Defaults.

3.4.2 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment and operating hours are based on CalEEMod 2020.4.0 defaults. A detailed summary of construction equipment assumptions by phase is provided at Table 3-3.

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Activity	Equipment	Amount	Hours Per Day
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	3	8
	Excavators	1	8
	Graders	1	8
Building Construction	Rubber Tired Dozers	1	8
	Cranes	1	7
	Tractors/Loaders/Backhoes	3	7
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8

² As shown in the CalEEMod User's Guide Version 2020.4.0, Section 4.3 "Offroad Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	6

Source: In order to account for fugitive dust emissions associated with Site Preparation and Grading activities, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

3.4.1 CONSTRUCTION EMISSIONS SUMMARY

Impacts without Mitigation

CalEEMod calculates maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions without mitigation are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutant.

Impacts with Mitigation

Although mitigation is not needed to reduce estimated maximum daily construction regional emissions, mitigation measures would be required to decrease localized emissions (please refer to the subsequent discussions at “Localized Significance”). Detailed construction model outputs are presented in Appendix 3.1. Implementation of these localized emissions mitigation measures would further reduce already less-than-significant regional emissions as indicated at Table 3-5.

TABLE 3-4 OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITHOUT MITIGATION

Year	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
2022	4.54	60.18	23.55	0.16	24.14	12.37
2023	36.45	16.83	22.85	0.05	2.89	1.27
Winter						
2022	4.54	61.63	22.41	0.16	24.14	12.37
2023	36.45	16.97	21.80	0.05	2.89	1.27
Maximum Daily Emissions	36.45	61.63	23.55	0.16	24.14	12.37
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

lbs/day – Pounds Per Day

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1.

TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITH MITIGATION

Year	Emissions (lbs/day)					
	VOC	NO _x	CO ³	SO _x	PM ₁₀	PM _{2.5}
Summer						
2020	2.23	47.17	30.98	0.16	9.72	5.11
2021	36.46	15.89	23.93	0.05	2.84	1.23
Winter						
2021	2.18	48.62	30.97	0.16	9.72	5.11
2021	36.45	16.03	22.88	0.05	2.84	1.23
Maximum Daily Emissions	36.46	48.62	30.98	0.16	9.72	5.11
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

Source: CalEEMod construction-source (mitigated) emissions are presented in Appendix 3.1.

3 The emission rates for the off-road equipment used during construction (without mitigation) are based on statewide fleet mix from CARB's off-road inventory model per year and HP range (Table 3.4 in Appendix D of the User's Guide). Mitigated (Tiered engine emission factors) (Table 3.5 in Appendix D of the User's Guide) are based on Carl Moyer standards to qualify for a particular tier that may be chosen to mitigate engine emissions. In some instances, the statewide fleet mix average for a particular equipment type, year, and HP may be lower than the engine tier standard generating higher mitigated emissions. (Source: CalEEMod User Tips #38). Therefore, although Table 3-5 indicates an increase in CO emissions after implementation of mitigation, it should be noted that this increase in CO is due to a modified calculation procedure in CalEEMod. For consistency purposes with the CalEEMod outputs, the emissions presented in Table 3-5 reflect the CalEEMod outputs.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions

3.5.1 AREA SOURCE EMISSIONS

Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using CalEEMod.

Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.5.2 ENERGY SOURCE EMISSIONS

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod.

Title 24 Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Nonresidential Buildings was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity. The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020.

3.5.3 MOBILE SOURCE EMISSIONS

Project mobile source air quality impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project-related operational air quality impacts are derived primarily from vehicle trips generated by the Project. Trip characteristics for the proposed Project were obtained from the trip generation assessment (23). Per the trip generation assessment, the Project is anticipated to generate a net total of 4,390 two-way vehicle per day (2,195 trip inbound and 2,195 trips outbound).

Trip Length

Due to the predominately retail nature of the Project (Supermarket, Retail, Fast Food Restaurant with Drive Thru, Car Wash and High-Turnover Sit-Down Restaurant uses, etc.), the Project's location, a substantial amount of residential land uses within a 3-mile radius of the Project site, and Supermarket, Retail, Restaurant, Fast Food Restaurant with Drive Thru, Fast Food Restaurant without Drive Thru, and High-Turnover Sit-Down Restaurant uses located in the project vicinity, an average trip length for customers of 3 miles was used in the assessment as opposed to the 8.4-mile model default trip length value. Additionally, 96% of all trips are assumed to be customer trips, 3% of all trips are assumed to be workers, and 1% of all trips are assumed to be other trips. CalEEMod defaults for trip length and trip purpose were utilized for the Medical Office portion of the Project.

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of brake and tire wear particulates. The emissions estimate for travel on paved roads were calculated using CalEEMod.

3.5.5 OPERATIONAL EMISSIONS SUMMARY

Impacts without Mitigation

As previously stated, CalEEMod calculates maximum daily emissions for summer and winter periods. As such, operational activities for summer and winter scenarios are presented in Table 3-6. Detailed operational model outputs are presented in Appendix 3.1. Project operational-source emissions will not exceed the thresholds of significance for applicable emissions and a less than significant impact would occur.

TABLE 3-6: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Operational Activities – Summer Scenario	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	1.74	3.60E-04	0.04	0.00	1.40E-04	1.40E-04
Energy Source	0.08	0.77	0.65	4.62E-04	0.06	0.06
Mobile Source	16.39	47.07	77.86	0.18	15.71	4.51
Total Maximum Daily Emissions	18.21	47.84	78.55	0.19	15.77	4.57
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Operational Activities – Winter Scenario	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	1.74	3.60E-04	0.04	0.00	1.40E-04	1.40E-04
Energy Source	0.08	0.77	0.65	4.62E-04	0.06	0.06
Mobile Source	14.57	48.23	73.45	0.17	15.71	4.51
Total Maximum Daily Emissions	16.40	48.99	74.14	0.18	15.77	4.57
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

Source: CalEEMod operational-source emissions are presented in Appendix 3.1.

3.6 LOCALIZED SIGNIFICANCE

BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLD (LST) DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (24). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the NAAQS and CAAQS. Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4⁴. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (25).

APPLICABILITY OF LSTs FOR THE PROJECT

For this Project, the appropriate SRA for the LST analysis is Lake Elsinore (SRA 25). LSTs apply to CO, NO₂, PM₁₀, and PM_{2.5}. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- CalEEMod is utilized to determine the maximum daily on-site emissions that will occur during construction activity.
- The SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (26) (27).
- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be compared to CalEEMod outputs.

⁴The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

- If the total acreage disturbed is greater than five acres per day, then LST impacts are appropriately evaluated through dispersion modeling.
- The LST methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

EMISSIONS CONSIDERED

SCAQMD's LST Methodology clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (24)." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

MAXIMUM DAILY DISTURBED-ACREAGE

The "acres disturbed" for analytical purposes are based on specific equipment type for each subcategory of construction activity and the estimated maximum area a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3-7). The equipment-specific grading rates are summarized in the SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* (26) (27). It should be noted that the disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day.

As shown on Table 3-7, the proposed Project's construction activities could actively disturb approximately 3.5 acres per day during site preparation and 2.5 acres per day for grading activities.

TABLE 3-7: MAXIMUM DAILY DISTURBED-ACREAGE

Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Site Preparation	Crawler Tractors	4	0.5	8	2.0
	Rubber Tired Dozers	3	0.5	8	1.5
Total acres disturbed per day during Site Preparation					3.5
Grading	Crawler Tractors	2	0.5	8	1.0
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
Total acres disturbed per day during Grading					2.5

SENSITIVE RECEPTORS

As previously stated, LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest

residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, individuals with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as “sensitive receptors”. These structures typically include residences, hotels, hospitals, etc. as they are also known to be locations where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site (in this case the nearest residential land use) has been used to determine construction and operational air quality impacts for emissions of PM₁₀ and PM_{2.5}, since PM₁₀ and PM_{2.5} thresholds are based on a 24 hour averaging time.

Commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for eight hours or less. The LST Methodology explicitly states that “LSTs based on shorter averaging periods, such as the NO₂ and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours (24).” For purposes of analysis, if an industrial/commercial use is located at a closer distance to the Project site than the nearest residential use, the nearest industrial/commercial use will be utilized to determine construction and operational LST air impacts for emissions of NO₂ and CO an individual could be present at these sites for periods of one to eight hours.

Project-related Sensitive Receptors

Receptors in the Project study area are described below and are shown on Exhibit 3-A.

- R1: Located approximately 631 feet north of the Project site, R1 represents the existing residential homes (35992 Avry Way) north of Catt Road.
- R2: Location R2 represents the existing residential home located roughly 39 feet west of the Project site at 23527 Crystal Way.
- R3: Location R2 represents the existing residential home located roughly 47 feet west of the Project site at 23515 Crystal Way.
- R4: Location R2 represents the existing residential home located roughly 62 feet west of the Project site at 23347 Crystal Way.
- R5: Location R5 represents the existing residential home located roughly 57 feet west of the Project site at 23491 Crystal Way.
- R6: Location R6 represents the existing residential home located roughly 51 feet west of the Project site at 23483 Crystal Way.
- R7: Location R7 represents the existing residential home (23416 Onyx Way) on the west side of Stable Lanes Way approximately 386 feet from the Project site.
- R8: Location R8 represents the existing residential home located roughly 323 feet west of the Project site at 23413 Onyx Way.

EXHIBIT 3-A: SENSITIVE RECEPTOR LOCATIONS



LEGEND:

- Receptor Locations
- Distance from receptor to Project site boundary (in feet)

- R9: Location R9 represents the existing residential homes on the north side of Stable Lanes Way at approximately 639 feet from the Project site.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual and cumulatively significant impact. As such, the nearest receptor to evaluate localized impacts of PM₁₀, PM_{2.5}, NO₂, and CO, is the existing residential home, represented by location R2, which is located approximately 39 feet/12 meters west of the Project. It should be noted that the LST Methodology explicitly states that *"It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters (24)."* As such a 25-meter receptor distance will be used for evaluation of localized NO₂, CO, PM₁₀ and PM₂₅ impacts.

3.7 CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

Since the total acreage disturbed is less than five acres per day for site preparation and grading activities, the SCAQMD's screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identifies thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance thresholds. Consistent with SCAQMD guidance, the thresholds presented in Table 3-8 were calculated by interpolating the threshold values for the Project's disturbed acreage.

TABLE 3-8: MAXIMUM DAILY LOCALIZED EMISSIONS THRESHOLDS

Pollutant	Construction Localized Thresholds
NO _x	303 lbs/day (Site Preparation)
	257 lbs/day (Grading)
CO	1,533 lbs/day (Site Preparation)
	1,244 lbs/day (Grading)
PM ₁₀	10 lbs/day (Site Preparation)
	8 lbs/day (Grading)
PM _{2.5}	6 lbs/day (Site Preparation)
	5 lbs/day (Grading)

LOCALIZED CONSTRUCTION-SOURCE EMISSIONS

Impacts without Mitigation

Table 3-9 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would exceed the applicable SCAQMD LSTs for emissions of PM₁₀ and PM_{2.5}. Outputs from the model runs for unmitigated construction LSTs are provided in Appendix 3.1.

Impacts with Mitigation

Table 3-10 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. MM AQ-1 is recommended to reduce the PM₁₀ and PM_{2.5} impacts. After implementation of MM AQ-1, construction emissions would not exceed the applicable SCAQMD LSTs for any criteria pollutant. As stated in Section ES.3, MM AQ-1 requires that for construction equipment >150 hp, the Construction Contractor shall ensure that off-road diesel construction equipment that complies with EPA/CARB Tier 3 emissions standards and shall ensure that all construction equipment is tuned and maintained in accordance with the manufacturer's specifications. Therefore, a less than significant impact would occur.

TABLE 3-9: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION (WITHOUT MITIGATION)

On-Site Site Preparation Emissions	Emissions (lbs/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	50.35	19.98	23.93	12.32
SCAQMD Localized Threshold	303	1,533	10	6
Threshold Exceeded?	NO	NO	YES	YES
On-Site Grading Emissions	Emissions (lbs/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	33.80	15.48	10.23	4.87
SCAQMD Localized Threshold	257	1,244	8	5
Threshold Exceeded?	NO	NO	YES	YES

TABLE 3-10: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION (WITH MITIGATION)

On-Site Site Preparation Emissions	Emissions (lbs/day)			
	NO _x	CO ⁵	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	27.00	30.26	9.52	5.05
SCAQMD Localized Threshold	303	1,533	10	6
Threshold Exceeded?	NO	NO	NO	NO
On-Site Grading Emissions	Emissions (lbs/day)			
	NO _x	CO ⁶	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	20.80	24.47	4.28	2.23
SCAQMD Localized Threshold	257	1,244	8	5
Threshold Exceeded?	NO	NO	NO	NO

5 The emission rates for the off-road equipment used during construction (without mitigation) are based on statewide fleet mix from CARB's off-road inventory model per year and HP range (Table 3.4 in Appendix D of the User's Guide). Mitigated (Tiered engine emission factors) (Table 3.5 in Appendix D of the User's Guide) are based on Carl Moyer standards to qualify for a particular tier that may be chosen to mitigate engine emissions. In some instances, the statewide fleet mix average for a particular equipment type, year, and HP may be lower than the engine tier standard generating higher mitigated emissions. (Source: CalEEMod User Tips #38). Therefore, although Table 3-5 indicates an increase in CO emissions after implementation of mitigation, it should be noted that this increase in CO is due to a modified calculation procedure in CalEEMod. For consistency purposes with the CalEEMod outputs, the emissions presented in Table 3-10 reflect the CalEEMod outputs.

