FOREST LAWN - CATHEDRAL CITY SPECIFIC PLAN

AIR QUALITY IMPACT ANALYSIS

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LIST OF ABBREVIATED TERMS

µg/m^3	Microgram per Cubic Meter
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
1993 CEQA Handbook	SCAQMD's CEQA Air Quality Handbook (1993)
2016-2040 RTP/SCS	2016-2040 Regional Transportation Plan/Sustainable Communities Strategy
AB 2595	California Clean Air Act
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BC	Black Carbon
Brief	Brief of Amicus Curiae by the SCAQMD in the Friant Ranch Case
C_2Cl_4	Perchloroethylene
C_4H_6	1,3-butadiene
C_6H_6	Benzene
C_2H_3Cl	Vinyl Chloride
C_2H_4O	Acetaldehyde
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
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
CEQA Guidelines	2019 CEQA Statute and Guidelines
CH_2O	Formaldehyde
CO	Carbon Monoxide
COH	Coefficient of Haze
COHb	Carboxyhemoglobin
City	City of Cathedral City
Cr(VI)	Chromium
EC	Elemental Carbon
EIR	Environmental Impact Report
EMFAC	Emissions FACtor Model
EPA	Environmental Protection Agency
ETW	Equivalent Test Weight
EV	Electric Vehicle
FAR	Floor Area Ratio

GHG	Greenhouse Gas
GVWR	Gross Vehicle Weight Rating
H_2S	Hydrogen Sulfide
HI	Hazard Index
hp	Horsepower
lbs	Pounds
lbs/day	Pounds Per Day
LED	Light-Emitting Diode
LST	Localized Significance Threshold
LST Methodology	Final Localized Significance Threshold Methodology
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measures
mph	Miles Per Hour
MWELO	California Department of Water Resources' Model Water Efficient Landscape Ordinance
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
O_2	Oxygen
O_3	Ozone
O_2 Deficiency	Chronic Hypoxemia
OBD-II	On-Board Diagnostic
ODC	Ozone Depleting Compounds
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	Forest Lawn - Cathedral City Specific Plan
RECLAIM	Regional Clean Air Incentives Market
ROG	Reactive Organic Gases
SB	Senate Bill
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
SSAB	Salton Sea Air Basin
TAC	Toxic Air Contaminant
Title 24	California Building Code
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
VOC	Volatile Organic Compounds

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this Forest Lawn - Cathedral City Specific Plan Air Quality Impact Analysis (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the CEQA Guidelines (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	*Less Than Significant*	*n/a*
Localized Construction Emissions	3.6	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
Localized Operational Emissions	3.6	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.7	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.8	*Less Than Significant*	*n/a*
Sensitive Receptors	3.9	*Less Than Significant*	*n/a*
Odors	3.10	*Less Than Significant*	*n/a*
Cumulative Impacts	3.11	*Less Than Significant*	*n/a*

ES.2 REGULATORY REQUIREMENTS

There are numerous requirements that development projects must comply with by law, and that were put in place by federal, State, and local regulatory agencies for the improvement of air quality. Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or other forms of property, or can cause excessive soiling on any other parcel shall conform to the requirements of the South Coast Air Quality Management District (SCAQMD). SCAQMD Rules that are currently applicable to this Project and/or the existing cemetery operations are described below.

SCAQMD Rule 402

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

SCAQMD Rule 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities.

SCAQMD Rule 1113

This rule serves to limit the VOC content of architectural coatings used on projects in the SCAQMD. This rule applies to any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects.

SCAQMD Rule 1147

The purpose of this rule is to reduce nitrogen oxide (NO_X) emissions while limiting carbon monoxide (CO) emissions from gaseous and liquid fuel fired combustion equipment as defined in this rule. This rule applies to the existing crematorium.

SCAQMD Rule 1301

This rule is intended to provide that pre-construction review requirements to ensure that new or relocated facilities do not interfere with progress in attainment of the National Ambient Air Quality Standards (NAAQS), while future economic growth within the SCAQMD is not unnecessarily restricted. The specific air quality goal is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors. Rule 1301 also limits emission increases of ammonia, and Ozone Depleting Compounds (ODCs) from new, modified or relocated facilities by requiring the use of Best Available Control Technology (BACT).

SCAQMD Rule 1401

A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States (U.S.) Bureau of Mines.

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1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed Forest Lawn - Cathedral City Specific Plan Project (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the new cemetery uses proposed in the southern portion of the proposed Specific Plan site and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

1.1 SITE LOCATION

Forest Lawn - Cathedral City is located at 69855 Ramon Road (south of Ramon Road and east of Da Vall Drive) in the City of Cathedral City, as shown in Exhibit 1-A. The proposed Specific Plan site includes the existing cemetery in the northern portion and a former self-storage facility in the southern portion that would be redeveloped with cemetery uses.

1.2 PROJECT DESCRIPTION

The existing cemetery in the northern portion of the proposed Specific Plan site includes an existing mortuary with chapel, mausoleums, wall crypts, columbaria, crematorium, and lawn crypts, as well as associated office space, storage, surface parking areas, and walkways. The existing development consists of approximately 18,000 square feet (sf) of occupied building area and approximately 35,000 sf of non-occupied floor area, including approximately 11,500 interment spaces. Additional mausoleums, wall crypts, and lawn crypts (approximately 5,000 sf of non-occupied floor area) are currently under construction in the southeast portion of the existing cemetery property pursuant to prior approvals and will provide an additional approximately 2,500 interment spaces.

The southern portion of the proposed Specific Plan site, which is also referred to herein as the "Project site" for purposes of this analysis, is currently developed with a former self-storage facility, which consists of 577 storage units in approximately 75,500 sf of non-occupied floor area, approximately 4,000 sf of occupied floor area, and surface parking, including spaces for recreational vehicles and trailers. The former self-storage facility gradually ceased operations over the last couple of years, in anticipation of this application for much needed cemetery property development.

Forest Lawn – Cathedral City's existing cemetery encompasses approximately 5.2 acres and is located at 69855 Ramon Road (south of Ramon Road and east of Da Vall Drive). There are existing residential uses to the west, and the former self-storage facility owned by Forest Lawn – Cathedral City to the south. The former self-storage facility is located on approximately 4.8-acres and is proposed to redeveloped with additional cemetery uses as part of the proposed Project.

In addition to the adoption of the proposed Specific Plan for the existing and proposed cemetery uses, the Project Applicant is requesting a General Plan Amendment to change the land use designation for the project site from CG General Commercial to Neighborhood Commercial, and a Zone Change to change the zoning designation from PCC Planned Community Commercial to NBP Neighborhood Business Park.

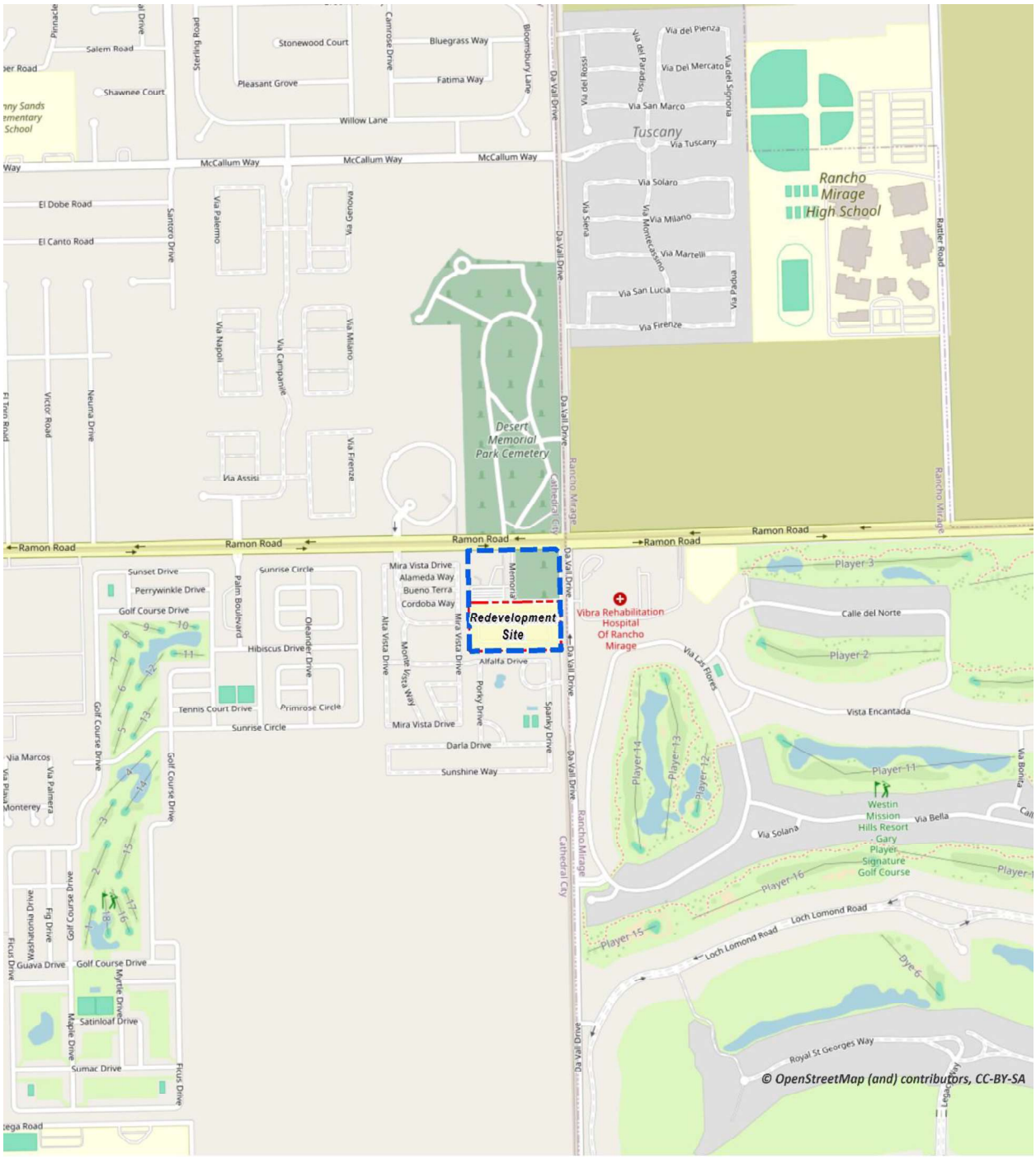
Proposed Forest Lawn-Cathedral City Specific Plan

The proposed Forest Lawn – Cathedral City Specific Plan would provide a regulatory framework for this cemetery development. The proposed Specific Plan would allow for the construction of up to approximately 12,000 sf of floor area for new structures (for such uses as reception areas, a chapel, restrooms, storage, multi-purpose and support areas) and up to approximately 275,000 sf of new non-occupied floor area (for such uses as wall crypts, columbaria, and burial and cremation garden structures). With the proposed removal of the former self-storage facility, this would result in a net increase of approximately 199,500 sf of non-occupied floor area. The new development would provide an additional approximately 70,000 interment spaces to help meet local and regional demand for interment. Cemetery structures such as burial gardens and mausoleums would be developed in stages, with incremental amounts of development occurring as needed to meet the demand for interment spaces. The Project would generally retain existing landscaping, add additional cemetery landscaping and garden areas, with a resulting increase in pervious area on the project site.

Accounting for existing uses to remain, cemetery uses currently under construction, and proposed future development within the southern portion of the Specific Plan site (former self-storage facility site), the proposed Specific Plan would thus allow a total of approximately 30,000 sf of occupied floor area, approximately 315,000 sf of non-occupied floor area, and approximately 84,000 interment spaces within the entire Forest Lawn – Cathedral City property. A preliminary conceptual site plan is shown on Exhibit 1-B. Actual development will be governed by the proposed Specific Plan.

With respect to construction activities, and as further discussion in Section 3.4, Construction Emissions, construction activities would include demolition; site preparation and grading; and building construction, paving and architectural coatings. It is conservatively assumed that approximately 5,383 tons of debris would be generated, and there would be approximately 60,000 cy of export. These materials would be hauled off-site. Additionally, Project contractors would use off-road diesel construction equipment that complies with EPA/CARB Tier 4 off-road emissions standards or equivalent would be used during construction. This Project feature would be included in the Project conditions of approval.

EXHIBIT 1-A: LOCATION MAP

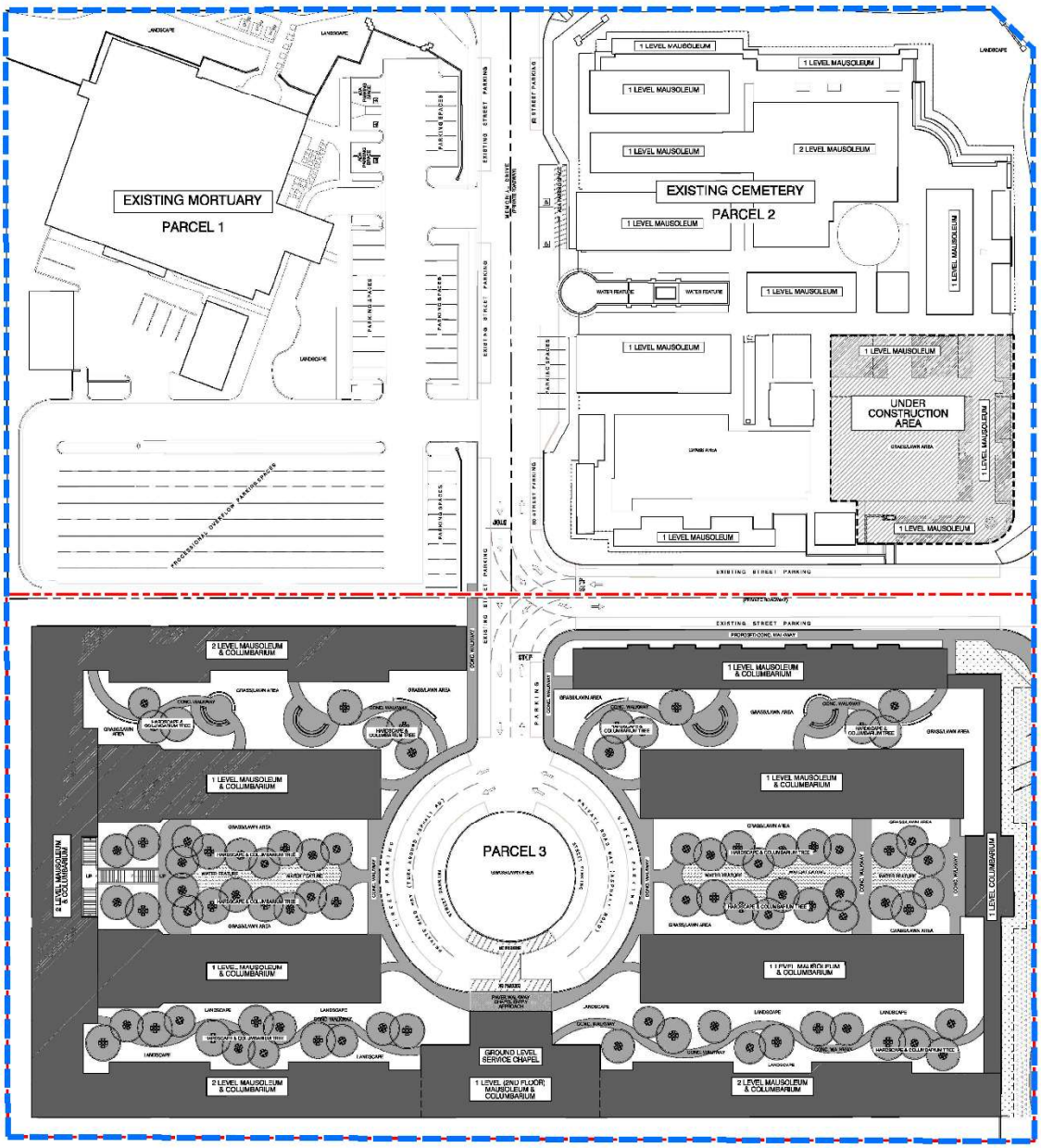


LEGEND:

Redevelopment Site Boundary

Specific Plan

EXHIBIT 1-B: PRELIMINARY CONCEPTUAL SITE PLAN



LEGEND:

N

Redevelopment Site Boundary Specific 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 ATMOSPHERIC SETTING

The Specific Plan site is located within Salton Sea Air Basin (SSAB) within the jurisdiction of the SCAQMD. The SSAB (also referred to herein as "the Basin") is aligned in a north-west-southwest orientation stretching from Banning Pass to the Mexican border. The regional climate, as well as the temperature, wind, humidity, precipitation, and amount of sunshine significantly influence the air quality in the Basin.

The climate of the Coachella Valley is a continental, desert-type climate, with hot summers, mild winters, and very little annual rainfall. Precipitation is less than six inches annually and occurs mostly in the winter months from active frontal systems and in the late summer months from thunderstorms. Almost all of the annual rainfall comes from the fringes of mid-latitude storms from late November to early April with summers often being completely dry. Temperatures exceed 100 degrees Fahrenheit (°F), on the average, for four months each year, with daily highs near 110 °F during July and August. Summer nights are cooler with minimum temperatures in the mid-70s. During the winter season, daytime highs are quite mild, but the dry air is conducive to nocturnal radiational cooling, with early morning lows around 40 °F.

The Coachella Valley and adjacent areas are exposed to frequent gusty winds. The flat terrain of the valley and strong temperature differentials, created by intense solar heating, produce moderate winds and deep thermal convection. Wind speeds exceeding 31 miles per hour (mph) occur most frequently in April and May. On an annual basis, strong winds (greater than 31 mph) are observed 0.6 percent of the time and speeds of less than 6.8 mph account for more than one-half of the observed winds. Prevailing winds are from the northwest through southwest, with secondary flows from the southeast. The strongest and most persistent winds typically occur immediately to the east of Banning Pass, which is noted as a wind power generation resource area. Aside from this locale, the wind conditions in the remainder of the Coachella Valley are geographically distinct. Stronger winds tend to occur closer to the foothills. Less frequently, widespread gusty winds occur over all areas of the Valley.

Portions of the SSAB experience surface inversions almost every day of the year. Inversions in the SSAB are attributed to strong surface heating, but are usually broken, allowing pollutants to disperse more easily. Weak surface inversions are caused by cooling of air in contact with the cold surface of the earth at night. In the valleys and low-lying areas, this condition is intensified by the addition of cold air flowing downslope from the hills and pooling on the valley floor. In addition, inversions in the SSAB caused by the presence of the Pacific high-pressure cell can cause the air mass aloft to sink. As the air descends, compressional heating warms the air to a temperature higher than the air below. This subsidence inversion can act as a nearly impenetrable lid to the vertical mixing of pollutants. These inversions can persist for one or more days, causing air stagnation and the buildup of pollutants. Subsidence inversions are common from November through June and are relatively absent from July through October.

Within the Project area, there is a natural sand migration process, called "blowsand," that has direct and indirect effects on air quality. Blowsand produces particulate matter (PM_{10}) in two ways: (1) by

direct particle erosion and fragmentation as natural PM_{10}, and (2) by secondary effects, as sand deposits on road surfaces.

Also, where water has already receded around the Salton Sea, the surface areas contain a salty mix of sediments that can change from a hardened salt crust to a fluffy soft layer of dust depending upon the season. Exposed sediments could elevate PM_{10} levels throughout the region. Almost 120,000 acres of Salton Sea lakebed could be exposed as inflows to the Sea decrease in future years. Local communities may be affected by 60,000 potentially dust-blowing acres, which will cause PM_{10} levels to rise.

2.2 AIR POLLUTANTS

2.2.1 Criteria Pollutants

Air quality regulations were first promulgated with the Federal Clean Air Act (CAA) of 1970. Air quality is defined by ambient air concentrations of seven "criteria air pollutants," which are a group of common air pollutants identified by the United States Environmental Protection Agency (U.S. EPA) to be of concern with respect to the health and welfare of the general public. Federal and State governments regulate criteria air pollutants by using ambient standards based on criteria regarding the health and/or environmental effects of each pollutant. The seven "criteria" air pollutants defined by the U.S. EPA are: (1) carbon monoxide (CO); (2) sulfur dioxide (SO_2); (3) nitrogen dioxide (NO_2); (4) ozone (O_3); (5) respirable particulate matter with a diameter of 10 microns or less (PM_{10}), (6) fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and (7) lead (Pb). 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 (2).

TABLE 2-1: CRITERIA POLLUTANTS (1 OF 7)

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 SSAB. The highest ambient CO	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

TABLE 2-1: CRITERIA POLLUTANTS (2 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
CO (Continued)	concentrations are generally found near congested transportation corridors and intersections.		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.
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	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, an increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 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.

TABLE 2-1: CRITERIA POLLUTANTS (3 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
SO_2 (Continued)			Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 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.
NO_2	NO_2 is a key component of nitrogen oxides (NO_X), which also includes nitric oxide (NO) and nitrous oxide (N_2O). NO_X compounds are primarily produced during combustion processes when nitrogen (N_2) reacts with oxygen (O_2). Both NO and NO_2 serve as precursors in the formation of O_3 and $PM_{2.5}$, making their monitoring crucial for air quality assessments. NO_2, being the more abundant form of NO_X in the atmosphere, has a relatively short lifespan of one to seven days, which enhances its significance as a major air pollutant. As a criteria air pollutant, NO_2 poses various health risks, including respiratory issues and increased vulnerability to infections. It also absorbs blue light, imparting a brownish-red hue to the atmosphere and contributing to reduced visibility and smog formation.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	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 NO_2 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 NO_2 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.

TABLE 2-1: CRITERIA POLLUTANTS (4 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
NO_2 (Continued)	Given that NO emissions largely convert to NO_2, the examination of NO_X emissions becomes essential when assessing potential air quality impacts. The concentrations of NO_2 are closely related to traffic density, often resulting in higher exposure levels for commuters in heavy traffic compared to what regional monitoring stations may indicate.		In animals, exposure to levels of NO_2 is 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 O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 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. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when ROGs and NO_X react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	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 O_3 effects. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 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

TABLE 2-1: CRITERIA POLLUTANTS (5 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
O_3 (Continued)			participate in multiple outdoor sports and reside in communities with high O_3 levels. O_3 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 O_3 may be more toxic than exposure to O_3 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.
Particulate Matter	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduced visibility (haze) which is caused by the scattering of light and consequently the significant reduction of 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 PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X, organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning.	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks 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,

TABLE 2-1: CRITERIA POLLUTANTS (6 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
Particulate Matter (Continued)	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 NOX 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.	Also formed from reaction of other pollutants (acid rain, NOX, SOX, organics).	and an increased mortality from lung cancer. 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 particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
Pb	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 smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	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. Pb poisoning can cause anemia, lethargy, seizures, and death; although it

TABLE 2-1: CRITERIA POLLUTANTS (7 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
Pb (Continued)	metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.		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.

2.2.2 Additional Pollutants

The SCAQMD's primary focus is to achieve the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for criteria pollutants. However, it also has a broader mandate to control emissions of air contaminants and safeguard public health. As a result, SCAQMD regulates additional pollutants beyond criteria pollutants, including reactive organic gases (ROGs), VOCs, and odors. Additional pollutants, their typical sources, and health effects are identified below (2).

TABLE 2-2: ADDITIONAL POLLUTANTS (1 OF 2)

Pollutant	Description	Sources	Health Effects
VOC	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	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting,	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.