6 *Ibid.*

3.8 OPERATIONAL-SOURCE EMISSIONS LST ANALYSIS

The development of the proposed project is located on approximately 8.9 acres. As previously stated, the total development is proposed to consist of 4,800 square feet of fast food with drive-thru window, 22,000 square foot grocery store, 7,700 square feet of retail shops, 7,600 square foot automotive retail store, 13,000 square foot pharmacy with drive-through window (first floor), 8,000 square feet of professional business/medical office (second floor), 3,590 square foot car wash, and 4,800 square foot restaurant. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The proposed project does not include such uses, and thus, due to the lack of significant stationary source emissions, no long-term localized significance threshold analysis is needed.

3.9 CO “HOT SPOT” ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or “hot spots.” Further, detailed modeling of Project-specific CO “hot spots” is not needed to reach this conclusion. An adverse CO concentration, known as a “hot spot”, would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO (28).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 2-3.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO “hot spot” analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This “hot spot” analysis did not predict any violation of CO standards, as shown on Table 3-11.

TABLE 3-11: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire/Veteran	4.6	3.5	3.7
Sunset/Highland	4	4.5	3.5
La Cienega/Century	3.7	3.1	5.2
Long Beach/Imperial	3	3.1	8.4

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations

Note: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak CO concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 9.3 ppm 8-hour CO concentration measured at the Long Beach Boulevard and Imperial Highway intersection (highest CO generating intersection within the “hot spot” analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 8.6 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (29). In contrast, the ambient 8-hour CO concentration within the Project study area is estimated at 1.4 ppm—1.6 ppm (please refer to previous Table 2-3). Therefore, even if the traffic volumes for the Project were double or even triple of the traffic volumes generated at the Long Beach Boulevard and Imperial Highway intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO “hot spot” at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph) —or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (30).

The 2003 AQMP, and as previously shown in Table 3-12, estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations ($4.6 \text{ ppm} \times 4 = 18.4 \text{ ppm}$) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).⁷ As shown in TIA on Exhibit 6-2, Opening Year Cumulative (2021) With Project Traffic Volumes, the highest trips on a segment of is 53,600 vph on Interstate 15 (I-15) Freeway Northbound On-Ramp and Clinton Keith Road (31).

⁷ Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

TABLE 3-12: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Blvd./Veteran Ave.	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Blvd./Highland Ave.	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Blvd./Century Blvd.	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Blvd./Imperial Hwy.	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Ave. = Avenue; Blvd. = Boulevard; Hwy. = Highway
Source: 2003 AQMP

Traffic volumes generating the CO concentrations for the “hot spot” analysis is shown on Table 3-13. The busiest intersection evaluated for AM traffic volumes was at Wilshire Blvd. and Veteran Ave., which has an AM traffic volume of approximately 8,062 vph. Alternatively, the busiest intersection for PM traffic volumes was at La Cienega Boulevard and Century Boulevard, which has a PM traffic volume of 8,674 vph (32). As shown on Table 3-13, the highest trips on a segment of road is 5,556 vph on I-15 Freeway Northbound On-Ramp and Clinton Keith Road. Although Project-related traffic volumes are slightly higher than the traffic volumes identified in the 2003 AQMP, the proposed Project considered herein would not produce the volume of traffic required to generate a CO “hot spot” either in the context of the 2003 Los Angeles hot spot study or based on representative BAAQMD CO threshold considerations. Therefore, CO “hot spots” are not an environmental impact of concern for the Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

TABLE 3-13: OPENING YEAR CUMULATIVE (2021) WITH PROJECT TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
Palomar St./Clinton Keith Rd.	785/692	671/520	910/757	1,106/1,629	3,472/3,597
Hidden Springs Rd./Clinton Keith Rd.	271/367	602/711	1,628/1,533	1,449/2,212	3,952/4,824
I-15 Fwy. SB On-Ramp/Clinton Keith Rd.	0/0	975/1,258	1,978/1,874	1,446/2,135	4,399/5,267
I-15 Fwy. NB On-Ramp/Clinton Keith Rd.	667/1,283	0/0	1,733/2,147	1,756/2,127	4,156/5,556

NB = Northbound; Rd. = Road; SB = Southbound; St. = Street
Source: Clinton Keith Marketplace Traffic Impact Analysis (Urban Crossroads, Inc., 2020).

3.10 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally

responsible for air pollution control, and works directly with the SCAG, county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In March 2017, the AQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (33). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS), a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (34). The Project's consistency with the AQMP will be determined using the 2016 AQMP as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993) (35). These indicators are discussed below:

Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs or regional significance thresholds were exceeded. As evaluated, the Project's regional and localized construction-source emissions would not exceed applicable regional significance threshold and LST thresholds after implementation of applicable mitigation measures. As such, a less than significant impact is expected.

Operational Impacts – Consistency Criterion 1

The Project regional analysis demonstrates that Project operational-source emissions would not exceed applicable thresholds of significance. As such, Project operational-source emissions would not result in or cause violations of the CAAQS and NAAQS.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The 2016 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Wildomar General Plan is considered to be consistent with the AQMP.

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities.

Operational Impacts – Consistency Criterion 2

The City of Wildomar General Plan designates the Project site for CR uses. The CR land use designation allows for the development of CR uses at a neighborhood, community and regional level, as well as for professional office and tourist-oriented commercial uses (4). As previously stated, the total development is proposed to consist of 4,800 square feet of fast food with drive-thru window, 22,000 square foot grocery store, 7,700 square feet of retail shops, 7,600 square foot automotive retail store, 13,000 square foot pharmacy with drive-through window (first floor), 8,000 square feet of professional business/medical office (second floor), 3,590 square foot car wash, and 4,800 square foot restaurant. The uses proposed by the Project are consistent with the City's land use designation. Furthermore, Project operational-source emissions would not exceed the threshold of significance and therefore, the Project would not be expected to conflict with the goals and objectives of the AQMP.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

AQMP Consistency Conclusion

The Project does not have the potential to result in or cause NAAQS or CAAQS violations. The proposed Project is also consistent with the land use and growth intensities reflected in the adopted General Plan. Additionally, Project operational-source emissions would not exceed the applicable regional thresholds of significance. Therefore, the Project will not conflict with the goal and objectives of the AQMP and have a less than significant impact with respect to this threshold.

3.11 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered as sensitive receptors.

Results of the LST analysis indicate that, with application of mitigation, the Project will not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial criteria pollutant concentrations during Project construction.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

3.12 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated

with the proposed Project construction and operations would be less than significant and no mitigation is required (36).

3.13 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for O₃, PM₁₀, and PM_{2.5} while the NAAQS designates the Project site as nonattainment for O₃ and PM_{2.5}.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (37). In this report the AQMD clearly states (Page D-3):

...the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or Environmental Impact Report (EIR). The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that, Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operational Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project operational-source air pollutant emissions would not result in exceedances of regional thresholds established by SCAQMD. Therefore, Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

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4 REFERENCES

1. **State of California.** 2019 CEQA California Environmental Quality Act. 2019.
2. **South Coast Air Quality Management District.** RULE 403. FUGITIVE DUST. [Online] <https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4>.
3. —. RULE 1113. Architectural Coatings. [Online] <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf>.
4. **City of Wildomar.** *General Plan*. 2003.
5. **South Coast Air Quality Management District.** Southern California Air Basins. [Online] <https://www.arb.ca.gov/msprog/onroad/porttruck/maps/scabc7map.pdf>.
6. —. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*. 2005.
7. **St. Croix Sensory, Inc.** *The "Gray Line" Between Odor Nuisance and Health Effects*. 2000.
8. **California Air Resources Board.** Ambient Air Quality Standards (AAQS). [Online] 2016. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.
9. **United State Environmental Protection Agency.** Frequent Questions about General Conformity . *EPA*. [Online] <https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity#8>.
10. **South Coast Air Quality Management District.** Annual Air Quality Monitoring Network Plan. [Online] July 2018. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/annual-air-quality-monitoring-network-plan-v2.pdf?sfvrsn=2>.
11. **Air Resources Board.** State and National Ambient Air Quality Standards. [Online] https://www.arb.ca.gov/regact/2019/stateareadesignations/appc.pdf?_ga=2.169398369.1537615702.1554741141-1192937971.1505156621.
12. **District, South Coast Air Quality Management.** Air Quality Data Tables. [Online] <https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year>.
13. **Environmental Protection Agency.** National Ambient Air Quality Standards (NAAQS). [Online] 1990. <https://www.epa.gov/environmental-topics/air-topics>.
14. —. Air Pollution and the Clean Air Act. [Online] <http://www.epa.gov/air/caa/>.
15. **United States Environmental Protection Agency.** 1990 Clean Air Act Amendment Summary: Title I. [Online] <https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-i>.
16. —. 1990 Clean Air Act Amendment Summary: Title II. [Online] <https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-ii>.
17. **Air Resources Board.** California Ambient Air Quality Standards (CAAQS). [Online] 2009. [Cited: April 16, 2018.] <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>.
18. **The California Energy Commission.** 2019 Building Energy Efficiency Standards . *California Energy Commission*. [Online] 2018. https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.
19. **Department of General Services.** Building Standards Commission. *CALGreen*. [Online] <https://codes.iccsafe.org/content/chapter/15778/>.

20. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016. <http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf>.
21. **South Coast Air Quality Management District (SCAQMD).** SCAQMD Air Quality Significance Thresholds. [Online] <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>.
22. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] June 2021. www.caleemod.com.
23. **Urban Crossroads, Inc.** *Clinton Keith Marketplace Trip Generation Assessment*. 2021.
24. **South Coast Air Quality Management District.** *Localized Significance Thresholds Methodology*. s.l. : South Coast Air Quality Management District, 2003.
25. **Lake Environmental.** US EPA Models. *Lake Environmental*. [Online] http://www.weblakes.com/download/us_epa.html.
26. **South Coast Air Quality Management District.** Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. [Online] <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf>.
27. **California Air Pollution Control Officers Association (CAPCOA).** Appendix A: Calculation Details for CalEEMod. *CalEEMod*. [Online] May 2021. www.caleemod.com.
28. **South Coast Air Quality Management District.** 2003 Air Quality Management Plan. [Online] 2003. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2003-air-quality-management-plan/2003-aqmp-appendix-v.pdf>.
29. —. 2003 Air Quality Management Plan. [Online] 2003. <https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp>.
30. **Bay Area Air Quality Management District.** [Online] <http://www.baaqmd.gov/>.
31. **Urban Crossroads, Inc.** *Clinton Keith Marketplace Traffic Impact Analysis*. 2021.
32. **South Coast Air Quality Management District.** 2003 Air Quality Management Plan. [Online] 2003. <https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp>.
33. —. Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11>.
34. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016. <http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf>.
35. **South Coast Air Quality Management District.** *CEQA Air Quality Handbook (1993)*. 1993.
36. —. RULE 402 NUISANCE. [Online] <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf>.
37. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. http://www.aqmd.gov/rules/ciwg/final_white_paper.pdf.

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5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Clinton Keith Marketplace Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 660-1994.

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Master of Science in Environmental Studies
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AEP – Association of Environmental Planners
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PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June 2013
Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

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APPENDIX C

***MAPS AND TABLES OF AREA DESIGNATIONS FOR
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS***

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APPENDIX C

MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

Ambient Air Quality Standards

(Updated 5/4/16)

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, 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 the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment	A
Nonattainment	N
Nonattainment-Transitional	NA-T
Unclassified	U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

FIGURE 1

2018
 Area Designations for State
 Ambient Air Quality Standards
 OZONE

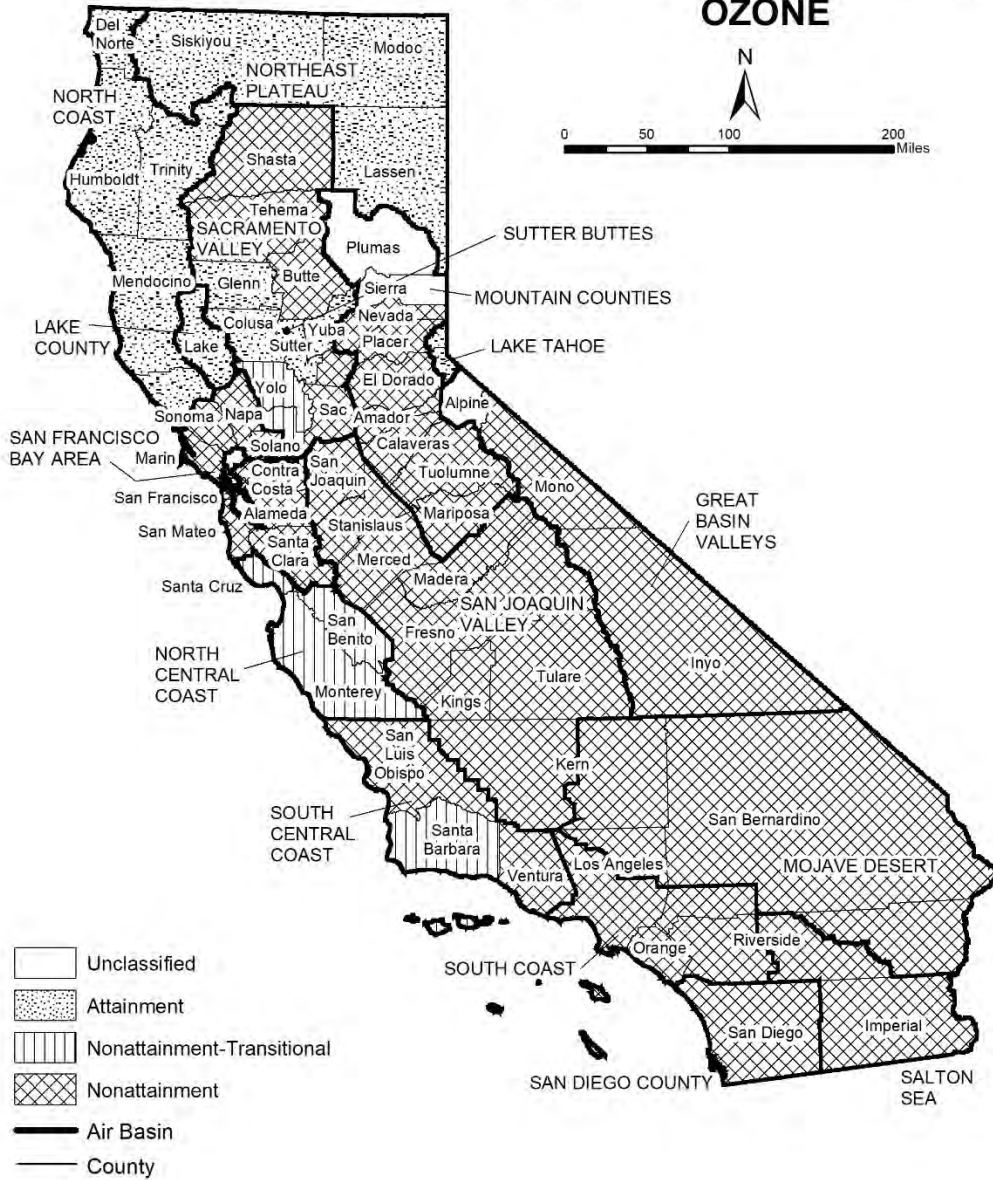


TABLE 1

**California Ambient Air Quality Standards
Area Designations for Ozone ⁽¹⁾**

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					NORTHEAST PLATEAU AIR BASIN				X
Alpine County			X		SACRAMENTO VALLEY AIR BASIN				
Inyo County	X				Colusa and Glenn Counties				X
Mono County	X				Sutter/Yuba Counties				
LAKE COUNTY AIR BASIN				X	Sutter Buttes	X			
LAKE TAHOE AIR BASIN				X	Remainder of Sutter County				X
MOJAVE DESERT AIR BASIN	X				Yuba County				X
MOUNTAIN COUNTIES AIR BASIN					Yolo/Solano Counties		X		
Amador County	X				Remainder of Air Basin	X			
Calaveras County	X				SALTON SEA AIR BASIN	X			
El Dorado County (portion)	X				SAN DIEGO AIR BASIN	X			
Mariposa County	X				SAN FRANCISCO BAY AREA AIR BASIN	X			
Nevada County	X				SAN JOAQUIN VALLEY AIR BASIN	X			
Placer County (portion)	X				SOUTH CENTRAL COAST AIR BASIN				
Plumas County			X		San Luis Obispo County	X			
Sierra County			X		Santa Barbara County		X		
Tuolumne County	X				Ventura County	X			
NORTH CENTRAL COAST AIR BASIN		X			SOUTH COAST AIR BASIN	X			
NORTH COAST AIR BASIN				X					

(1) AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

FIGURE 2

**2018
Area Designations for State
Ambient Air Quality Standards
PM10**



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 2

**California Ambient Air Quality Standards
Area Designation for Suspended Particulate Matter (PM10)**

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN	X			NORTH CENTRAL COAST AIR BASIN	X		
LAKE COUNTY AIR BASIN			X	NORTH COAST AIR BASIN			
LAKE TAHOE AIR BASIN	X			Del Norte, Sonoma (portion) and Trinity Counties			X
MOJAVE DESERT AIR BASIN	X			Remainder of Air Basin	X		
MOUNTAIN COUNTIES AIR BASIN				NORTHEAST PLATEAU AIR BASIN			
Amador County		X		Siskiyou County			X
Calaveras County	X			Remainder of Air Basin		X	
El Dorado County (portion)	X			SACRAMENTO VALLEY AIR BASIN			
Mariposa County				Shasta County			X
- Yosemite National Park	X			Remainder of Air Basin	X		
- Remainder of County		X		SALTON SEA AIR BASIN	X		
Nevada County	X			SAN DIEGO AIR BASIN	X		
Placer County (portion)	X			SAN FRANCISCO BAY AREA AIR BASIN	X		
Plumas County	X			SAN JOAQUIN VALLEY AIR BASIN	X		
Sierra County	X			SOUTH CENTRAL COAST AIR BASIN	X		
Tuolumne County		X		SOUTH COAST AIR BASIN	X		

FIGURE 3

**2018
Area Designations for State
Ambient Air Quality Standards
PM_{2.5}**

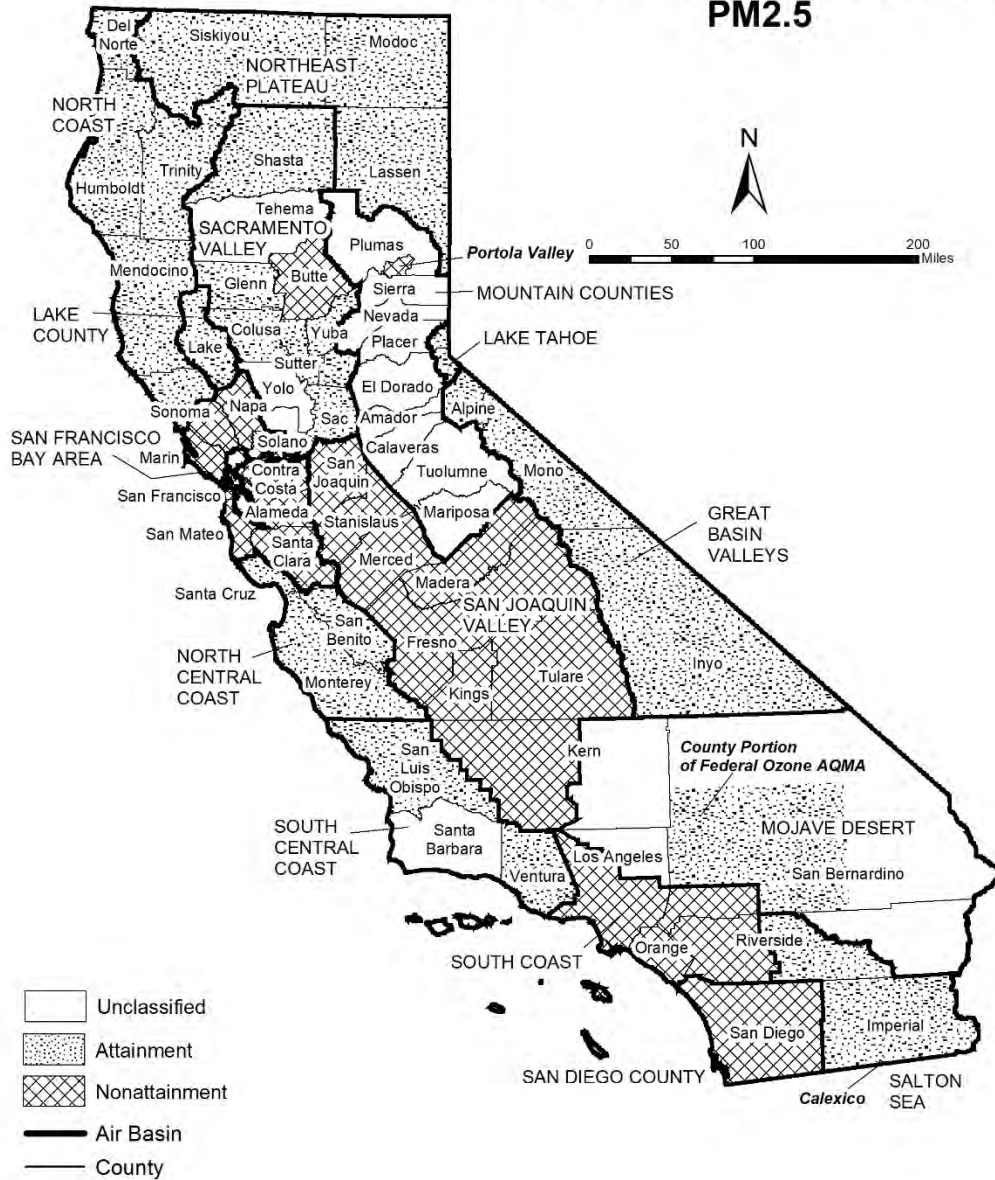


TABLE 3

**California Ambient Air Quality Standards
Area Designations for Fine Particulate Matter (PM2.5)**

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SALTON SEA AIR BASIN			
LAKE COUNTY AIR BASIN			X	Imperial County			
LAKE TAHOE AIR BASIN			X	- City of Calexico (3)	X		
MOJAVE DESERT AIR BASIN				Remainder of Air Basin			X
San Bernardino County				SAN DIEGO AIR BASIN	X		
- County portion of federal Southeast Desert Modified AQMA for Ozone (1)			X	SAN FRANCISCO BAY AREA AIR BASIN	X		
				SAN JOAQUIN VALLEY AIR BASIN	X		
Remainder of Air Basin		X		SOUTH CENTRAL COAST AIR BASIN			
MOUNTAIN COUNTIES AIR BASIN				San Luis Obispo County			X
Plumas County				Santa Barbara County		X	
- Portola Valley (2)	X			Ventura County			X
Remainder of Air Basin		X		SOUTH COAST AIR BASIN	X		
NORTH CENTRAL COAST AIR BASIN			X				
NORTH COAST AIR BASIN			X				
NORTHEAST PLATEAU AIR BASIN			X				
SACRAMENTO VALLEY AIR BASIN							
Butte County	X						
Colusa County			X				
Glenn County			X				
Placer County (portion)			X				
Sacramento County			X				
Shasta County			X				
Sutter and Yuba Counties			X				
Remainder of Air Basin		X					

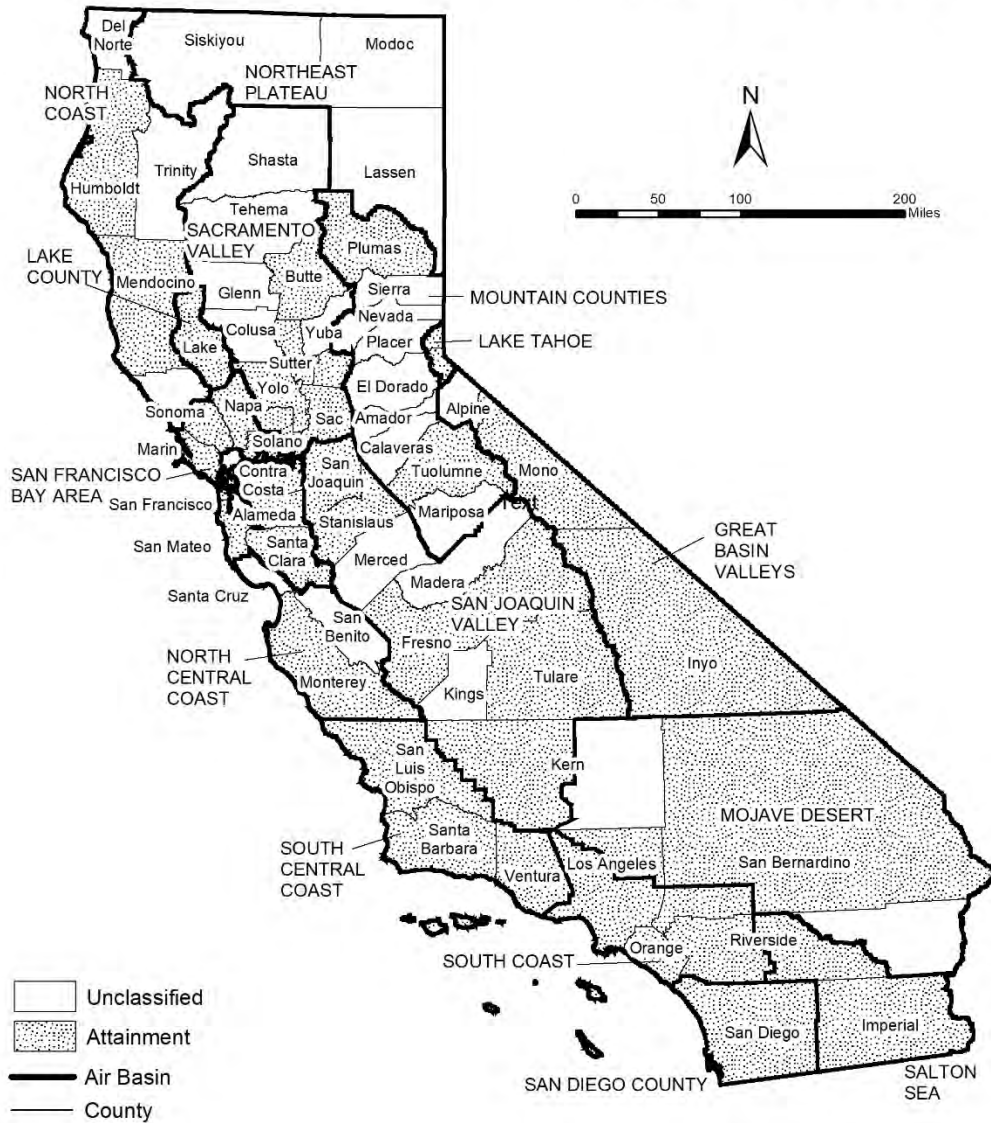
(1) California Code of Regulations, title 17, section 60200(b)