TABLE 2-2: ADDITIONAL POLLUTANTS (2 OF 2)

Pollutant	Description	Sources	Health Effects
VOC (Continued)	known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical 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 O_3, which is a criteria pollutant. The terms VOC and ROG (see below) are used interchangeably.	cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	
ROG	Similar to VOC, ROGs are also precursors in forming O_3 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. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) are used interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.

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. NAAQS and CAAQS currently in effect are shown in Table 2-3 (3).

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 July 16, 2024, and are presented in Table 2-3. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, 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 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 (4).

TABLE 2-3: 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 [3,6]	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 (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	9.0 µg/m^3	15.0 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)		53 ppb (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 Flourescence; 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 2-3: 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 $\mu g/m^3$ 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 February 7, 2024, the national annual PM2.5 primary standard was lowered from 12.0 $\mu g/m^3$ to 9.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15.0 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ 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 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

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 seven of the most common air pollutants: CO, Pb, O_3, PM_{10}, $PM_{2.5}$, NO_2, and SO_2 which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 35 permanent monitoring stations and 2 single-pollutant source Pb air monitoring sites throughout the air district (5). On January 25, 2024, CARB adopted the proposed 2023 amendments to the state and national area designations. See Table 2-4 for attainment designations for the SSAB (6). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SSAB.

TABLE 2-4: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SSAB

Criteria Pollutant	State Designation	Federal Designation
O_3 - 1-hour standard	Nonattainment	--
O_3 - 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassified/Attainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment
PB[1]	Attainment	Unclassified/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SSAB
"-" = no standard.

2.7 LOCAL AIR QUALITY

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the district in order to inform Southern California residents about the air quality conditions. The Project site is located within the Coachella Valley 1 area (SRA 30). The Coachella Valley 1 (SRA 30) monitoring station is located approximately 6.20 miles northwest of the Project site and reports air quality statistics for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$.

The most recent three (3) years of data available is shown in Table 2-5 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 O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2021 through 2023 was obtained from the SCAQMD Air Quality Data Tables (7). Additionally, data for SO_2 has been omitted as attainment is regularly met in the SSAB and few monitoring stations measure SO_2 concentrations.

TABLE 2-5: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2021-2023

Pollutant	Standard	Year		
		2021	2022	2023
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.110	0.106	0.116
Maximum Federal 8-Hour Concentration (ppm)		0.092	0.089	0.093
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	10	7	10
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	38	43	39
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	0.8	1.1	0.9
Maximum Federal 8-Hour Concentration	> 20 ppm	0.4	0.5	0.8
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.036	0.038	0.035
Annual Federal Standard Design Value		0.007	0.006	0.006
PM_{10}				
Maximum Federal 24-Hour Concentration (µg/m³)	> 150 µg/m³	100	432	183
Annual Federal Arithmetic Mean (µg/m³)		21.4	25.3	22.8
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m³	0	4	1
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m³	9	16	17
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration (µg/m³)	> 35 µg/m³	13.5	31.2	26.2
Annual Federal Arithmetic Mean (µg/m³)	> 12 µg/m³	6.20	6.32	5.86
Number of Days Exceeding Federal 24-Hour Standard	> 35 µg/m³	0	0	0

ppm = Parts Per Million
µg/m³ = Microgram per Cubic Meter
Source: Data for O_3, CO, NO_2, PM_{10}, 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 O_3, CO, NO_X, SO_2, PM_{10}, and Pb (8). 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 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 (9). 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) (10) (11). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-4 (previously presented) provides the NAAQS within the SSAB. 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

CARB, which became part of 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. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SSAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (12) (8). 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 ROGs, NO_X, CO and PM_{10}. However, air basins may use an 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: The California Energy Code 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 August 1, 2009, and is administered by the California Building Standards Commission.

The 2022 California Title 24 Energy Standards became effective on January 1, 2023, with updates for the 2025 standards set to take effect on January 1, 2026. As the Project is expected to be completed over an extended period of time, it will need to comply with the applicable Title 24 Energy Standards in effect at the time building permits are submitted, which would include further updates beyond the 2025 version.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2025 California Green Building Code Standards that go into effect on January 1, 2026. The Project would be required to comply with the applicable standards in place at the time building permit submittals are made.

2.8.3 Regional Regulations

Air Quality Management Plan

Currently, the NAAQS and CAAQS are exceeded in most parts of the SSAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards (15). The Coachella Valley PM_{10} State Implementation Plan (CVSIP) establishes additional controls needed to demonstrate expeditious attainment of the PM_{10} standards in the Coachella Valley, located in the Salton Sea Air Basin. This area which is under SCAQMD's jurisdiction has been designated as a serious non-attainment area for PM_{10}. 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 3.8.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

This study quantifies air quality emissions generated by construction and operation of the new cemetery uses in the southern portion of the proposed Specific Plan site and addresses whether the Project conflicts with implementation of the SCAQMD's AQMP. The analysis of Project-generated air emissions determines whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the SSAB is in non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine whether the Project would expose sensitive receptors to substantial pollutant concentrations and the impacts of odors. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *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.

The SCAQMD has developed regional significance thresholds for criteria pollutants, as summarized at Table 3-1 (16). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2023) indicate that any projects in the SSAB 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: REGIONAL EMISSIONS SIGNIFICANCE THRESHOLDS

Pollutant	Construction	Operations
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
ppm = Parts Per Million
µg/m3 = Micrograms Per Cubic Meter

3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

3.3.1 CalEEMod

Land uses such as the Project affect air quality through construction-source and operational-source emissions. The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates, as such the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (17). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions associated with the new cemetery uses in the southern portion of the Specific Plan site currently developed with a former self-storage facility. The proposed Specific Plan does not involve any changes to the cemetery uses that are existing and under construction in the northern portion of the Specific Plan site. Therefore, no analysis of these uses is required. Output from the model runs for both construction and operational activity are provided in Appendix 3.1.

3.4 CONSTRUCTION EMISSIONS

3.4.1 Construction Activities

Construction activities associated with the construction of new cemetery uses in the southern portion of the Specific Plan site would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction-related emissions are expected from the following construction activities:

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

Demolition Activities

The site is currently developed with existing storage facility uses/structures, including 4,000 sf of occupiable floor area and 75,500 sf of non-occupied floor area. For purposes of this analysis, it is conservatively assumed that 182,599 sf of asphalt would be removed[1]. Collectively these demolition activities would generate approximately 5,383 tons of debris, which would be hauled off-site.

Site Preparation and 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. Based on client provided

[1] The paved area within the southern portion of the Specific Plan site at the former self-storage facility is approximately 97,500 sf.

information, the Project would require approximately 60,000 cubic yards of export for earthwork activities.

Building Construction, Paving, and Architectural Coating Activities

Building construction and paving emissions are primarily associated with exhaust emissions from on-site equipment and vehicular trips to the site by construction workers and vendor trips. Architectural coating emissions include worker trips as well, but the primary pollutant emission of concern during this phase is ROG/VOC. CalEEMod default emission rates include the effects of Rule 1113 to limit ROG/VOC emissions. Building construction, paving, and architectural coating activities are modeled as overlapping phases to provide a conservative analysis. This approach likely overestimates emissions as these activities are not expected to occur simultaneously in practice.

Based on information provided by Forest Lawn, most of the buildings will be constructed primarily of stone, with some areas finished in stucco that will be colored and applied as part of the exterior treatment. Accordingly, only the interior building spaces have been assumed to require painting as part of the Project's construction. It is also noted that there are strict regulations governing painting and other surface treatments within cemetery properties. All work related to exterior finishes, maintenance, and materials will be carried out in full compliance with these requirements. Furthermore, the Project will be designed and constructed in accordance with Cemetery and Funeral Bureau's Laws and Regulations, ensuring that all applicable standards are met.

Off-Site Utility and Infrastructure Improvements

In addition, to support the Project development, there may be paving for off-site improvements associated with utility connections and streetscape along Memorial Drive and DaVall Drive. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints on the amount of daily activity that could occur. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility or roadway infrastructure construction would not use equipment totals that would exceed the equipment totals in Table 3-3. As such, no impacts beyond what has already been identified in this report are expected to occur.

3.4.2 Construction Duration

Construction of the proposed cemetery uses will most likely occur over a period of 8-10 years, as cemetery development tends to occur incrementally as interment space is needed. However, demolition of the existing structures interior to the former self-storage facility would occur following Project approvals. Following the initial demolition, construction may not begin right away and will likely proceed incrementally, for example, with one quadrant potentially being developed at a time.

For purposes of analysis, however, construction is conservatively assumed to begin in April 2026 and would last through March 2028. This 2-year timeframe suggests a more rapid and intense construction period than is anticipated to occur, likely resulting in higher emissions over a short period of time for analytical purposes. Given the probable extended timeline discussed above, this assumption overestimates the intensity of air quality impacts. The construction schedule utilized in the analysis, shown in Table 3-2, represents a "conservative" 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 the *CEQA Guidelines* (1).

TABLE 3-2: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition	04/01/2026	04/28/2026	20
Site Preparation	04/29/2026	05/19/2026	15
Grading	04/29/2026	05/19/2026	15
Building Construction	05/20/2026	03/31/2028	488
Paving	03/06/2028	03/31/2028	20
Architectural Coating	03/06/2028	03/31/2028	20

3.4.3 Construction Equipment

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-3 is assumed to operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the City code. The construction equipment list is based on CalEEMod defaults with modifications based on direction from the Project Applicant to reflect the use of Tier 4 Final equipment. The use of Tier 4 Final equipment will be included in the Project conditions of approval. While the list includes all potential equipment that may be used over the course of the Project, it represents a conservative estimate for purposes of analysis and reflects a larger fleet mix than what will actually be operating on-site at any given time.

[2] As shown in the CalEEMod User's Guide Version 2022, Appendix G "Table G-11. Statewide Average Annual Offroad Equipment Emission Factors" 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.

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Quantity	Hours
Demolition	Rubber Tired Dozers	2	8
	Concrete/Industrial Saws	1	8
	Excavators	3	8
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Graders	1	8
	Excavators	1	8
	Rubber Tired Dozers	1	8
	Crawler Tractors	3	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Tractors/Loaders/Backhoes	1	8
	Cement and Mortar Mixers	2	8
	Pavers	1	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

[1] In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

3.4.4 On-Road Trips

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. The number of worker, vendor, and hauling trips per phase is presented below in Table 3-4. Worker trips are based on CalEEMod defaults. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 3-4: CONSTRUCTION TRIP ASSUMPTIONS

Construction Activity	Worker Trips	Vendor Trips	Hauling Trips
Demolition	15	1	67
Site Preparation	18	1	0
Grading	15	1	500
Building Construction	120	44	0
Paving	20	0	0
Architectural Coating	24	0	0

3.4.5 Construction Emissions Summary

CalEEMod calculates maximum daily emissions for summer and winter periods. As such, the estimated maximum daily construction emissions without mitigation for both summer and winter periods are summarized in Table 3-5. Detailed unmitigated construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction would not exceed criteria pollutant thresholds established by the SCAQMD.

TABLE 3-5: CONSTRUCTION EMISSIONS SUMMARY

Construction Emissions						
Year	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
2026	1.68	42.20	60.50	0.31	18.30	6.88
2027	0.82	4.01	26.20	0.04	2.02	0.54
Winter						
2026	0.75	4.29	22.40	0.04	2.02	0.54
2027	0.73	4.16	21.90	0.04	2.02	0.54
2028	4.97	7.02	35.10	0.05	2.63	0.71
Maximum Daily Emissions	4.97	42.20	60.50	0.31	18.30	6.88
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

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

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions are expected from the following primary sources:

- Mobile Source Emissions;
- Area Source Emissions; and
- Energy Source Emissions.

3.5.1 Mobile Source Emissions

Trip characteristics available from the *Forest Lawn - Cathedral City Specific Plan Vehicle Miles Traveled (VMT) Screening Evaluation* were utilized in this analysis (18).

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 was calculated using CalEEMod.

3.5.2 Area Source Emissions

Architectural Coatings

Over a period of time the buildings that are part of this Project would require maintenance and would therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. 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, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that on October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by January 1, 2024, which is now in effect. However, for purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod, and do not incorporate the emissions reductions that would be realized from implementation of AB 1346.

3.5.3 Energy Source Emissions

Combustion Emissions Associated with Electricity and Natural Gas

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity. 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 SSAB, criteria pollutant emissions from offsite generation of electricity are excluded from the evaluation of significance. Natural gas and electricity usage

associated with the Project was calculated based on information provided by the Project Applicant for the existing cemetery uses.

3.5.4 Operational Emissions Summary

Operational activities for summer and winter scenarios are presented in Table 3-6. Detailed operation model outputs for the Project are presented in Appendix 3.1. As shown in Table 3-6, the Project would not exceed the numerical thresholds of significance established by the SCAQMD for emissions of any criteria pollutant. As such, operational impacts would be considered less-than-significant.

The existing crematory within the North Area operates under existing SCAQMD permits to operate (Permit Nos. G119463 and G19464). These permits regulate TACs in accordance with SCAQMD Rule 1401 and include conditions that ensure compliance with applicable health risk standards. The proposed Project would not introduce any new crematory uses, increase the number of permitted cremations, or modify the existing permit conditions. Therefore, the Project would not result in an increase in operational activity or associated emissions beyond what is analyzed in this report.

TABLE 3-6: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Operational Emissions						
Source	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
Mobile	0.24	0.23	2.41	0.01	0.52	0.13
Area	8.22	0.11	12.50	0.00	0.02	0.02
Energy	0.00	0.03	0.03	0.00	0.00	0.00
Maximum Daily Emissions	8.46	0.37	14.94	0.01	0.54	0.15
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Winter						
Mobile	0.20	0.25	1.64	0.01	0.52	0.13
Area	6.17	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.03	0.03	0.00	0.00	0.00
Maximum Daily Emissions	6.37	0.28	1.67	0.01	0.52	0.13
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

3.6 LOCALIZED AIR QUALITY IMPACTS

3.6.1 Background on LST Development

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that localized impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/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-4.[3] LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard 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* (19).

3.6.2 Applicability of LSTs for the Project

For this Project, the appropriate SRA for the LST analysis is the SCAQMD Coachella Valley 1 (SRA 30). LSTs apply to CO, NO_2, PM_{10}, 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:

- Identify the maximum daily on-site emissions that will occur during construction activity:
  - The maximum daily on-site emissions could be based on information provided by the Project Applicant; or
  - The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds and CalEEMod User's Guide Appendix A: Calculation Details for CalEEMod can be used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (20) (21).
- If the total acreage disturbed is less than or equal to 5 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.
- If the total acreage disturbed is greater than 5 acres per day, then LST impacts may still be conservatively evaluated using the LST look-up tables for a 5-acre disturbance area. Use of the 5-acre disturbance area thresholds can be used to show that even if the daily emissions from all construction activity were emitted within a 5-acre area, and therefore concentrated over a smaller area which would result in greater site adjacent concentrations, the impacts would still be less than significant if the applicable 5-acre thresholds are utilized.
- 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.

[3] The 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."

3.6.3 Emissions Considered

Based on SCAQMD's *LST Methodology*, emissions for concern during construction activities are on-site NO_X, CO, $PM_{2.5}$, and PM_{10}. The *LST Methodology* clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (22)." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

3.6.4 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 C: Emission Calculation Details for CalEEMod* (20) (23). 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. Based on Table 3-7, the Project's construction activities could actively disturb approximately 1 acre per day during demolition, 3.5 acres per day during site preparation and 2.5 acres per day during grading activities.

TABLE 3-7: MAXIMUM DAILY DISTURBED-ACREAGE

Construction Activity	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Demolition	Rubber Tired Dozers	2	0.5	8	1.0
	Total acres disturbed per day during Demolition				1.0
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	3	0.5	8	1.5
	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

Source: Maximum daily disturbed acreage based on equipment list presented in Appendix 3.1.

3.6.5 Receptors

As previously stated, LSTs represent the maximum emissions from a project that would 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, and individuals with pre-existing respiratory or cardiovascular

illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use to the Project site where an individual could remain for 24 hours has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

Per the *LST Methodology*, 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 on-site for 8 hours or less. However, *LST Methodology* explicitly states that "*LSTs based on shorter averaging periods, such as the NO_2 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)." Therefore, any adjacent land use where an individual could remain for 1 or 8 hours, that is located at a closer distance to the Project site than the receptor used for PM_{10} and $PM_{2.5}$ analysis, must be considered to determine construction and operational LST air impacts for emissions of NO_2 and CO since these pollutants have an averaging time of 1 and 8 hours.

Receptors in the Project study area are described below and shown on Exhibit 3-A. Localized air quality impacts were evaluated at sensitive receptor land uses nearest the proposed new cemetery development in the southern portion of the Specific Plan site. Distance is measured in a straight line from the Project boundary to each receptor location. The selected receptor locations represent the sensitive receptors nearest to the proposed new cemetery development in the southern portion of the Specific Plan site and are considered representative of similar receptors throughout the broader surrounding area.

- Location R1 represents the Rehabilitation Hospital of Southern California located at 70077 Ramon Road, approximately 205 feet east of the southern portion of the proposed Specific Plan site.
- Location R2 represents the existing residence at 75 Via Las Flores, approximately 212 feet east of the southern portion of the proposed Specific Plan site. Receptor R2 is placed in the private outdoor living area (backyard).
- Location R3 represents an existing recreational vehicle (RV), located at the Desert Shadows RV Resort at 69801 Desert Shadows Drive, immediately south of the Project site. Receptor R3 is placed in the private outdoor living area (backyard).
- Location R4 represents the Desert Shadows RV Resort activity center located at 69801 Desert Shadows Drive, approximately 102 feet west of the southern portion of the proposed Specific Plan site.
- Location R5 represents the existing RV, located at the Desert Shadows RV Resort at 69801 Desert Shadows Drive, approximately 8 feet west of the southern portion of the proposed Specific Plan site. Receptor R5 is placed in the private outdoor living area (backyard).
- Location R6 represents the existing cemetery in the northern portion of the proposed Specific Plan site, located at 69855 Ramon Road, approximately 126 feet north of the southern portion of the proposed Specific Plan site. Receptor R6 is placed at the nearest building façade where an individual could reasonably be present for durations ranging from 1 to 8 hours.

EXHIBIT 3-A: RECEPTOR LOCATIONS



- Location R7 represents the existing cemetery in the northern portion of the proposed Specific Plan site, located at 69855 Ramon Road, approximately 29 feet north of the southern portion of the proposed Specific Plan site. Receptor R7 is placed at the nearest building façade where an individual could be present for periods of 1 to 8 hours.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining a Project's impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time). The nearest receptor used for evaluation of localized impacts of PM_{10} and $PM_{2.5}$ is represented by R3 which represents the existing RV, located at the Desert Shadows RV Resort at 69801 Desert Shadows Drive, approximately 7 feet (2 meters) south of the Project site.

As previously stated, and consistent with LST Methodology, the nearest industrial/commercial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO_X and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assumed that an individual could be present at these sites for periods of one to 8 hours. It should be noted that the existing residence (R3) is located at a closer distance than the nearest industrial/commercial use. As such, the same receptor will be used for evaluation of localized NO_x and CO.

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* (25)." As such a 25-meter receptor distance will be used for evaluation of localized PM_{10}, $PM_{2.5}$, NO_X, and CO.

3.6.6 Localized Thresholds for Construction Activity

Since the total acreage disturbed is 1 acre per day for demolition, 3.5 acres per day for site preparation and 2.5 acres per day grading activities, the SCAQMD's screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identify 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 CONSTRUCTION EMISSIONS THRESHOLDS

Construction Activity	Construction Localized Thresholds			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Demolition	132 lbs/day	878 lbs/day	4 lbs/day	3 lbs/day
Site Preparation	248 lbs/day	1,796 lbs/day	11 lbs/day	7 lbs/day
Grading	210 lbs/day	1,465 lbs/day	8 lbs/day	6 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.6.7 Construction-Source Localized Emissions

Table 3-9 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would not exceed the applicable SCAQMD LSTs for emissions of any criterial pollutant. For analytical purposes, emissions associated with peak demolition, site preparation, and grading activities are considered for purposes of LSTs since these phases represents the maximum localized emissions that would occur. Any other construction phases of development that overlap would result in lesser emissions and consequently lesser impacts than what is disclosed herein. Outputs from the model runs for unmitigated construction LSTs are provided in Appendix 3.1.

TABLE 3-9: LOCALIZED CONSTRUCTION-SOURCE EMISSIONS

Activity	Year	Scenario	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	2026	Summer	4.51	18.2	3.88	0.64
		Winter	n/a	n/a	n/a	n/a
Maximum Daily Emissions			4.51	18.2	3.88	0.64
Construction Localized Threshold			132	878	4	3
Threshold Exceeded?			NO	NO	NO	NO
Site Preparation	2026	Summer	2.71	30	5.76	2.79
		Winter	n/a	n/a	n/a	n/a
Maximum Daily Emissions			2.71	30	5.76	2.79
Construction Localized Threshold			248	1,796	11	7
Threshold Exceeded?			NO	NO	NO	NO
Grading	2026	Summer	2.13	19	2.39	1.01
		Winter	n/a	n/a	n/a	n/a
Maximum Daily Emissions			2.13	18.2	3.88	0.64
Construction Localized Threshold			132	878	4	3
Threshold Exceeded?			NO	NO	NO	NO

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

3.6.8 Operational-Source Localized Emissions

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, which involves a Specific Plan to allow for the development of new cemetery uses, 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.

As previously stated, the existing crematory within the North Area operates under existing SCAQMD permits to operate (Permit Nos. G119463 and G19464). These permits regulate TACs in accordance with SCAQMD Rule 1401 and include conditions that ensure compliance with applicable health risk standards. The proposed Project would not introduce any new crematory uses, increase the number of permitted cremations, or modify the existing permit conditions. Therefore, the Project would not result in an increase in operational activity or associated emissions.

3.7 CO "HOT SPOT" ANALYSIS

A CO hotspot is defined as a localized concentration of carbon monoxide exceeding the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time the most recent CEQA Air Quality Handbook (1993) was published by SCAQMD, the air basin was designated as non-attainment, requiring projects to perform hotspot analyses to ensure they did not worsen the existing conditions. Over the last two decades, background CO concentrations have been significantly reduced due to regulatory controls on tailpipe emissions, which have culminated in the air basin achieving attainment status for CO.

The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

In 2003, the SCAQMD, as part of its AQMP development process, prepared modeling to determine the potential for CO Hotspots at the four busiest intersections in the air basin. As summarized in the 2003 AQMP, even at one of the busiest intersections at that time, only 0.7 ppm of CO is attributable to vehicular traffic and the remaining 7.7 ppm were due to ambient background conditions. As shown on Table 2-5 in this report, the background 1-hour and 8-hour concentrations are well below the applicable AAQS. The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

As such, Project-related traffic at any intersections in the vicinity of the Project would not cause or contribute to a CO hotspot since the background concentrations (0.90 ppm and 0.80 ppm for the maximum federal 1-hour and 8-hour concentrations, respectively) are low and any contribution from Project traffic would be negligible.

3.8 AQMP

The Project site is located within the SSAB and is subject to SCAQMD's 2022 AQMP and the 2003 Coachella Valley PM_{10} SIP. 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 used 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 Southern California Association of Governments (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 SSAB. 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 December 2022, the SCAQMD released the *Final 2022 AQMP* (*2022 AQMP*). The *2022 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 (26). Similar to the 2016 AQMP, the *2022 AQMP* incorporates scientific and technological information and planning assumptions, including the *2020-2045 RTP/SCS*, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (27). The Project's consistency with the AQMP will be determined using the *2022 AQMP* as discussed below.