(2) California Code of Regulations, title 17, section 60200(c)

(3) California Code of Regulations, title 17, section 60200(a)

FIGURE 4

2018
Area Designations for State
Ambient Air Quality Standards
CARBON MONOXIDE



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 4

**California Ambient Air Quality Standards
Area Designation for Carbon Monoxide***

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					SACRAMENTO VALLEY AIR BASIN				
Alpine County			X		Butte County				X
Inyo County				X	Colusa County			X	
Mono County				X	Glenn County			X	
LAKE COUNTY AIR BASIN				X	Placer County (portion)				X
LAKE TAHOE AIR BASIN				X	Sacramento County				X
MOJAVE DESERT AIR BASIN					Shasta County			X	
Kern County (portion)			X		Solano County (portion)				X
Los Angeles County (portion)				X	Sutter County				X
Riverside County (portion)			X		Tehama County			X	
San Bernardino County (portion)				X	Yolo County				X
MOUNTAIN COUNTIES AIR BASIN					Yuba County			X	
Amador County			X		SALTON SEA AIR BASIN				X
Calaveras County			X		SAN DIEGO AIR BASIN				X
El Dorado County (portion)			X		SAN FRANCISCO BAY AREA AIR BASIN				X
Mariposa County			X		SAN JOAQUIN VALLEY AIR BASIN				
Nevada County			X		Fresno County				X
Placer County (portion)			X		Kern County (portion)				X
Plumas County				X	Kings County			X	
Sierra County			X		Madera County			X	
Tuolumne County				X	Merced County			X	
NORTH CENTRAL COAST AIR BASIN					San Joaquin County				X
Monterey County				X	Stanislaus County				X
San Benito County			X		Tulare County				X
Santa Cruz County			X		SOUTH CENTRAL COAST AIR BASIN				X
NORTH COAST AIR BASIN					SOUTH COAST AIR BASIN				X
Del Norte County			X						
Humboldt County				X					
Mendocino County				X					
Sonoma County (portion)			X						
Trinity County			X						
NORTHEAST PLATEAU AIR BASIN			X						

* The area designated for carbon monoxide is a county or portion of a county

FIGURE 5

2018
Area Designations for State
Ambient Air Quality Standards
NITROGEN DIOXIDE



TABLE 5

**California Ambient Air Quality Standards
Area Designation for Nitrogen Dioxide**

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SACRAMENTO VALLEY AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN DIEGO AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X	SOUTH COAST AIR BASIN			
NORTHEAST PLATEAU AIR BASIN			X	CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties	X		
				Remainder of Air Basin			X

FIGURE 6

2018
Area Designations for State
Ambient Air Quality Standards
SULFUR DIOXIDE



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 6

**California Ambient Air Quality Standards
Area Designation for Sulfur Dioxide***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SALTON SEA AIR BASIN		X
LAKE TAHOE AIR BASIN		X	SAN DIEGO AIR BASIN		X
MOJAVE DESERT AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X			

* The area designated for sulfur dioxide is a county or portion of a county

FIGURE 7

2018
Area Designations for State
Ambient Air Quality Standards
SULFATES



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 7**California Ambient Air Quality Standards
Area Designation for Sulfates**

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SACRAMENTO VALLEY AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN DIEGO AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X	SOUTH COAST AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X				

FIGURE 8

2018
Area Designations for State
Ambient Air Quality Standards
LEAD



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 8**California Ambient Air Quality Standards
Area Designations for Lead (particulate)***

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SAN DIEGO AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH COAST AIR BASIN			X
NORTH COAST AIR BASIN			X				
NORTHEAST PLATEAU AIR BASIN			X				
SACRAMENTO VALLEY AIR BASIN			X				

* The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

FIGURE 9

2018
Area Designations for State
Ambient Air Quality Standards
HYDROGEN SULFIDE



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 9

**California Ambient Air Quality Standards
Area Designation for Hydrogen Sulfide***

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					NORTH CENTRAL COAST AIR BASIN			X	
Alpine County			X		NORTH COAST AIR BASIN				
Inyo County				X	Del Norte County			X	
Mono County				X	Humboldt County				X
LAKE COUNTY AIR BASIN				X	Mendocino County			X	
LAKE TAHOE AIR BASIN			X		Sonoma County (portion)				
MOJAVE DESERT AIR BASIN					- Geyser Geothermal Area (2)				X
Kern County (portion)			X		- Remainder of County			X	
Los Angeles County (portion)			X		Trinity County			X	
Riverside County (portion)			X		NORTHEAST PLATEAU AIR BASIN			X	
San Bernardino County (portion)					SACRAMENTO VALLEY AIR BASIN			X	
- Searles Valley Planning Area (1)	X				SALTON SEA AIR BASIN			X	
- Remainder of County			X		SAN DIEGO AIR BASIN			X	
MOUNTAIN COUNTIES AIR BASIN					SAN FRANCISCO BAY AREA AIR BASIN			X	
Amador County					SAN JOAQUIN VALLEY AIR BASIN			X	
- City of Sutter Creek	X				SOUTH CENTRAL COAST AIR BASIN				
- Remainder of County			X		San Luis Obispo County				X
Calaveras County			X		Santa Barbara County				X
El Dorado County (portion)			X		Ventura County			X	
Mariposa County			X		SOUTH COAST AIR BASIN			X	
Nevada County			X						
Placer County (portion)			X						
Plumas County			X						
Sierra County			X						
Tuolumne County			X						

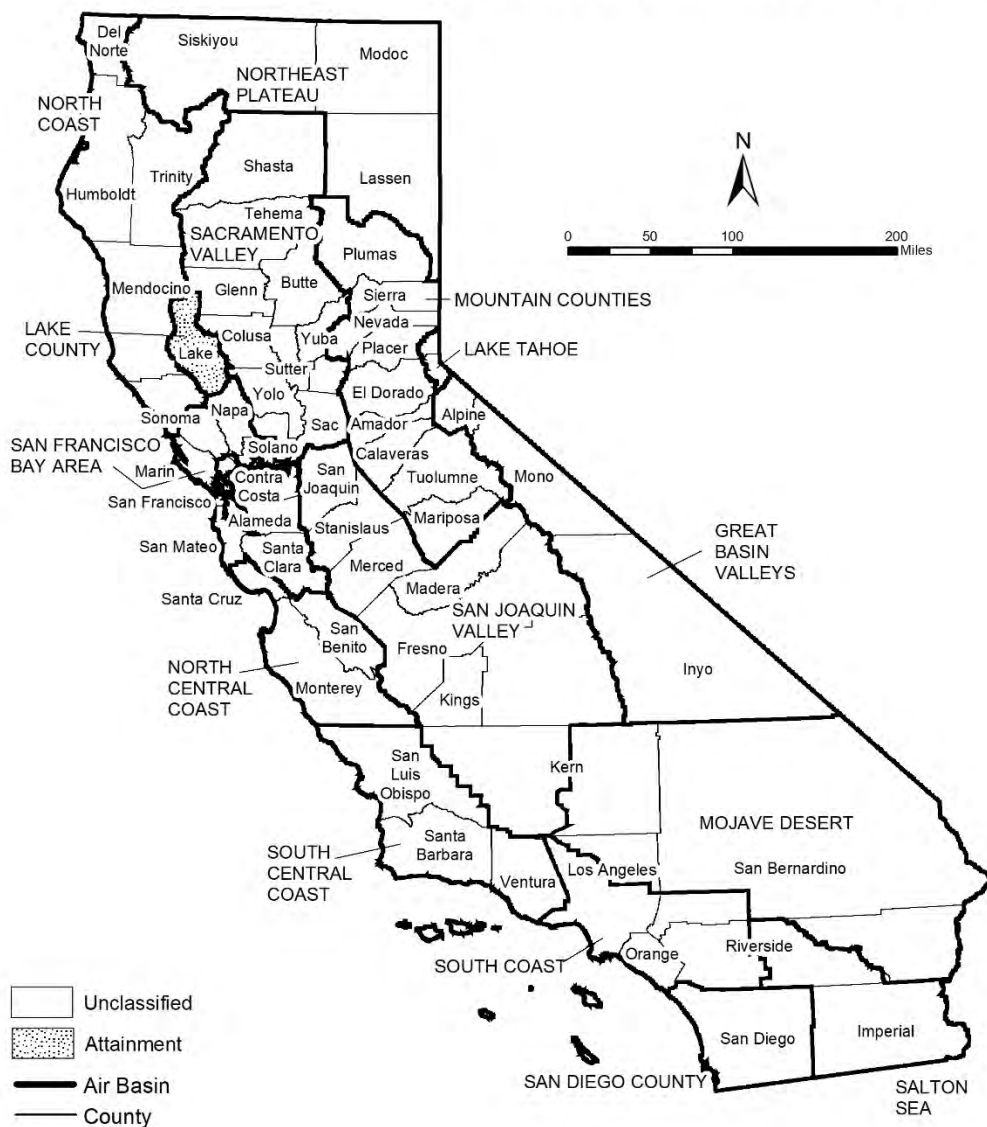
* The area designated for hydrogen sulfide is a county or portion of a county

(1) 52 Federal Register 29384 (August 7, 1987)

(2) California Code of Regulations, title 17, section 60200(d)

FIGURE 10

2018
Area Designations for State
Ambient Air Quality Standards
VISIBILITY REDUCING PARTICLES



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 10

**California Ambient Air Quality Standards
Area Designation for Visibility Reducing Particles**

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN			X		SACRAMENTO VALLEY AIR BASIN			X	
LAKE COUNTY AIR BASIN				X	SALTON SEA AIR BASIN			X	
LAKE TAHOE AIR BASIN			X		SAN DIEGO AIR BASIN			X	
MOJAVE DESERT AIR BASIN			X		SAN FRANCISCO BAY AREA AIR BASIN			X	
MOUNTAIN COUNTIES AIR BASIN			X		SAN JOAQUIN VALLEY AIR BASIN			X	
NORTH CENTRAL COAST AIR BASIN			X		SOUTH CENTRAL COAST AIR BASIN			X	
NORTH COAST AIR BASIN			X		SOUTH COAST AIR BASIN			X	
NORTHEAST PLATEAU AIR BASIN			X						

Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. Additional information about the federal area designations is available on the U.S. EPA website:

<https://www.epa.gov/green-book>

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website:

<https://www.epa.gov/criteria-air-pollutants>

Designation Categories

Suspended Particulate Matter (PM₁₀). The U.S. EPA uses three categories to designate areas with respect to PM₁₀:

- Attainment
- Nonattainment
- Unclassifiable

Ozone, Fine Suspended Particulate Matter (PM_{2.5}), Carbon Monoxide (CO), and Nitrogen Dioxide (NO₂). The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment
- Unclassifiable/Attainment

The national 1-hour ozone standard was revoked effective June 15, 2005, and the area designations map reflects the 2015 national 8-hour ozone standard of 0.070 ppm. Original designations were finalized on August 3, 2018.

On December 14, 2012, the U.S. EPA established a new national annual primary PM_{2.5} standard of 12.0 µg/m³. New area designations reflecting this revised standard became final in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0 µg/m³ as well as the 24-hour standard of 35 µg/m³, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO₂ standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO₂ standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO₂). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment,
- Unclassifiable, and
- Attainment/Unclassifiable.

On June 2, 2010, the U.S. EPA established a new primary 1-hour SO₂ standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual

average standards. Area designations for the 1-hour SO₂ standard were finalized on December 21, 2017 and are reflected in the area designations map.

Lead (particulate). The U.S. EPA promulgated a new rolling 3-month average lead standard in October 2008 of 0.15 µg/m³. Designations were made for this standard in November 2010.

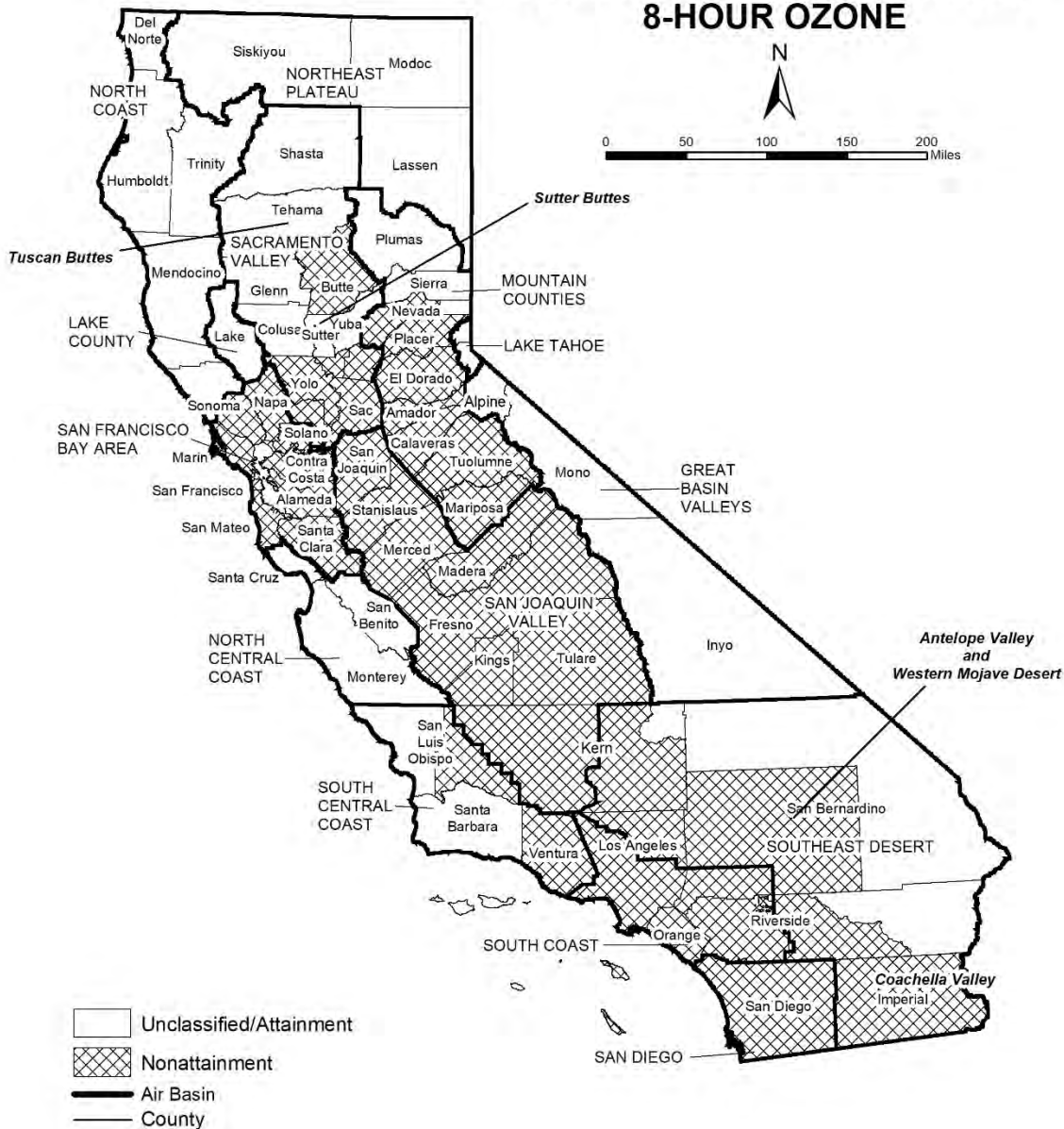
Designation Areas

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at:

https://ecfr.io/Title-40/se40.20.81_1305

FIGURE 11

Area Designations for National Ambient Air Quality Standards 8-HOUR OZONE



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 11

**National Ambient Air Quality Standards
Area Designations for 8-Hour Ozone***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN (cont.)		
LAKE COUNTY AIR BASIN		X	Yolo County (2)	X	
LAKE TAHOE AIR BASIN		X	Yuba County		X
MOUNTAIN COUNTIES AIR BASIN			SAN DIEGO COUNTY	X	
Amador County	X		SAN FRANCISCO BAY AREA AIR BASIN	X	
Calaveras County	X		SAN JOAQUIN VALLEY AIR BASIN	X	
El Dorado County (portion) (2)	X		SOUTH CENTRAL COAST AIR BASIN (1)		
Mariposa County	X		San Luis Obispo County		
Nevada County			- Eastern San Luis Obispo County	X	
- Western Nevada County	X		- Remainder of County		X
- Remainder of County		X	Santa Barbara County		X
Placer County (portion) (2)	X		Ventura County		
Plumas County		X	- Area excluding Anacapa and San Nicolas Islands	X	
Sierra County		X	- Channel Islands (1)		X
Tuolumne County	X		SOUTH COAST AIR BASIN (1)	X	
NORTH CENTRAL COAST AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		
NORTH COAST AIR BASIN		X	Kern County (portion)	X	
NORTHEAST PLATEAU AIR BASIN		X	- Indian Wells Valley		X
SACRAMENTO VALLEY AIR BASIN			Imperial County	X	
Butte County	X		Los Angeles County (portion)	X	
Colusa County		X	Riverside County (portion)		
Glenn County		X	- Coachella Valley	X	
Sacramento Metro Area (2)	X		- Non-AQMA portion		X
Shasta County		X	San Bernardino County		
Sutter County			- Western portion (AQMA)	X	
- Sutter Buttes	X		- Eastern portion (non-AQMA)		X
- Southern portion of Sutter County (2)	X				
- Remainder of Sutter County		X			
Tehama County					
- Tuscan Buttes	X				
- Remainder of Tehama County		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2015 8-hour ozone standard of 0.070 ppm.

(1) South Central Coast Air Basin Channel Islands:

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

Ventura County includes Anacapa and San Nicolas Islands.

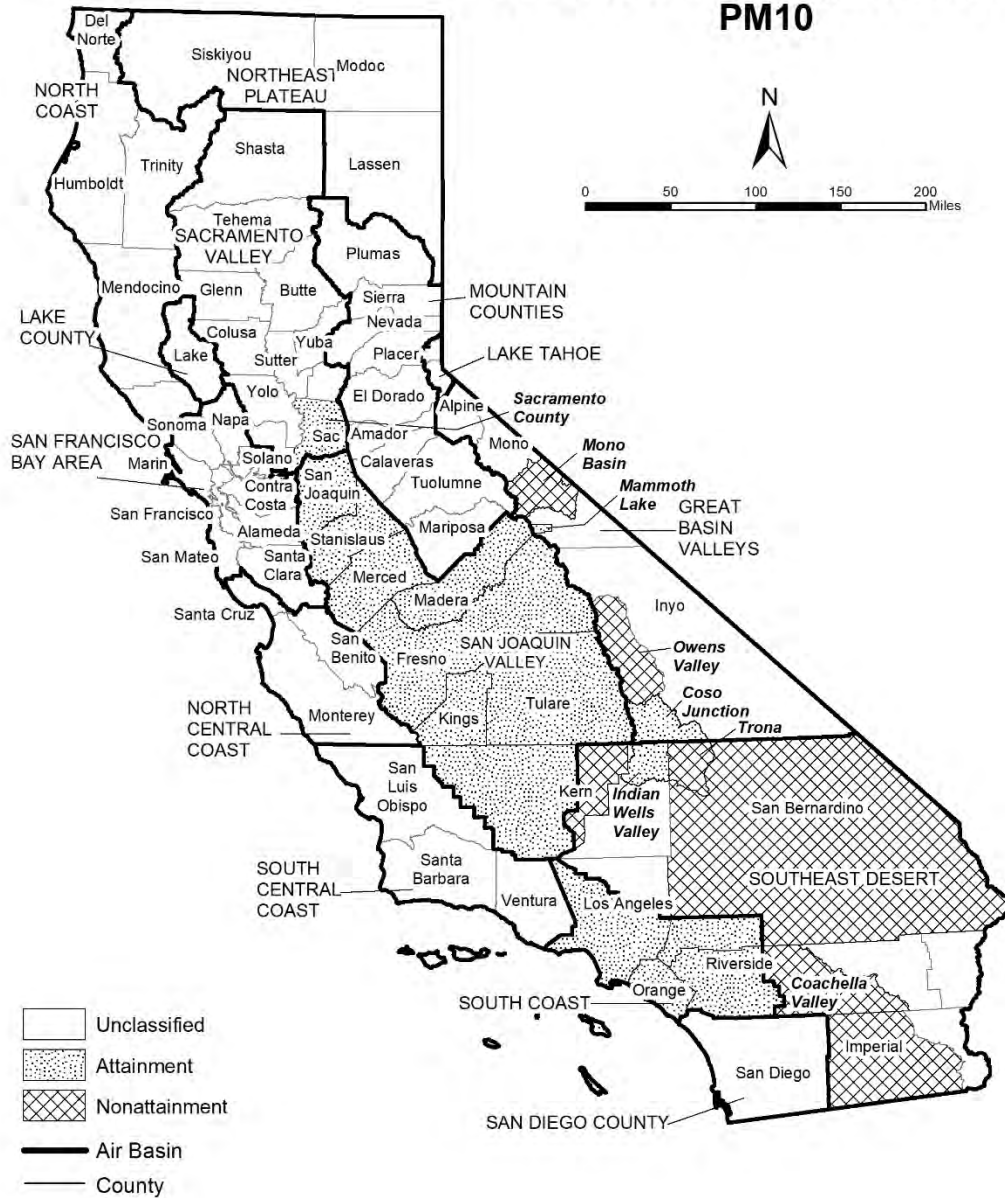
South Coast Air Basin:

Los Angeles County includes San Clemente and Santa Catalina Islands.

(2) For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

FIGURE 12

Area Designations for National Ambient Air Quality Standards PM10



Source Date:
 October 2018
 Air Quality Planning and Science Division

TABLE 12

**National Ambient Air Quality Standards
Area Designations for Suspended Particulate Matter (PM10)***

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN				SAN DIEGO COUNTY		X	
Alpine County		X		SAN FRANCISCO BAY AREA AIR BASIN		X	
Inyo County				SAN JOAQUIN VALLEY AIR BASIN			X
- Owens Valley Planning Area	X			SOUTH CENTRAL COAST AIR BASIN		X	
- Coso Junction			X	SOUTH COAST AIR BASIN			X
- Remainder of County		X		SOUTHEAST DESERT AIR BASIN			
Mono County				Eastern Kern County			
- Mammoth Lake Planning Area			X	- Indian Wells Valley			X
- Mono Lake Basin	X			- Portion within San Joaquin Valley Planning Area	X		
- Remainder of County		X		- Remainder of County		X	
LAKE COUNTY AIR BASIN		X		Imperial County			
LAKE TAHOE AIR BASIN		X		- Imperial Valley Planning Area	X		
MOUNTAIN COUNTIES AIR BASIN				- Remainder of County		X	
Placer County (portion) (2)		X		Los Angeles County (portion)		X	
Remainder of Air Basin		X		Riverside County (portion)			
NORTH CENTRAL COAST AIR BASIN		X		- Coachella Valley (3)	X		
NORTH COAST AIR BASIN		X		- Non-AQMA portion		X	
NORTHEAST PLATEAU AIR BASIN		X		San Bernardino County			
SACRAMENTO VALLEY AIR BASIN				- Trona	X		
Butte County		X		- Remainder of County	X		
Colusa County		X					
Glenn County		X					
Placer County (portion) (2)		X					
Sacramento County (1)			X				
Shasta County		X					
Solano County (portion)		X					
Sutter County		X					
Tehama County		X					
Yolo County		X					
Yuba County		X					

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

(1) Air quality in Sacramento County meets the national PM10 standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.

(2) U.S. EPA designation puts the Sacramento Valley Air Basin portion of Placer County in the Mountain Counties Air Basin.

(3) Air quality in Coachella Valley meets the national PM10 standards. A request for redesignation to attainment has been submitted to U.S. EPA.

FIGURE 13

Area Designations for National Ambient Air Quality Standards PM2.5



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 13

**National Ambient Air Quality Standards
Area Designations for Fine Particulate Matter (PM2.5)***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE COUNTY AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN (2)	X	
LAKE TAHOE AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN	X	
MOUNTAIN COUNTIES AIR BASIN			SOUTH CENTRAL COAST AIR BASIN		X
Plumas County			SOUTH COAST AIR BASIN (3)	X	
- Portola Valley Portion of Plumas	X		SOUTHEAST DESERT AIR BASIN		
- Remainder of Plumas County		X	Imperial County (portion) (4)	X	
Remainder of Air Basin		X	Remainder of Air Basin		X
NORTH CENTRAL COAST AIR BASIN		X			
NORTH COAST AIR BASIN		X			
NORTHEAST PLATEAU AIR BASIN		X			
SACRAMENTO VALLEY AIR BASIN					
Sacramento Metro Area (1)	X				
Sutter County		X			
Yuba County (portion)		X			
Remainder of Air Basin		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour PM2.5 standard as well as the 1997 and 2012 PM2.5 annual standards.

(1) For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

(2) Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

(3) Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

(4) That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

FIGURE 14

**Area Designations for National Ambient Air Quality Standards
CARBON MONOXIDE**



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 14**National Ambient Air Quality Standards
Area Designations for Carbon Monoxide***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE TAHOE AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

FIGURE 15

Area Designations for National Ambient Air Quality Standards NITROGEN DIOXIDE



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 15**National Ambient Air Quality Standards
Area Designations for Nitrogen Dioxide***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE TAHOE AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

FIGURE 16

Area Designations for National Ambient Air Quality Standards SULFUR DIOXIDE



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 16

**National Ambient Air Quality Standards
Area Designations for Sulfur Dioxide***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		
LAKE COUNTY AIR BASIN		X	San Luis Obispo County		X
LAKE TAHOE AIR BASIN		X	Santa Barbara County		X
MOUNTAIN COUNTIES AIR BASIN		X	Ventura County		X
NORTH CENTRAL COAST AIR BASIN		X	Channel Islands (1)		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		
SACRAMENTO VALLEY AIR BASIN		X	Imperial County		X
SAN DIEGO COUNTY		X	Remainder of Air Basin		X
SAN FRANCISCO BAY AREA AIR BASIN		X			
SAN JOAQUIN VALLEY AIR BASIN					
Fresno County		X			
Kern County (portion)		X			
Kings County		X			
Madera County		X			
Merced County		X			
San Joaquin County		X			
Stanislaus County		X			
Tulare County		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2010 1-hour SO₂ standard of 75 ppb.