SCAG adopted the 2020-*2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS), a planning document that supports the integration of land use and transportation to help the region meet the federal metropolitan planning organization (MPO) requirements under the Sustainable communities and Climate Protection Act. It should be noted that although the 2024-2050 RTP was released after approval of the 2022 AQMP, the 2022 AQMP is reliant in part upon the general plan land use designations.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the *1993 CEQA Handbook* (28). These indicators are discussed below:

3.8.1 Consistency Criterion No. 1

Potential to 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 refer 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

As evaluated, the Project's localized and regional construction-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

Operational Impacts – Consistency Criterion 1

As evaluated, the Project's localized and regional operation-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

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

3.8.2 Consistency Criterion No. 2

Potential to exceed the assumptions in the AQMP based on the years of Project build-out phase.

The *2022 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 Cathedral City 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. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

Operational Impacts – Consistency Criterion 2

The City of Cathedral City General Plan designates the Project site as "General Commercial (GC)" land uses and "Planned Community Commercial (PCC)" zoning uses.

The Project proposes a General Plan Amendment to change the land use designation from "General Commercial (GC)" to "Neighborhood Commercial (CN)." The CN designation provides for a variety of land uses such as supermarkets, super drugstores, and supporting commercial services, including banking and similar financial services, businesses, offices, dry cleaners, restaurants, barber shops/beauty salons, and similar commercial outlets serving day-to-day neighborhood needs. The CN designation allows for a maximum floor area ratio (FAR) of 0.35 acre (29).

The Project proposes a Zone Change Amendment to rezone the site from "Planned Community Commercial (PCC)" to "Neighborhood Business Park (NBP)." The NBP designation intends to create a transition between residential, office, and commercial uses, allowing for uses such as animal clinics, cemeteries, landscape nurseries, medical clinics, recreational facilities, etc. (30).

The Forest Lawn – Cathedral City Specific Plan would provide a regulatory framework for this cemetery development. The proposed Specific Plan would allow for the construction of up to approximately 12,000 sf of floor area for new structures (for such uses as reception areas, a chapel, restrooms, storage, multi-purpose and support areas) and up to approximately 275,000 sf of new non-occupied floor area (for such uses as wall crypts, columbaria, and burial and cremation garden structures). With the proposed removal of the former self-storage facility, this would result in a net increase of approximately 199,500 sf of non-occupied floor area. The new development would provide an additional approximately 70,000 interment spaces to help meet local and regional demand for interment. Cemetery structures such as burial gardens and mausoleums would be developed in stages, with incremental amounts of development occurring as needed to meet the demand for interment spaces. The Project would generally retain existing landscaping, add additional cemetery landscaping and garden areas, with a resulting increase in pervious area on the project site.

Accounting for existing uses to remain, cemetery uses currently under construction, and proposed future development within the southern portion of the Specific Plan site (former self-storage facility site), the proposed Specific Plan would thus allow a total of approximately 30,000 sf of occupied floor area, approximately 315,000 sf of non-occupied floor area, and approximately 84,000 interment spaces within the entire Forest Lawn – Cathedral City property.

As previously stated, the Project proposes a General Plan Amendment and Zone Change in connection with the proposed Specific Plan. The proposed development would continue the existing cemetery uses within the Specific Plan site, which have been developed with the current land use and zoning designations. The existing land use and zoning designations provide for a range of commercial uses which are of a relatively high intensity and could be regional-scale. The proposed land use and zoning designations allow for similar and less intense development, and the Project is consistent with the development intensities allowed under both the existing and proposed designations. Further, the Project on an individual basis does not have an impact and as such, the proposed Project would not conflict with the goals and objectives of the AQMP. Furthermore, the Project, as evaluated herein would not exceed the regional or localized air quality significance thresholds.

Additionally, the Project would not induce substantial population or employment growth beyond what is already anticipated for the Project site. The proposed expansion of the existing cemetery is expected to generate approximately four (4) additional employees. This modest increase is consistent with the existing land use and would not result in population or employment growth exceeding the projections identified in the regional growth forecasts.

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

AQMP Consistency Conclusion

Project would not have the potential to result in or cause NAAQS or CAAQS violations. The Project would not exceed the regional or localized construction and operational thresholds, and the Project's development intensity is consistent with the development intensities allowed within the General Plan as previously stated. As such, the Project is therefore considered to be consistent with the AQMP.

3.9 Potential Impacts to Sensitive Receptors

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project would not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

Additionally, the Project would 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.

3.9.1 Toxic Air Contaminants

Based on the results of the *Forest Lawn - Cathedral City Specific Plan Construction Health Risk Assessment* (29), emissions generated from the Project during short-term construction will not exceed SCAQMD significance thresholds for cancer and non-cancer health risks. As such, a less than significant impact is expected.

Land uses such as the proposed Project would not generate substantive TAC emissions during ongoing operations therefore, an operational HRA is not necessary.

3.9.2 Friant Ranch Case

In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, the California Supreme Court held that an Environmental Impact Report's (EIR) air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided.

Most local agencies, including the City of Cathedral City, lack the data to do their own assessment of potential health impacts from criteria air pollutant emissions, as would be required to establish customized, locally-specific thresholds of significance based on potential health impacts from an individual development project. The use of national or "generic" data to fill the gap of missing local data would not yield accurate results because such data does not capture local air patterns, local background conditions, or local population characteristics, all of which play a role in how a population experiences air pollution. Because it is impracticable to accurately isolate the exact cause of a human disease (for example, the role a particular air pollutant plays compared to the role of other allergens and genetics in causing asthma), existing scientific tools cannot accurately estimate health impacts of the Project's air emissions without undue speculation. Instead, readers are directed to the Project's air quality impact analysis above, which provides extensive information concerning the quantifiable and non-quantifiable health risks related to the Project's construction and long-term operation.

Notwithstanding, this AQIA does evaluate the proposed Project's localized impact to air quality for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$ by comparing the proposed Project's on-site emissions to the SCAQMD's applicable LST thresholds. The LST analysis above determined that the Project would not result in emissions exceeding SCAQMD's LSTs. Therefore, the proposed Project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$.

As the Project's emissions would comply with federal, state, and local air quality standards, the proposed Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level and would not provide a reliable indicator of health effects if modeled.

3.10 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 these 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 current solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors and other emissions (such as those leading to odors) associated with construction and operations activities of the proposed Project would be less than significant and no mitigation is required (31).

3.11 CUMULATIVE IMPACTS

As previously shown in Table 2-4, the CAAQS designates the Project site as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$. The SCAQMD 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* (32). In this report the SCAQMD clearly states (Page D-3):

> *"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for 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 SSAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Conversely, project-level construction and operational emissions that exceed SCAQMD thresholds would be considered cumulatively considerable. SCAQMD's thresholds of significance for project-specific direct and cumulatively-considerable

impacts have clearly been successful, as application of these thresholds has led to significant air quality improvements throughout the SSAB.

Construction-Source Emission Impacts

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

Operational-Source Emission Impacts

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

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5 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Forest Lawn - Cathedral City Specific Plan 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 hqureshi@urbanxroads.com.

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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 – CARB • 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

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.

Table of Ambient Air Quality Standards

Ambient Air Quality Standards

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 (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	9.0 µg/m^3	15.0 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)		53 ppb (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 Flourescence; 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 $\mu g/m^3$ 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 8hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On February 7, 2024, the national annual PM2.5 primary standard was lowered from 12.0 µg/m3 to 9.0 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15.0 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 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 $\mu g/m^3$)as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

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.

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:

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

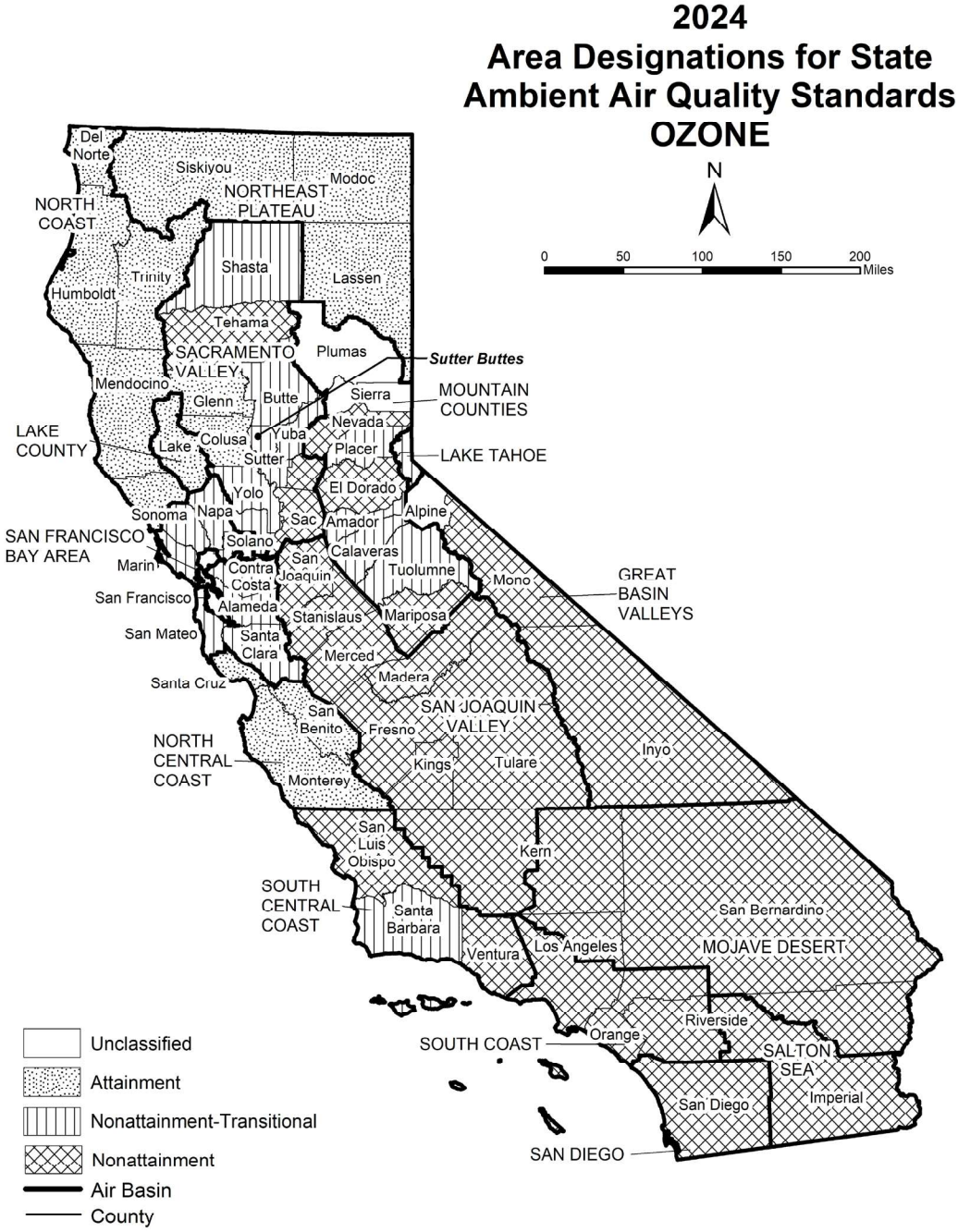
In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air 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.