(1) South Central Coast Air Basin Channel Islands:

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

Ventura County includes Anacapa and San Nicolas Islands.

Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

FIGURE 17

Area Designations for National Ambient Air Quality Standards LEAD



TABLE 17

**National Ambient Air Quality Standards
Area Designations for Lead (particulate)**

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE COUNTY AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
LAKE TAHOE AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH COAST AIR BASIN		
NORTH COAST AIR BASIN		X	Los Angeles County (portion) (1)	X	
NORTHEAST PLATEAU AIR BASIN		X	Remainder of Air Basin		X
SACRAMENTO VALLEY AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

(1) Portion of County in Air Basin, not including Channel Islands

APPENDIX 3.1:
CALEEMOD EMISSIONS MODEL OUTPUTS

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The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**The Commons at Hidden Springs
Riverside-South Coast County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	4.80	1000sqft	0.11	4,800.00	0
Strip Mall	7.70	1000sqft	0.18	7,700.00	0
Supermarket	22.00	1000sqft	0.51	22,000.00	0
Automobile Care Center	7.60	1000sqft	0.17	7,600.00	0
Pharmacy/Drugstore with Drive Thru	13.00	1000sqft	0.30	13,000.00	0
Medical Office Building	8.00	1000sqft	0.18	8,000.00	0
High Turnover (Sit Down Restaurant)	4.80	1000sqft	0.11	4,800.00	0
Gasoline/Service Station	3.59	Pump	0.01	506.82	0
Other Asphalt Surfaces	319.75	1000sqft	7.34	319,748.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Grading -
- Construction Phase -

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Vehicle Trips - Per traffic report Weekend adjusted the same percentage as weekday trip gen to account for passby and internal capture; all pass by trips added to primary; C-C trips set to 3 mi for proximity, retail commercial 96% customer, 3% employee, and 1% other

Construction Off-road Equipment Mitigation - Tier 3 Mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	MaterialImported	0.00	33,000.00
tblLandUse	LandUseSquareFeet	319,750.00	319,748.00
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TTP	48.00	96.00
tblVehicleTrips	CC_TTP	78.80	96.00
tblVehicleTrips	CC_TTP	79.00	96.00
tblVehicleTrips	CC_TTP	72.50	96.00
tblVehicleTrips	CC_TTP	73.50	96.00
tblVehicleTrips	CC_TTP	64.40	96.00
tblVehicleTrips	CC_TTP	74.50	96.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CW_TTP	33.00	3.00
tblVehicleTrips	CW_TTP	2.20	3.00
tblVehicleTrips	CW_TTP	2.00	3.00
tblVehicleTrips	CW_TTP	8.50	3.00
tblVehicleTrips	CW_TTP	7.50	3.00
tblVehicleTrips	CW_TTP	16.60	3.00
tblVehicleTrips	CW_TTP	6.50	3.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	59.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	10.00	0.00
tblVehicleTrips	PB_TP	49.00	0.00

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	21.00	49.00
tblVehicleTrips	PR_TP	29.00	79.00
tblVehicleTrips	PR_TP	14.00	73.00
tblVehicleTrips	PR_TP	37.00	80.00
tblVehicleTrips	PR_TP	60.00	70.00
tblVehicleTrips	PR_TP	38.00	87.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	PR_TP	34.00	70.00
tblVehicleTrips	ST_TR	23.72	12.17
tblVehicleTrips	ST_TR	616.12	277.25
tblVehicleTrips	ST_TR	182.17	127.58
tblVehicleTrips	ST_TR	122.40	62.79
tblVehicleTrips	ST_TR	8.57	7.71
tblVehicleTrips	ST_TR	114.89	52.73
tblVehicleTrips	ST_TR	42.04	21.57
tblVehicleTrips	ST_TR	177.62	101.95
tblVehicleTrips	SU_TR	11.88	6.09
tblVehicleTrips	SU_TR	472.58	212.66
tblVehicleTrips	SU_TR	166.88	127.58
tblVehicleTrips	SU_TR	142.64	73.17
tblVehicleTrips	SU_TR	1.42	1.28
tblVehicleTrips	SU_TR	45.57	20.92
tblVehicleTrips	SU_TR	20.43	10.48
tblVehicleTrips	SU_TR	166.47	95.89
tblVehicleTrips	WD_TR	23.72	28.42
tblVehicleTrips	WD_TR	470.95	212.08
tblVehicleTrips	WD_TR	172.01	127.58

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	WD_TR	112.18	57.08
tblVehicleTrips	WD_TR	34.80	31.25
tblVehicleTrips	WD_TR	109.16	50.00
tblVehicleTrips	WD_TR	44.32	22.33
tblVehicleTrips	WD_TR	106.78	61.45

2.0 Emissions Summary

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.5444	60.1809	23.5546	0.1639	21.9792	2.1574	24.1366	10.3848	1.9848	12.3696	0.0000	17,043.48 98	17,043.48 98	1.7863	1.9966	17,677.12 47
2023	36.4574	16.8300	22.8491	0.0536	2.1648	0.7262	2.8910	0.5834	0.6834	1.2668	0.0000	5,301.116 7	5,301.116 7	0.7174	0.2121	5,380.707 1
Maximum	36.4574	60.1809	23.5546	0.1639	21.9792	2.1574	24.1366	10.3848	1.9848	12.3696	0.0000	17,043.48 98	17,043.48 98	1.7863	1.9966	17,677.12 47

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.2266	47.1749	30.9827	0.1639	8.6946	1.1212	9.7200	4.0826	1.1079	5.1079	0.0000	17,043.48 98	17,043.48 98	1.7863	1.9966	17,677.12 47
2023	36.4574	15.8899	23.9319	0.0536	2.1648	0.6777	2.8425	0.5834	0.6461	1.2295	0.0000	5,301.116 7	5,301.116 7	0.7174	0.2121	5,380.707 1
Maximum	36.4574	47.1749	30.9827	0.1639	8.6946	1.1212	9.7200	4.0826	1.1079	5.1079	0.0000	17,043.48 98	17,043.48 98	1.7863	1.9966	17,677.12 47

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	5.65	18.11	-18.34	0.00	55.02	37.62	53.52	57.46	34.26	53.53	0.00	0.00	0.00	0.00	0.00	0.00

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Energy	0.0997	0.9061	0.7611	5.4400e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0208	0.0199	1,093.8006
Mobile	13.3676	11.3526	77.6605	0.1409	13.2255	0.1182	13.3438	3.5286	0.1106	3.6392		14,350.1303	14,350.1303	1.0851	0.8794	14,639.3065
Total	15.1368	12.2591	78.4616	0.1463	13.2255	0.1872	13.4128	3.5286	0.1796	3.7082		15,437.5550	15,437.5550	1.1061	0.8993	15,733.1983

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Energy	0.0997	0.9061	0.7611	5.4400e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0208	0.0199	1,093.8006
Mobile	13.3676	11.3526	77.6605	0.1409	13.2255	0.1182	13.3438	3.5286	0.1106	3.6392		14,350.1303	14,350.1303	1.0851	0.8794	14,639.3065
Total	15.1368	12.2591	78.4616	0.1463	13.2255	0.1872	13.4128	3.5286	0.1796	3.7082		15,437.5550	15,437.5550	1.1061	0.8993	15,733.1983

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/29/2022	2/11/2022	5	10	
2	Grading	Grading	2/12/2022	3/11/2022	5	20	
3	Building Construction	Building Construction	3/12/2022	1/27/2023	5	230	
4	Paving	Paving	1/28/2023	2/24/2023	5	20	
5	Architectural Coating	Architectural Coating	2/25/2023	3/24/2023	5	20	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 50

Acres of Paving: 7.34

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 102,610; Non-Residential Outdoor: 34,203; Striped Parking Area: 19,185 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Building Construction	Cranes	1	7.00	231	0.29
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	157.00	64.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	31.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839		5,508.7626	5,508.7626	1.7817		5,553.3037
Total	4.4735	50.3453	19.9794	0.0569	21.7780	2.1564	23.9344	10.3315	1.9839	12.3154		5,508.7626	5,508.7626	1.7817		5,553.3037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197
Total	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.4934	0.0000	8.4934	4.0293	0.0000	4.0293			0.0000			0.0000
Off-Road	1.3969	27.0067	30.2661	0.0569		1.0244	1.0244		1.0244	1.0244	0.0000	5,508.762 6	5,508.762 6	1.7817		5,553.303 7
Total	1.3969	27.0067	30.2661	0.0569	8.4934	1.0244	9.5178	4.0293	1.0244	5.0537	0.0000	5,508.762 6	5,508.762 6	1.7817		5,553.303 7

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197
Total	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8823	0.0000	8.8823	3.6281	0.0000	3.6281			0.0000			0.0000
Off-Road	2.9262	33.8015	15.4839	0.0438		1.3487	1.3487		1.2408	1.2408		4,239.0719	4,239.0719	1.3710		4,273.3470
Total	2.9262	33.8015	15.4839	0.0438	8.8823	1.3487	10.2310	3.6281	1.2408	4.8690		4,239.0719	4,239.0719	1.3710		4,273.3470

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6522	26.3411	5.8576	0.1186	3.6099	0.3062	3.9161	0.9897	0.2929	1.2826		12,650.3838	12,650.3838	0.1711	1.9928	13,248.5114
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	0.7113	26.3794	6.4548	0.1201	3.7776	0.3070	4.0846	1.0342	0.2937	1.3279		12,804.4179	12,804.4179	0.1750	1.9966	13,403.7777

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.4641	0.0000	3.4641	1.4150	0.0000	1.4150			0.0000			0.0000
Off-Road	1.0756	20.7955	24.4701	0.0438		0.8142	0.8142		0.8142	0.8142	0.0000	4,239.0719	4,239.0719	1.3710		4,273.3470
Total	1.0756	20.7955	24.4701	0.0438	3.4641	0.8142	4.2783	1.4150	0.8142	2.2292	0.0000	4,239.0719	4,239.0719	1.3710		4,273.3470

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6522	26.3411	5.8576	0.1186	3.6099	0.3062	3.9161	0.9897	0.2929	1.2826		12,650.3838	12,650.3838	0.1711	1.9928	13,248.5114
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0591	0.0383	0.5972	1.5200e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		154.0341	154.0341	3.8400e-003	3.8100e-003	155.2664
Total	0.7113	26.3794	6.4548	0.1201	3.7776	0.3070	4.0846	1.0342	0.2937	1.3279		12,804.4179	12,804.4179	0.1750	1.9966	13,403.7777

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1042	2.7063	0.9410	0.0117	0.4099	0.0390	0.4490	0.1180	0.0373	0.1554		1,234.8502	1,234.8502	0.0131	0.1831	1,289.7475
Worker	0.6185	0.4008	6.2502	0.0160	1.7549	8.7300e-003	1.7636	0.4654	8.0400e-003	0.4734		1,612.2236	1,612.2236	0.0402	0.0399	1,625.1215
Total	0.7227	3.1071	7.1912	0.0276	2.1648	0.0478	2.2126	0.5834	0.0454	0.6288		2,847.0737	2,847.0737	0.0533	0.2230	2,914.8690

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5039	14.3529	17.3955	0.0269		0.7480	0.7480		0.7123	0.7123	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.5039	14.3529	17.3955	0.0269		0.7480	0.7480		0.7123	0.7123	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1042	2.7063	0.9410	0.0117	0.4099	0.0390	0.4490	0.1180	0.0373	0.1554		1,234.8502	1,234.8502	0.0131	0.1831	1,289.7475
Worker	0.6185	0.4008	6.2502	0.0160	1.7549	8.7300e-003	1.7636	0.4654	8.0400e-003	0.4734		1,612.2236	1,612.2236	0.0402	0.0399	1,625.1215
Total	0.7227	3.1071	7.1912	0.0276	2.1648	0.0478	2.2126	0.5834	0.0454	0.6288		2,847.0737	2,847.0737	0.0533	0.2230	2,914.8690

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0721	2.0909	0.8609	0.0112	0.4099	0.0182	0.4281	0.1180	0.0174	0.1355		1,185.7344	1,185.7344	0.0121	0.1752	1,238.2511
Worker	0.5732	0.3542	5.7442	0.0154	1.7549	8.2100e-003	1.7631	0.4654	7.5600e-003	0.4730		1,560.1723	1,560.1723	0.0361	0.0368	1,572.0500
Total	0.6454	2.4451	6.6051	0.0266	2.1648	0.0264	2.1912	0.5834	0.0250	0.6084		2,745.9067	2,745.9067	0.0482	0.2121	2,810.3011

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3893	13.4448	17.3268	0.0269		0.6513	0.6513		0.6211	0.6211	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.3893	13.4448	17.3268	0.0269		0.6513	0.6513		0.6211	0.6211	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0721	2.0909	0.8609	0.0112	0.4099	0.0182	0.4281	0.1180	0.0174	0.1355		1,185.7344	1,185.7344	0.0121	0.1752	1,238.2511
Worker	0.5732	0.3542	5.7442	0.0154	1.7549	8.2100e-003	1.7631	0.4654	7.5600e-003	0.4730		1,560.1723	1,560.1723	0.0361	0.0368	1,572.0500
Total	0.6454	2.4451	6.6051	0.0266	2.1648	0.0264	2.1912	0.5834	0.0250	0.6084		2,745.9067	2,745.9067	0.0482	0.2121	2,810.3011

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.9615					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9943	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0548	0.0338	0.5488	1.4700e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		149.0611	149.0611	3.4500e-003	3.5200e-003	150.1959
Total	0.0548	0.0338	0.5488	1.4700e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		149.0611	149.0611	3.4500e-003	3.5200e-003	150.1959

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.9615					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9943	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0548	0.0338	0.5488	1.4700e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		149.0611	149.0611	3.4500e-003	3.5200e-003	150.1959
Total	0.0548	0.0338	0.5488	1.4700e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		149.0611	149.0611	3.4500e-003	3.5200e-003	150.1959

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.1525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	36.3442	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1132	0.0699	1.1342	3.0500e-003	0.3465	1.6200e-003	0.3481	0.0919	1.4900e-003	0.0934		308.0595	308.0595	7.1200e-003	7.2700e-003	310.4048
Total	0.1132	0.0699	1.1342	3.0500e-003	0.3465	1.6200e-003	0.3481	0.0919	1.4900e-003	0.0934		308.0595	308.0595	7.1200e-003	7.2700e-003	310.4048

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.1525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	36.3442	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1132	0.0699	1.1342	3.0500e-003	0.3465	1.6200e-003	0.3481	0.0919	1.4900e-003	0.0934		308.0595	308.0595	7.1200e-003	7.2700e-003	310.4048
Total	0.1132	0.0699	1.1342	3.0500e-003	0.3465	1.6200e-003	0.3481	0.0919	1.4900e-003	0.0934		308.0595	308.0595	7.1200e-003	7.2700e-003	310.4048

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.3676	11.3526	77.6605	0.1409	13.2255	0.1182	13.3438	3.5286	0.1106	3.6392		14,350.1303	14,350.1303	1.0851	0.8794	14,639.3065
Unmitigated	13.3676	11.3526	77.6605	0.1409	13.2255	0.1182	13.3438	3.5286	0.1106	3.6392		14,350.1303	14,350.1303	1.0851	0.8794	14,639.3065

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	215.99	92.49	46.28	134,894	134,894
Fast Food Restaurant with Drive Thru	1,018.00	1,330.82	1020.77	1,123,776	1,123,776
Gasoline/Service Station	458.01	458.01	458.01	458,301	458,301
High Turnover (Sit Down Restaurant)	273.98	301.39	351.22	308,147	308,147
Medical Office Building	250.00	61.68	10.24	561,619	561,619
Other Asphalt Surfaces	0.00	0.00	0.00		
Pharmacy/Drugstore with Drive Thru	650.00	685.49	271.96	680,630	680,630
Strip Mall	171.94	166.09	80.70	138,832	138,832
Supermarket	1,351.90	2,242.90	2109.58	1,543,611	1,543,611
Total	4,389.83	5,338.87	4,348.76	4,949,809	4,949,809

4.3 Trip Type Information

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	3.00	6.90	3.00	96.00	1.00	49	51	0
Fast Food Restaurant with Drive Thru	16.60	3.00	6.90	3.00	96.00	1.00	79	21	0
Gasoline/Service Station	16.60	3.00	6.90	3.00	96.00	1.00	73	27	0
High Turnover (Sit Down Restaurant)	16.60	3.00	6.90	3.00	96.00	1.00	80	20	0
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	70	30	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Pharmacy/Drugstore with Drive Thru	16.60	3.00	6.90	3.00	96.00	1.00	87	13	0
Strip Mall	16.60	3.00	6.90	3.00	96.00	1.00	60	40	0
Supermarket	16.60	3.00	6.90	3.00	96.00	1.00	70	30	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Fast Food Restaurant with Drive Thru	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Gasoline/Service Station	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
High Turnover (Sit Down Restaurant)	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Medical Office Building	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Pharmacy/Drugstore with Drive Thru	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Strip Mall	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Supermarket	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0997	0.9061	0.7611	5.4400e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0208	0.0199	1,093.8006
NaturalGas Unmitigated	0.0997	0.9061	0.7611	5.4400e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0208	0.0199	1,093.8006

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	673.173	7.2600e-003	0.0660	0.0554	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003		79.1968	79.1968	1.5200e-003	1.4500e-003	79.6674
Fast Food Restaurant with Drive Thru	3585.67	0.0387	0.3515	0.2953	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.8430	421.8430	8.0900e-003	7.7300e-003	424.3498
Gasoline/Service Station	44.8918	4.8000e-004	4.4000e-003	3.7000e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		5.2814	5.2814	1.0000e-004	1.0000e-004	5.3128
High Turnover (Sit Down Restaurant)	3585.67	0.0387	0.3515	0.2953	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.8430	421.8430	8.0900e-003	7.7300e-003	424.3498
Medical Office Building	75.1781	8.1000e-004	7.3700e-003	6.1900e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8445	8.8445	1.7000e-004	1.6000e-004	8.8970
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	78.3562	8.5000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.2184	9.2184	1.8000e-004	1.7000e-004	9.2732
Strip Mall	46.411	5.0000e-004	4.5500e-003	3.8200e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.4601	5.4601	1.0000e-004	1.0000e-004	5.4926
Supermarket	1153.04	0.0124	0.1130	0.0950	6.8000e-004		8.5900e-003	8.5900e-003		8.5900e-003	8.5900e-003		135.6519	135.6519	2.6000e-003	2.4900e-003	136.4580
Total		0.0997	0.9061	0.7611	5.4500e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0209	0.0199	1,093.8006

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.673173	7.2600e-003	0.0660	0.0554	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003		79.1968	79.1968	1.5200e-003	1.4500e-003	79.6674
Fast Food Restaurant with Drive Thru	3.58567	0.0387	0.3515	0.2953	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.8430	421.8430	8.0900e-003	7.7300e-003	424.3498
Gasoline/Service Station	0.0448918	4.8000e-004	4.4000e-003	3.7000e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		5.2814	5.2814	1.0000e-004	1.0000e-004	5.3128
High Turnover (Sit Down Restaurant)	3.58567	0.0387	0.3515	0.2953	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.8430	421.8430	8.0900e-003	7.7300e-003	424.3498
Medical Office Building	0.0751781	8.1000e-004	7.3700e-003	6.1900e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8445	8.8445	1.7000e-004	1.6000e-004	8.8970
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	0.0783562	8.5000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.2184	9.2184	1.8000e-004	1.7000e-004	9.2732
Strip Mall	0.046411	5.0000e-004	4.5500e-003	3.8200e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.4601	5.4601	1.0000e-004	1.0000e-004	5.4926
Supermarket	1.15304	0.0124	0.1130	0.0950	6.8000e-004		8.5900e-003	8.5900e-003		8.5900e-003	8.5900e-003		135.6519	135.6519	2.6000e-003	2.4900e-003	136.4580
Total		0.0997	0.9061	0.7611	5.4500e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0209	0.0199	1,093.8006

6.0 Area Detail

6.1 Mitigation Measures Area

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Unmitigated	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1981					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.7000e-003	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Total	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1981					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.7000e-003	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Total	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912

7.0 Water Detail

7.1 Mitigation Measures Water

The Commons at Hidden Springs - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**The Commons at Hidden Springs
Riverside-South Coast County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	4.80	1000sqft	0.11	4,800.00	0
Strip Mall	7.70	1000sqft	0.18	7,700.00	0
Supermarket	22.00	1000sqft	0.51	22,000.00	0
Automobile Care Center	7.60	1000sqft	0.17	7,600.00	0
Pharmacy/Drugstore with Drive Thru	13.00	1000sqft	0.30	13,000.00	0
Medical Office Building	8.00	1000sqft	0.18	8,000.00	0
High Turnover (Sit Down Restaurant)	4.80	1000sqft	0.11	4,800.00	0
Gasoline/Service Station	3.59	Pump	0.01	506.82	0
Other Asphalt Surfaces	319.75	1000sqft	7.34	319,748.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Grading -
- Construction Phase -

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes

Vehicle Trips - Per traffic report Weekend adjusted the same percentage as weekday trip gen to account for passby and internal capture; all pass by trips added to primary; C-C trips set to 3 mi for proximity, retail commercial 96% customer, 3% employee, and 1% other

Construction Off-road Equipment Mitigation - Tier 3 Mitigation

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	MaterialImported	0.00	33,000.00
tblLandUse	LandUseSquareFeet	319,750.00	319,748.00
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TL	8.40	3.00
tblVehicleTrips	CC_TTP	48.00	96.00
tblVehicleTrips	CC_TTP	78.80	96.00
tblVehicleTrips	CC_TTP	79.00	96.00
tblVehicleTrips	CC_TTP	72.50	96.00
tblVehicleTrips	CC_TTP	73.50	96.00
tblVehicleTrips	CC_TTP	64.40	96.00
tblVehicleTrips	CC_TTP	74.50	96.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CNW_TTP	19.00	1.00
tblVehicleTrips	CW_TTP	33.00	3.00
tblVehicleTrips	CW_TTP	2.20	3.00
tblVehicleTrips	CW_TTP	2.00	3.00
tblVehicleTrips	CW_TTP	8.50	3.00
tblVehicleTrips	CW_TTP	7.50	3.00
tblVehicleTrips	CW_TTP	16.60	3.00
tblVehicleTrips	CW_TTP	6.50	3.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	59.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	10.00	0.00
tblVehicleTrips	PB_TP	49.00	0.00

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	21.00	49.00
tblVehicleTrips	PR_TP	29.00	79.00
tblVehicleTrips	PR_TP	14.00	73.00
tblVehicleTrips	PR_TP	37.00	80.00
tblVehicleTrips	PR_TP	60.00	70.00
tblVehicleTrips	PR_TP	38.00	87.00
tblVehicleTrips	PR_TP	45.00	60.00
tblVehicleTrips	PR_TP	34.00	70.00
tblVehicleTrips	ST_TR	23.72	12.17
tblVehicleTrips	ST_TR	616.12	277.25
tblVehicleTrips	ST_TR	182.17	127.58
tblVehicleTrips	ST_TR	122.40	62.79
tblVehicleTrips	ST_TR	8.57	7.71
tblVehicleTrips	ST_TR	114.89	52.73
tblVehicleTrips	ST_TR	42.04	21.57
tblVehicleTrips	ST_TR	177.62	101.95
tblVehicleTrips	SU_TR	11.88	6.09
tblVehicleTrips	SU_TR	472.58	212.66
tblVehicleTrips	SU_TR	166.88	127.58
tblVehicleTrips	SU_TR	142.64	73.17
tblVehicleTrips	SU_TR	1.42	1.28
tblVehicleTrips	SU_TR	45.57	20.92
tblVehicleTrips	SU_TR	20.43	10.48
tblVehicleTrips	SU_TR	166.47	95.89
tblVehicleTrips	WD_TR	23.72	28.42
tblVehicleTrips	WD_TR	470.95	212.08
tblVehicleTrips	WD_TR	172.01	127.58

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	WD_TR	112.18	57.08
tblVehicleTrips	WD_TR	34.80	31.25
tblVehicleTrips	WD_TR	109.16	50.00
tblVehicleTrips	WD_TR	44.32	22.33
tblVehicleTrips	WD_TR	106.78	61.45

2.0 Emissions Summary

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.5397	61.6250	22.4059	0.1638	21.9792	2.1574	24.1366	10.3848	1.9848	12.3696	0.0000	17,038.63 68	17,038.63 68	1.7862	1.9982	17,672.71 84
2023	36.4503	16.9699	21.7983	0.0521	2.1648	0.7262	2.8910	0.5834	0.6835	1.2669	0.0000	5,157.551 8	5,157.551 8	0.7174	0.2135	5,237.564 6
Maximum	36.4503	61.6250	22.4059	0.1638	21.9792	2.1574	24.1366	10.3848	1.9848	12.3696	0.0000	17,038.63 68	17,038.63 68	1.7862	1.9982	17,672.71 84

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1814	48.6191	30.9725	0.1638	8.6946	1.1216	9.7200	4.0826	1.1083	5.1079	0.0000	17,038.63 68	17,038.63 68	1.7862	1.9982	17,672.71 84
2023	36.4503	16.0297	22.8811	0.0521	2.1648	0.6778	2.8426	0.5834	0.6462	1.2296	0.0000	5,157.551 8	5,157.551 8	0.7174	0.2135	5,237.564 6
Maximum	36.4503	48.6191	30.9725	0.1638	8.6946	1.1216	9.7200	4.0826	1.1083	5.1079	0.0000	17,038.63 68	17,038.63 68	1.7862	1.9982	17,672.71 84

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	5.75	17.74	-21.83	0.00	55.02	37.60	53.52	57.46	34.25	53.53	0.00	0.00	0.00	0.00	0.00	0.00

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Energy	0.0997	0.9061	0.7611	5.4400e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0208	0.0199	1,093.8006
Mobile	10.7488	12.0231	73.3549	0.1313	13.2255	0.1185	13.3440	3.5286	0.1108	3.6394		13,387.1239	13,387.1239	1.1652	0.9000	13,684.4535
Total	12.5180	12.9296	74.1560	0.1368	13.2255	0.1875	13.4130	3.5286	0.1798	3.7084		14,474.5486	14,474.5486	1.1863	0.9199	14,778.3453

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Energy	0.0997	0.9061	0.7611	5.4400e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0208	0.0199	1,093.8006
Mobile	10.7488	12.0231	73.3549	0.1313	13.2255	0.1185	13.3440	3.5286	0.1108	3.6394		13,387.1239	13,387.1239	1.1652	0.9000	13,684.4535
Total	12.5180	12.9296	74.1560	0.1368	13.2255	0.1875	13.4130	3.5286	0.1798	3.7084		14,474.5486	14,474.5486	1.1863	0.9199	14,778.3453