Table 1 California Ambient Air Quality Standards Area Designations for Ozone[1]

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

[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 1

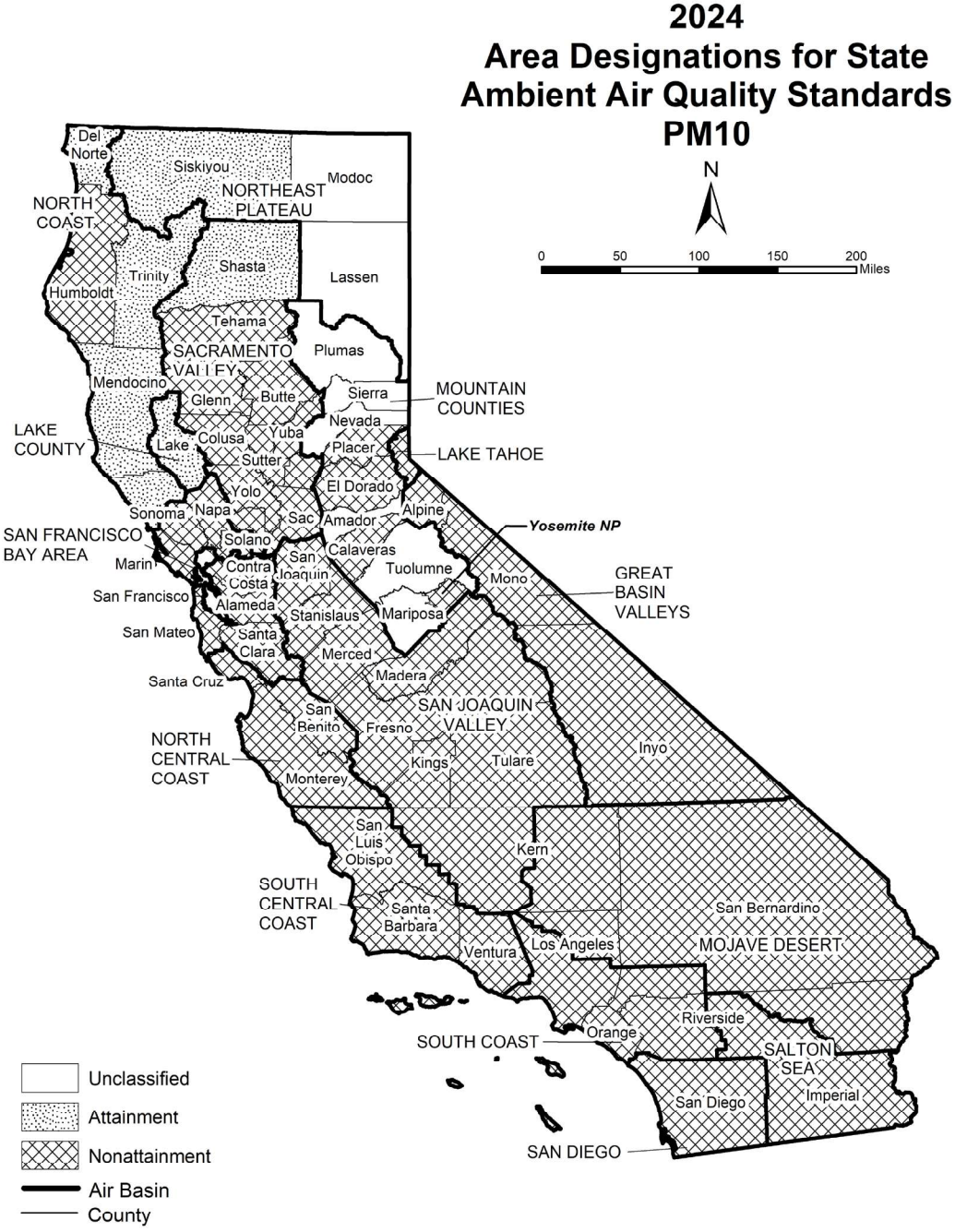


Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 2
California Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM_{10})

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

Figure 2



Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 3
California Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	A
MOJAVE DESERT AIR BASIN	A
MOUNTAIN COUNTIES AIR BASIN	
Plumas County	
- Portola Valley[2]	N
- Remainder Plumas County	U
Remainder of Air Basin	U
NORTH CENTRAL COAST AIR BASIN	A
NORTH COAST AIR BASIN	A
NORTHEAST PLATEAU AIR BASIN	A
SACRAMENTO VALLEY AIR BASIN	
Butte County	A
Colusa County	A
Glenn County	A
Placer County (portion)	A
Sacramento County	A
Shasta County	A
Sutter and Yuba Counties	N
Remainder of Air Basin	U
SALTON SEA AIR BASIN	
Imperial County	
- City of Calexico[3]	N
Remainder of Air Basin	A
SAN DIEGO AIR BASIN	N
SAN FRANCISCO BAY AREA AIR BASIN	A
SAN JOAQUIN VALLEY AIR BASIN	N
SOUTH CENTRAL COAST AIR BASIN	A
SOUTH COAST AIR BASIN	N

[2] California Code of Regulations, title 17, section 60200(c)
[3] California Code of Regulations, title 17, section 60200(a)

Figure 3



Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 4
California Ambient Air Quality Standards Area Designations for Carbon Monoxide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	
Alpine County	U
Inyo County	A
Mono County	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	A
MOJAVE DESERT AIR BASIN	
Kern County (portion)	U
Los Angeles County (portion)	A
Riverside County (portion)	U
San Bernardino County (portion)	A
MOUNTAIN COUNTIES AIR BASIN	
Amador County	U
Calaveras County	U
El Dorado County (portion)	U
Mariposa County	U
Nevada County	U
Placer County (portion)	U
Plumas County	A
Sierra County	U
Tuolumne County	A
NORTH CENTRAL COAST AIR BASIN	
Monterey County	A
San Benito County	U
Santa Cruz County	U
NORTH COAST AIR BASIN	
Del Norte County	U
Humboldt County	A
Mendocino County	A
Sonoma County (portion)	U
Trinity County	U

Area	Designations
NORTHEAST PLATEAU AIR BASIN	U
SACRAMENTO VALLEY AIR BASIN	
Butte County	A
Colusa County	U
Glenn County	U
Placer County (portion)	A
Sacramento County	A
Shasta County	U
Solano County (portion)	A
Sutter County	A
Tehama County	U
Yolo County	A
Yuba County	U
SALTON SEA AIR BASIN	A
SAN DIEGO AIR BASIN	A
SAN FRANCISCO BAY AREA AIR BASIN	A
SAN JOAQUIN VALLEY AIR BASIN	
Fresno County	A
Kern County (portion)	A
Kings County	U
Madera County	U
Merced County	U
San Joaquin County	A
Stanislaus County	A
Tulare County	A
SOUTH CENTRAL COAST AIR BASIN	A
SOUTH COAST AIR BASIN	A

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

Figure 4



Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 5
California Ambient Air Quality Standards Area Designations for Nitrogen Dioxide

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

Figure 5



Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 6
California Ambient Air Quality Standards Area Designations for Sulfur Dioxide*

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

* The area designated for sulfur dioxide 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 6



Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 7
California Ambient Air Quality Standards Area Designations for Sulfates

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

Figure 7



Last Updated: November 2024
Air Quality Planning and Science Division, CARB

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

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

* 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 8



Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 9
California Ambient Air Quality Standards Area Designations for Hydrogen Sulfide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	
Alpine County	U
Inyo County	A
Mono County	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	U
MOJAVE DESERT AIR BASIN	
Kern County (portion)	U
Los Angeles County (portion)	U
Riverside County (portion)	U
San Bernardino County (portion)	
- Searles Valley Planning Area[4]	N
- Remainder of County	U
MOUNTAIN COUNTIES AIR BASIN	
Amador County	
- City of Sutter Creek	N
- Remainder of County	U
Calaveras County	U
El Dorado County (portion)	U
Mariposa County	U
Nevada County	U
Placer County (portion)	U
Plumas County	U
Sierra County	U
Tuolumne County	U

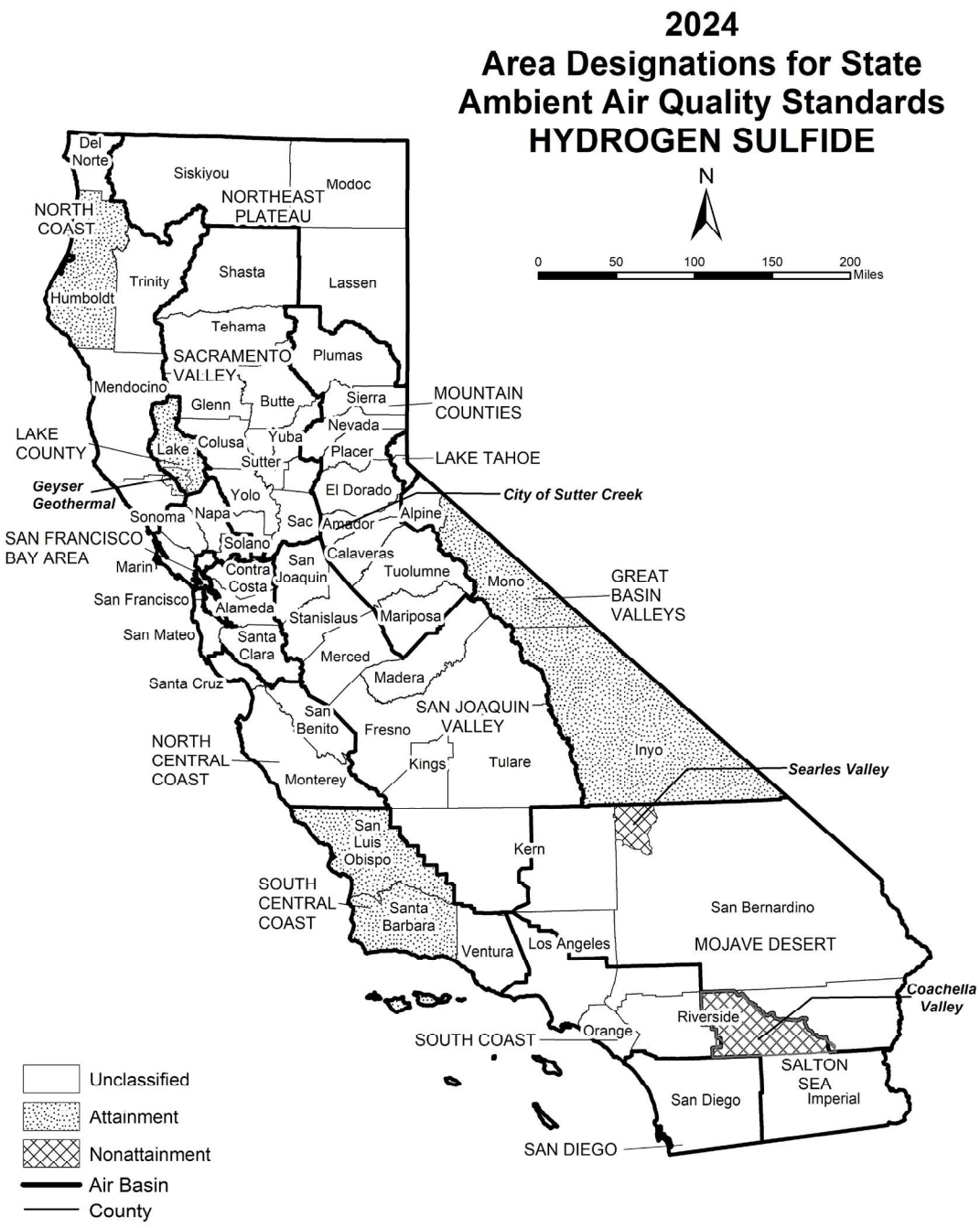
Area	Designations
NORTH CENTRAL COAST AIR BASIN	U
NORTH COAST AIR BASIN	
Del Norte County	U
Humboldt County	A
Mendocino County	U
Sonoma County (portion)	
- Geyser Geothermal Area[5]	A
- Remainder of County	U
Trinity County	U
NORTHEAST PLATEAU AIR BASIN	U
SACRAMENTO VALLEY AIR BASIN	U
SALTON SEA AIR BASIN	
Riverside County (portion)	N
Imperial County	U
SAN DIEGO AIR BASIN	U
SAN FRANCISCO BAY AREA AIR BASIN	U
SAN JOAQUIN VALLEY AIR BASIN	U
SOUTH CENTRAL COAST AIR BASIN	
San Luis Obispo County	A
Santa Barbara County	A
Ventura County	U
SOUTH COAST AIR BASIN	U