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/29/2022	2/11/2022	5	10	
2	Grading	Grading	2/12/2022	3/11/2022	5	20	
3	Building Construction	Building Construction	3/12/2022	1/27/2023	5	230	
4	Paving	Paving	1/28/2023	2/24/2023	5	20	
5	Architectural Coating	Architectural Coating	2/25/2023	3/24/2023	5	20	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 50

Acres of Paving: 7.34

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 102,610; Non-Residential Outdoor: 34,203; Striped Parking Area: 19,185 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Building Construction	Cranes	1	7.00	231	0.29
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	4,125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	157.00	64.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	31.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	4.4735	50.3453	19.9794	0.0569		2.1564	2.1564		1.9839	1.9839		5,508.7626	5,508.7626	1.7817		5,553.3037
Total	4.4735	50.3453	19.9794	0.0569	21.7780	2.1564	23.9344	10.3315	1.9839	12.3154		5,508.7626	5,508.7626	1.7817		5,553.3037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386
Total	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.4934	0.0000	8.4934	4.0293	0.0000	4.0293			0.0000			0.0000
Off-Road	1.3969	27.0067	30.2661	0.0569		1.0244	1.0244		1.0244	1.0244	0.0000	5,508.7626	5,508.7626	1.7817		5,553.3037
Total	1.3969	27.0067	30.2661	0.0569	8.4934	1.0244	9.5178	4.0293	1.0244	5.0537	0.0000	5,508.7626	5,508.7626	1.7817		5,553.3037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386
Total	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8823	0.0000	8.8823	3.6281	0.0000	3.6281			0.0000			0.0000
Off-Road	2.9262	33.8015	15.4839	0.0438		1.3487	1.3487		1.2408	1.2408		4,239.0719	4,239.0719	1.3710		4,273.3470
Total	2.9262	33.8015	15.4839	0.0438	8.8823	1.3487	10.2310	3.6281	1.2408	4.8690		4,239.0719	4,239.0719	1.3710		4,273.3470

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6212	27.7838	6.0184	0.1187	3.6099	0.3066	3.9165	0.9897	0.2933	1.2830		12,660.0413	12,660.0413	0.1696	1.9943	13,258.5893
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	0.6764	27.8235	6.5024	0.1201	3.7776	0.3074	4.0850	1.0342	0.2941	1.3282		12,799.5649	12,799.5649	0.1734	1.9982	13,399.3715

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.4641	0.0000	3.4641	1.4150	0.0000	1.4150			0.0000			0.0000
Off-Road	1.0756	20.7955	24.4701	0.0438		0.8142	0.8142		0.8142	0.8142	0.0000	4,239.0719	4,239.0719	1.3710		4,273.3470
Total	1.0756	20.7955	24.4701	0.0438	3.4641	0.8142	4.2783	1.4150	0.8142	2.2292	0.0000	4,239.0719	4,239.0719	1.3710		4,273.3470

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6212	27.7838	6.0184	0.1187	3.6099	0.3066	3.9165	0.9897	0.2933	1.2830		12,660.0413	12,660.0413	0.1696	1.9943	13,258.5893
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0552	0.0398	0.4840	1.3800e-003	0.1677	8.3000e-004	0.1685	0.0445	7.7000e-004	0.0452		139.5236	139.5236	3.8100e-003	3.9000e-003	140.7822
Total	0.6764	27.8235	6.5024	0.1201	3.7776	0.3074	4.0850	1.0342	0.2941	1.3282		12,799.5649	12,799.5649	0.1734	1.9982	13,399.3715

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0997	2.8511	0.9772	0.0117	0.4099	0.0391	0.4491	0.1180	0.0374	0.1555		1,236.1969	1,236.1969	0.0129	0.1835	1,291.1916
Worker	0.5778	0.4160	5.0654	0.0145	1.7549	8.7300e-003	1.7636	0.4654	8.0400e-003	0.4734		1,460.3472	1,460.3472	0.0399	0.0409	1,473.5203
Total	0.6775	3.2672	6.0425	0.0261	2.1648	0.0479	2.2127	0.5834	0.0455	0.6289		2,696.5442	2,696.5442	0.0528	0.2243	2,764.7119

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5039	14.3529	17.3955	0.0269		0.7480	0.7480		0.7123	0.7123	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.5039	14.3529	17.3955	0.0269		0.7480	0.7480		0.7123	0.7123	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0997	2.8511	0.9772	0.0117	0.4099	0.0391	0.4491	0.1180	0.0374	0.1555		1,236.1969	1,236.1969	0.0129	0.1835	1,291.1916
Worker	0.5778	0.4160	5.0654	0.0145	1.7549	8.7300e-003	1.7636	0.4654	8.0400e-003	0.4734		1,460.3472	1,460.3472	0.0399	0.0409	1,473.5203
Total	0.6775	3.2672	6.0425	0.0261	2.1648	0.0479	2.2127	0.5834	0.0455	0.6289		2,696.5442	2,696.5442	0.0528	0.2243	2,764.7119

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0668	2.2175	0.8899	0.0112	0.4099	0.0183	0.4282	0.1180	0.0175	0.1355		1,188.6771	1,188.6771	0.0119	0.1758	1,241.3617
Worker	0.5373	0.3675	4.6644	0.0140	1.7549	8.2100e-003	1.7631	0.4654	7.5600e-003	0.4730		1,413.6648	1,413.6648	0.0360	0.0377	1,425.7969
Total	0.6041	2.5850	5.5543	0.0252	2.1648	0.0265	2.1913	0.5834	0.0250	0.6085		2,602.3419	2,602.3419	0.0478	0.2135	2,667.1586

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3893	13.4448	17.3268	0.0269		0.6513	0.6513		0.6211	0.6211	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.3893	13.4448	17.3268	0.0269		0.6513	0.6513		0.6211	0.6211	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0668	2.2175	0.8899	0.0112	0.4099	0.0183	0.4282	0.1180	0.0175	0.1355		1,188.6771	1,188.6771	0.0119	0.1758	1,241.3617
Worker	0.5373	0.3675	4.6644	0.0140	1.7549	8.2100e-003	1.7631	0.4654	7.5600e-003	0.4730		1,413.6648	1,413.6648	0.0360	0.0377	1,425.7969
Total	0.6041	2.5850	5.5543	0.0252	2.1648	0.0265	2.1913	0.5834	0.0250	0.6085		2,602.3419	2,602.3419	0.0478	0.2135	2,667.1586

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.9615					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9943	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226
Total	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.9615					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9943	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 1	2,207.584 1	0.7140		2,225.433 6

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226
Total	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.1525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	36.3442	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1061	0.0726	0.9210	2.7600e-003	0.3465	1.6200e-003	0.3481	0.0919	1.4900e-003	0.0934		279.1313	279.1313	7.1000e-003	7.4400e-003	281.5268
Total	0.1061	0.0726	0.9210	2.7600e-003	0.3465	1.6200e-003	0.3481	0.0919	1.4900e-003	0.0934		279.1313	279.1313	7.1000e-003	7.4400e-003	281.5268

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.1525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	36.3442	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1061	0.0726	0.9210	2.7600e-003	0.3465	1.6200e-003	0.3481	0.0919	1.4900e-003	0.0934		279.1313	279.1313	7.1000e-003	7.4400e-003	281.5268
Total	0.1061	0.0726	0.9210	2.7600e-003	0.3465	1.6200e-003	0.3481	0.0919	1.4900e-003	0.0934		279.1313	279.1313	7.1000e-003	7.4400e-003	281.5268

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.7488	12.0231	73.3549	0.1313	13.2255	0.1185	13.3440	3.5286	0.1108	3.6394		13,387.12 39	13,387.12 39	1.1652	0.9000	13,684.45 35
Unmitigated	10.7488	12.0231	73.3549	0.1313	13.2255	0.1185	13.3440	3.5286	0.1108	3.6394		13,387.12 39	13,387.12 39	1.1652	0.9000	13,684.45 35

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	215.99	92.49	46.28	134,894	134,894
Fast Food Restaurant with Drive Thru	1,018.00	1,330.82	1020.77	1,123,776	1,123,776
Gasoline/Service Station	458.01	458.01	458.01	458,301	458,301
High Turnover (Sit Down Restaurant)	273.98	301.39	351.22	308,147	308,147
Medical Office Building	250.00	61.68	10.24	561,619	561,619
Other Asphalt Surfaces	0.00	0.00	0.00		
Pharmacy/Drugstore with Drive Thru	650.00	685.49	271.96	680,630	680,630
Strip Mall	171.94	166.09	80.70	138,832	138,832
Supermarket	1,351.90	2,242.90	2109.58	1,543,611	1,543,611
Total	4,389.83	5,338.87	4,348.76	4,949,809	4,949,809

4.3 Trip Type Information

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	3.00	6.90	3.00	96.00	1.00	49	51	0
Fast Food Restaurant with Drive Thru	16.60	3.00	6.90	3.00	96.00	1.00	79	21	0
Gasoline/Service Station	16.60	3.00	6.90	3.00	96.00	1.00	73	27	0
High Turnover (Sit Down Restaurant)	16.60	3.00	6.90	3.00	96.00	1.00	80	20	0
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	70	30	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Pharmacy/Drugstore with Drive Thru	16.60	3.00	6.90	3.00	96.00	1.00	87	13	0
Strip Mall	16.60	3.00	6.90	3.00	96.00	1.00	60	40	0
Supermarket	16.60	3.00	6.90	3.00	96.00	1.00	70	30	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Fast Food Restaurant with Drive Thru	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Gasoline/Service Station	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
High Turnover (Sit Down Restaurant)	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Medical Office Building	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Pharmacy/Drugstore with Drive Thru	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Strip Mall	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Supermarket	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0997	0.9061	0.7611	5.4400e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0208	0.0199	1,093.8006
NaturalGas Unmitigated	0.0997	0.9061	0.7611	5.4400e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0208	0.0199	1,093.8006

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	673.173	7.2600e-003	0.0660	0.0554	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003		79.1968	79.1968	1.5200e-003	1.4500e-003	79.6674
Fast Food Restaurant with Drive Thru	3585.67	0.0387	0.3515	0.2953	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.8430	421.8430	8.0900e-003	7.7300e-003	424.3498
Gasoline/Service Station	44.8918	4.8000e-004	4.4000e-003	3.7000e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		5.2814	5.2814	1.0000e-004	1.0000e-004	5.3128
High Turnover (Sit Down Restaurant)	3585.67	0.0387	0.3515	0.2953	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.8430	421.8430	8.0900e-003	7.7300e-003	424.3498
Medical Office Building	75.1781	8.1000e-004	7.3700e-003	6.1900e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8445	8.8445	1.7000e-004	1.6000e-004	8.8970
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	78.3562	8.5000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.2184	9.2184	1.8000e-004	1.7000e-004	9.2732
Strip Mall	46.411	5.0000e-004	4.5500e-003	3.8200e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.4601	5.4601	1.0000e-004	1.0000e-004	5.4926
Supermarket	1153.04	0.0124	0.1130	0.0950	6.8000e-004		8.5900e-003	8.5900e-003		8.5900e-003	8.5900e-003		135.6519	135.6519	2.6000e-003	2.4900e-003	136.4580
Total		0.0997	0.9061	0.7611	5.4500e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0209	0.0199	1,093.8006

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.673173	7.2600e-003	0.0660	0.0554	4.0000e-004		5.0200e-003	5.0200e-003		5.0200e-003	5.0200e-003		79.1968	79.1968	1.5200e-003	1.4500e-003	79.6674
Fast Food Restaurant with Drive Thru	3.58567	0.0387	0.3515	0.2953	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.8430	421.8430	8.0900e-003	7.7300e-003	424.3498
Gasoline/Service Station	0.0448918	4.8000e-004	4.4000e-003	3.7000e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		5.2814	5.2814	1.0000e-004	1.0000e-004	5.3128
High Turnover (Sit Down Restaurant)	3.58567	0.0387	0.3515	0.2953	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.8430	421.8430	8.0900e-003	7.7300e-003	424.3498
Medical Office Building	0.0751781	8.1000e-004	7.3700e-003	6.1900e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8445	8.8445	1.7000e-004	1.6000e-004	8.8970
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	0.0783562	8.5000e-004	7.6800e-003	6.4500e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.2184	9.2184	1.8000e-004	1.7000e-004	9.2732
Strip Mall	0.046411	5.0000e-004	4.5500e-003	3.8200e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.4601	5.4601	1.0000e-004	1.0000e-004	5.4926
Supermarket	1.15304	0.0124	0.1130	0.0950	6.8000e-004		8.5900e-003	8.5900e-003		8.5900e-003	8.5900e-003		135.6519	135.6519	2.6000e-003	2.4900e-003	136.4580
Total		0.0997	0.9061	0.7611	5.4500e-003		0.0689	0.0689		0.0689	0.0689		1,087.3391	1,087.3391	0.0209	0.0199	1,093.8006

6.0 Area Detail

6.1 Mitigation Measures Area

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Unmitigated	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1981					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.7000e-003	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Total	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1981					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.7000e-003	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912
Total	1.6695	3.6000e-004	0.0399	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		0.0856	0.0856	2.2000e-004		0.0912

7.0 Water Detail

7.1 Mitigation Measures Water

The Commons at Hidden Springs - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation