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

[4] 52 Federal Register 29384 (August 7, 1987)

[5] California Code of Regulations, title 17, section 60200(d)

Figure 9

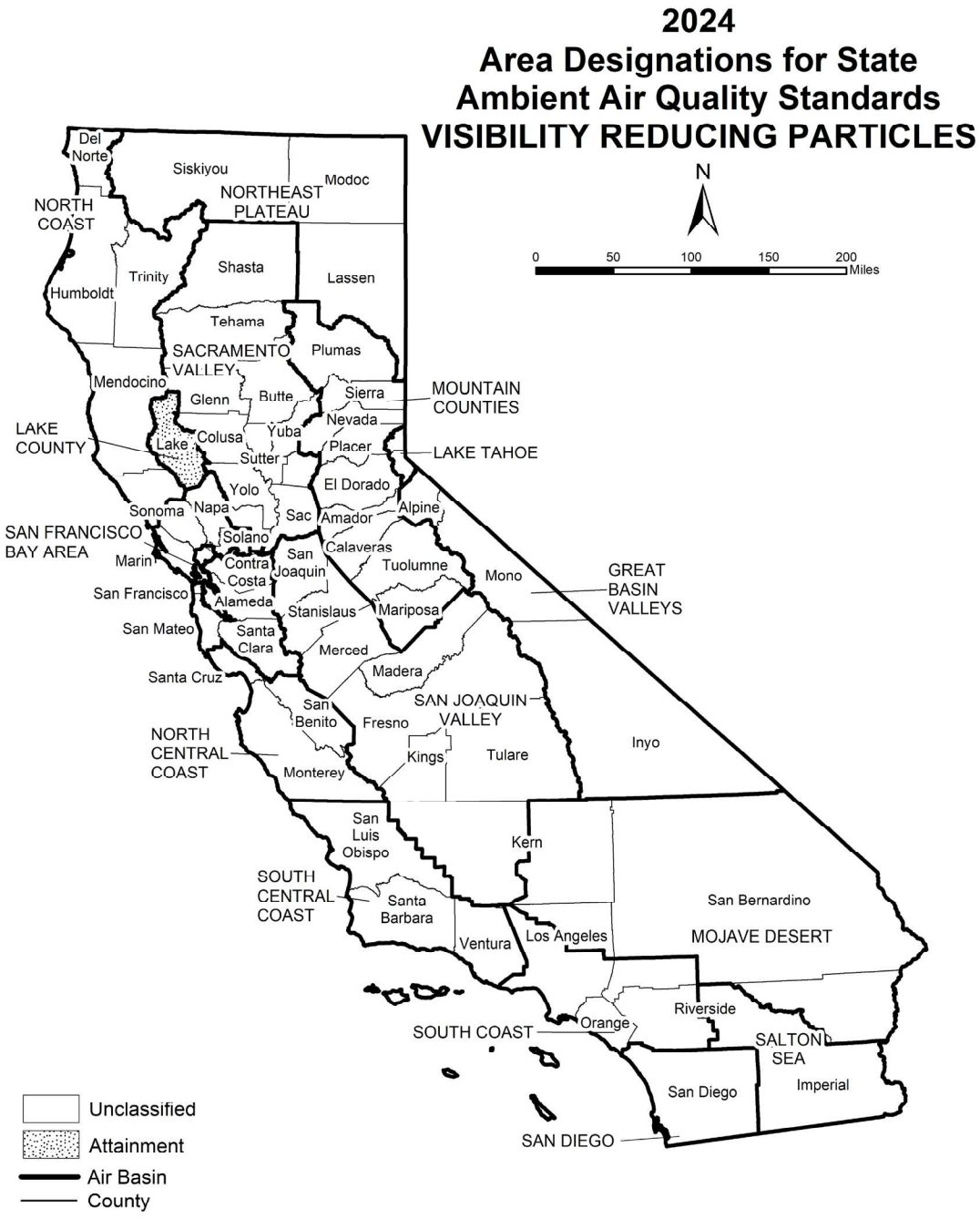


Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 10
California Ambient Air Quality Standards Area Designations for Visibility Reducing Particles

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

Figure 10


2024
Area Designations for State
Ambient Air Quality Standards
VISIBILITY REDUCING PARTICLES
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Placer
LAKE TAHOE
Sutter
El Dorado
Yolo
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
Last Updated: November 2024
Air Quality Planning and Science Division, CARB

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. These maps reflect all current national standards. For example, the map for Fine Suspended Particulate Matter ($PM_{2.5}$) reflects both the annual and the 24-hour standard. Additional information about the federal area designations is available on the U.S. EPA website: *Nonattainment Areas for Criteria Pollutants (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: *Criteria Air Pollutants*

On February 7, 2024, the U.S. EPA established a new national annual primary $PM_{2.5}$ standard of 9.0 µg/m^3. Area designations for this revised standard will be finalized in February 2026. Until that time, the current designation map will reflect the most previous 2012 annual average standard of 12.0 µg/m^3 as well as the 24-hour standard of 35 µg/m^3, last revised in 2006.

Designation Categories

Suspended Particulate Matter (PM_{10}). The U.S. EPA uses three categories to designate areas with respect to PM_{10}:

- Attainment (A)
- Nonattainment (N)
- Unclassifiable (U)

Ozone, Fine Suspended Particulate Matter ($PM_{2.5}$), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), and Lead. The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment (N)
- Unclassifiable/Attainment (U/A)

Sulfur Dioxide (SO_2). 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 (N),
- Unclassifiable (U), and
- Unclassifiable/Attainment (U/A).

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: *Title 40 SECTION 81.305*.

Table 11
National Ambient Air Quality Standards Area Designations for 8-Hour Ozone*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	
Amador County	N
Calaveras County	N
El Dorado County (portion)[6]	N
Mariposa County	N
Nevada County	
- Western Nevada County	N
- Remainder of County	U/A
Placer County (portion)[6]	N
Plumas County	U/A
Sierra County	U/A
Tuolumne County	N
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	
Butte County	N
Colusa County	U/A
Glenn County	U/A
Sacramento Metro Area[6]	N
Shasta County	U/A
Sutter County	
- Sutter Buttes	N
- Southern portion of Sutter County[6]	N
- Remainder of Sutter County	U/A
Tehama County	
- Tuscan Buttes	N
- Remainder of Tehama County	U/A

Area	Designations
SACRAMENTO VALLEY AIR BASIN (cont.)	
Yolo County[6]	N
Yuba County	U/A
SAN DIEGO COUNTY	N
SAN FRANCISCO BAY AREA AIR BASIN	N
SAN JOAQUIN VALLEY AIR BASIN	N
SOUTH CENTRAL COAST AIR BASIN[7]	
San Luis Obispo County	
- Eastern San Luis Obispo County	N
- Remainder of County	U/A
Santa Barbara County	U/A
Ventura County	
- Area Excluding Anacapa and San Nicolas Islands	N
- Channel Islands[7]	U/A
SOUTH COAST AIR BASIN[7]	N
SOUTHEAST DESERT AIR BASIN	
Kern County (portion)	N
- Indian Wells Valley	U/A
Imperial County	N
Los Angeles County (portion)	N
Riverside County (portion)	
- Coachella Valley	N
- Non-AQMA portion	U/A
San Bernardino County	
- Western portion (AQMA)	N
- Eastern portion (non-AQMA)	U/A

* 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.

[6] 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.

[7] 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.

Figure 11

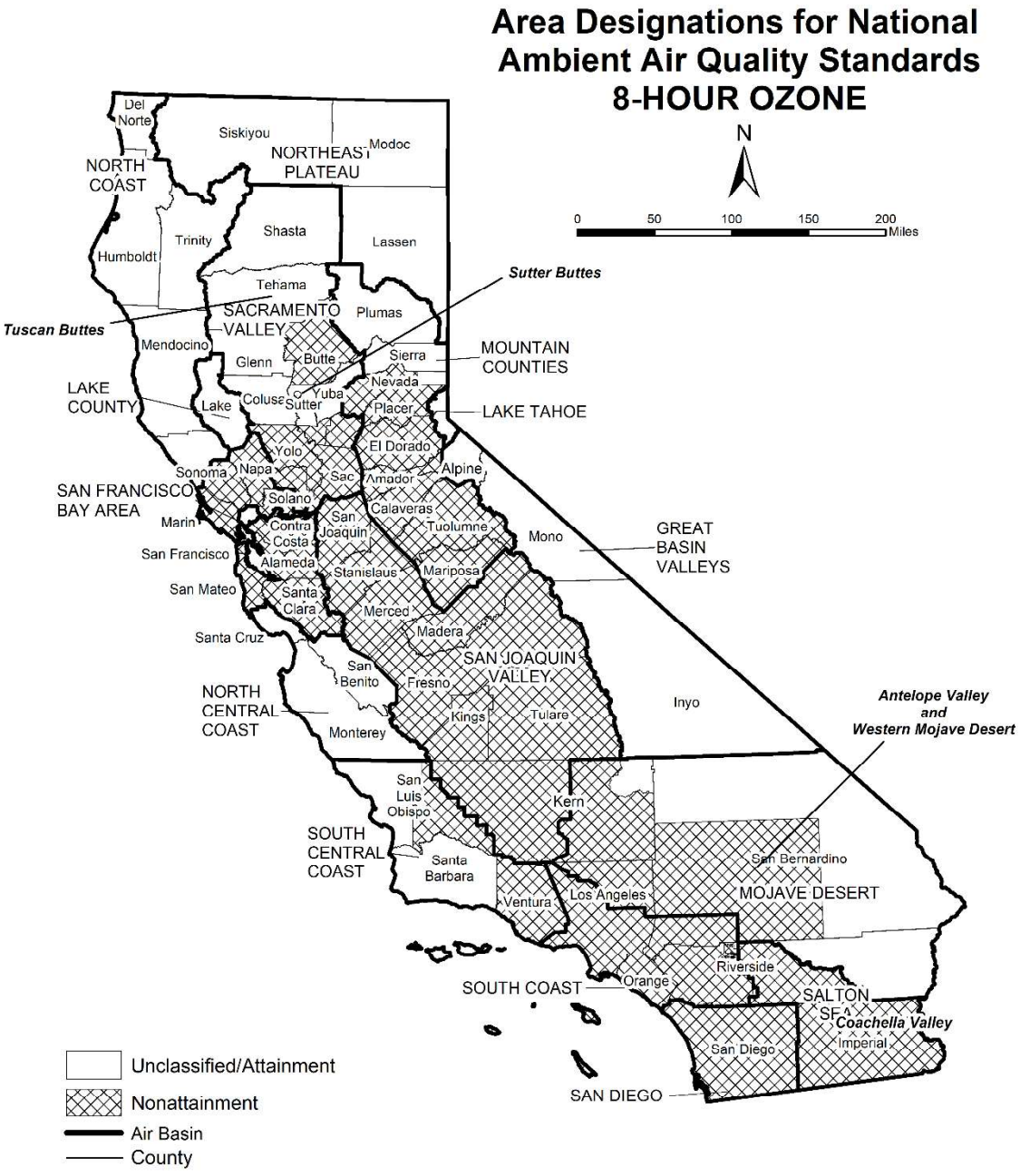

Area Designations for National Ambient Air Quality Standards
8-HOUR OZONE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Sutter Buttes
Tuscan Buttes
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
Antelope Valley and Western Mojave Desert
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
SOUTH COAST
Orange
SALTON SEA
Coachella Valley
Imperial
San Diego
SAN DIEGO
Unclassified/Attainment
Nonattainment
Air Basin
County
Last Updated: November 2023
Map reflects the 2015 8-hour ozone standard of 0.070 ppm
Air Quality Planning and Science Division, CARB

Table 12 National Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM_{10})*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	
Alpine County	U
Inyo County	
- Owens Valley Planning Area	N
- Coso Junction	A
- Remainder of County	U
Mono County	
- Mammoth Lake Planning Area	A
- Mono Lake Basin	N
- Remainder of County	U
LAKE COUNTY AIR BASIN	U
LAKE TAHOE AIR BASIN	U
MOUNTAIN COUNTIES AIR BASIN	U
NORTH CENTRAL COAST AIR BASIN	U
NORTH COAST AIR BASIN	U
NORTHEAST PLATEAU AIR BASIN	U
SACRAMENTO VALLEY AIR BASIN	
Sacramento County	A
Remainder of Air Basin	U
SAN DIEGO COUNTY	U

Area	Designations
SAN FRANCISCO BAY AREA AIR BASIN	U
SAN JOAQUIN VALLEY AIR BASIN	A
SOUTH CENTRAL COAST AIR BASIN	U
SOUTH COAST AIR BASIN	A
SOUTHEAST DESERT AIR BASIN	
Eastern Kern County	
- Indian Wells Valley	A
- Portion within San Joaquin Valley Planning Area	N
- Remainder of County	U
Imperial County	
- Imperial Valley Planning Area	A
- Remainder of County	U
Los Angeles County (portion)	U
Riverside County (portion)	
- Coachella Valley	N
- Non-AQMA portion	U
San Bernardino County	
- Trona	N
- Remainder of County	N

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

Figure 12

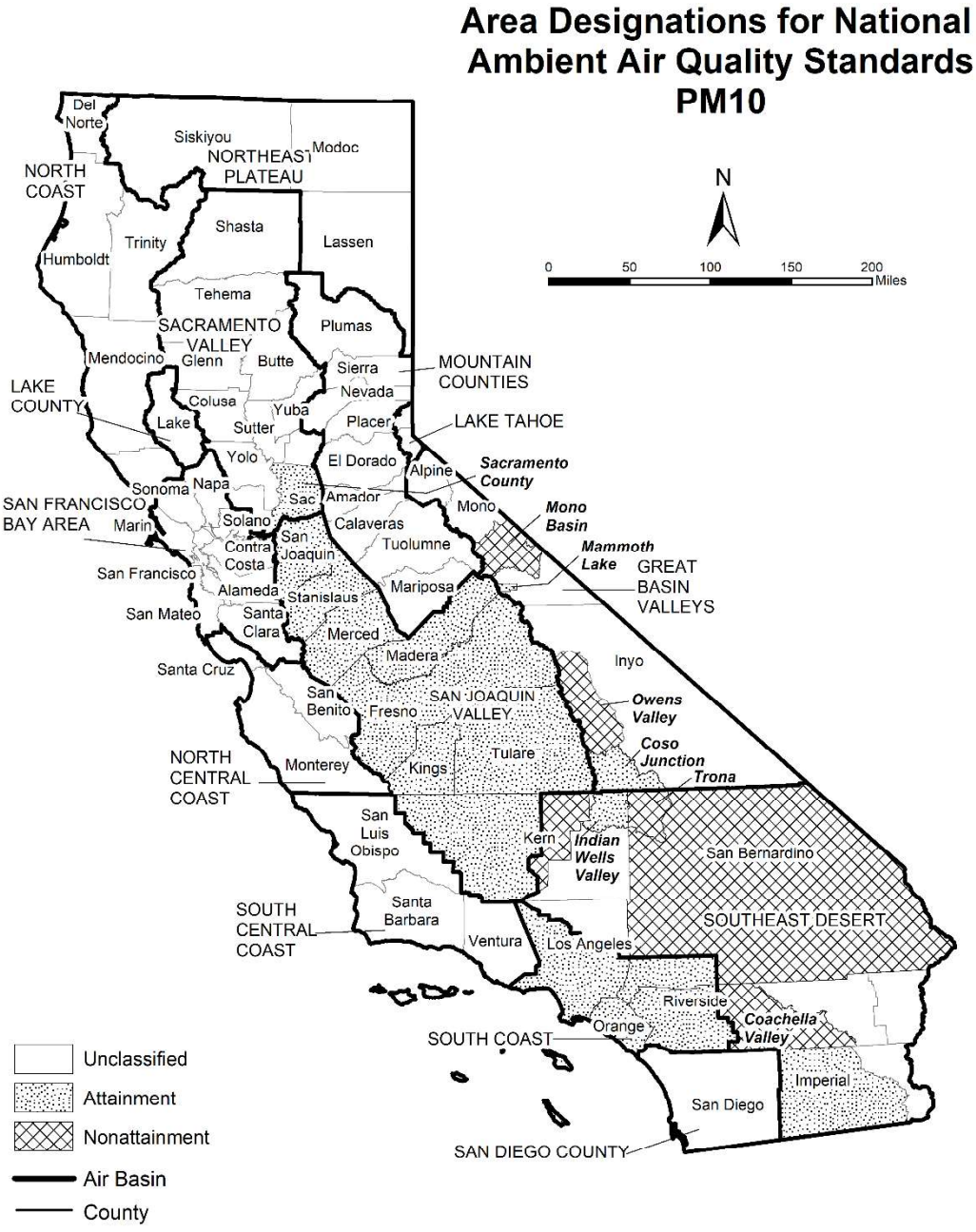

Area Designations for National Ambient Air Quality Standards PM10
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Trinity
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Alpine
Sacramento County
Sonoma
Napa
Sac
Amador
Mono
Mono Basin
SAN FRANCISCO BAY AREA
Marin
Solano
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mammoth Lake
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Inyo
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Owens Valley
Coso Junction
Trona
NORTH CENTRAL COAST
Monterey
Kings
Tulare
San Luis Obispo
Kern
Indian Wells Valley
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
Ventura
Los Angeles
SOUTHEAST DESERT
Riverside
Coachella Valley
Orange
SOUTH COAST
Imperial
San Diego
SAN DIEGO COUNTY
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: November 2023
Air Quality Planning and Science Division

Table 13
National Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	
Plumas County	
- Portola Valley Portion of Plumas County	N
- Remainder of Plumas County	U/A
Remainder of Air Basin	U/A
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	
Sacramento Metro Area[8]	N
Remainder of Air Basin	U/A
SAN DIEGO COUNTY	U/A
SAN FRANCISCO BAY AREA AIR BASIN[9]	N
SAN JOAQUIN VALLEY AIR BASIN	N
SOUTH CENTRAL COAST AIR BASIN	U/A
SOUTH COAST AIR BASIN[10]	N
SOUTHEAST DESERT AIR BASIN	
Imperial County (portion)[11]	N
Remainder of Air Basin	U/A

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

NOTE: This map reflects the 2006 24-hour $PM_{2.5}$ standard as well as the 1997 and 2012 $PM_{2.5}$ annual standards.

[8] 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 $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[9] Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[10] Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

[11] 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 $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

Figure 13

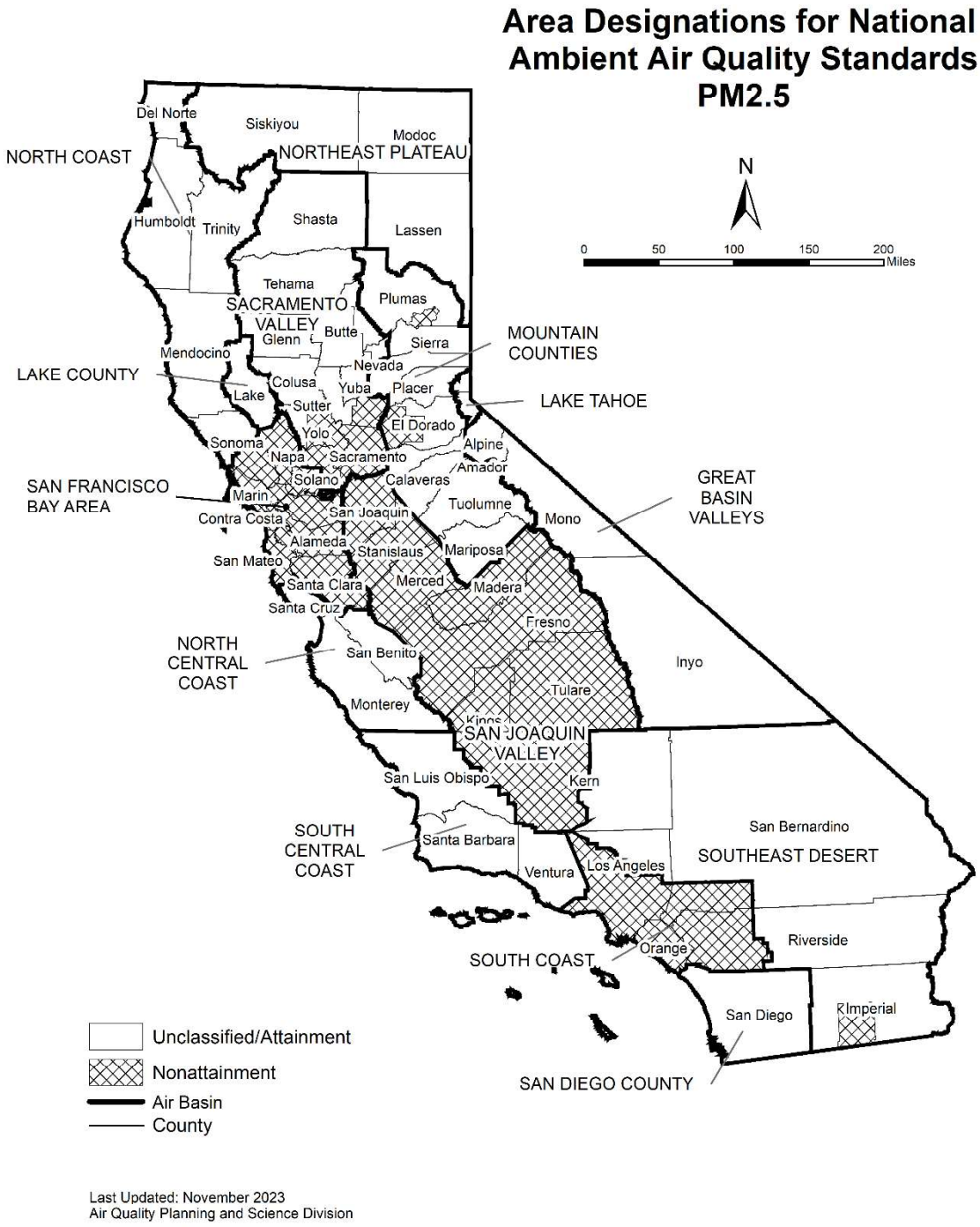

Area Designations for National Ambient Air Quality Standards PM2.5
N
0 50 100 150 200 Miles
NORTH COAST
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
Humboldt
Trinity
Shasta
Lassen
Tehama
SACRAMENTO VALLEY
Plumas
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Mendocino
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
El Dorado
Yolo
Sonoma
Alpine
Napa
Sacramento
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
GREAT BASIN VALLEYS
Marin
Tuolumne
Contra Costa
San Joaquin
Mono
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
NORTH CENTRAL COAST
San Benito
Inyo
Tulare
Monterey
Kings
SAN JOAQUIN VALLEY
San Luis Obispo
Kern
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
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Table 14
National Ambient Air Quality Standards Area Designations for Carbon Monoxide*

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

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

Figure 14


Area Designations for National Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Tulare
Inyo
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
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Air Quality Planning and Science Division

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

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

* 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
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
Colusa
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Marin
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
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Table 16
National Ambient Air Quality Standards Area Designations for Sulfur Dioxide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	U/A
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	U/A
SAN DIEGO COUNTY	U/A
SAN FRANCISCO BAY AREA AIR BASIN	U/A
SAN JOAQUIN VALLEY AIR BASIN	U/A
SOUTH CENTRAL COAST AIR BASIN[12]	U/A
SOUTH COAST AIR BASIN	U/A
SOUTHEAST DESERT AIR BASIN	U/A

* 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 SO_2 standard of 75 ppb.

[12] 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 16

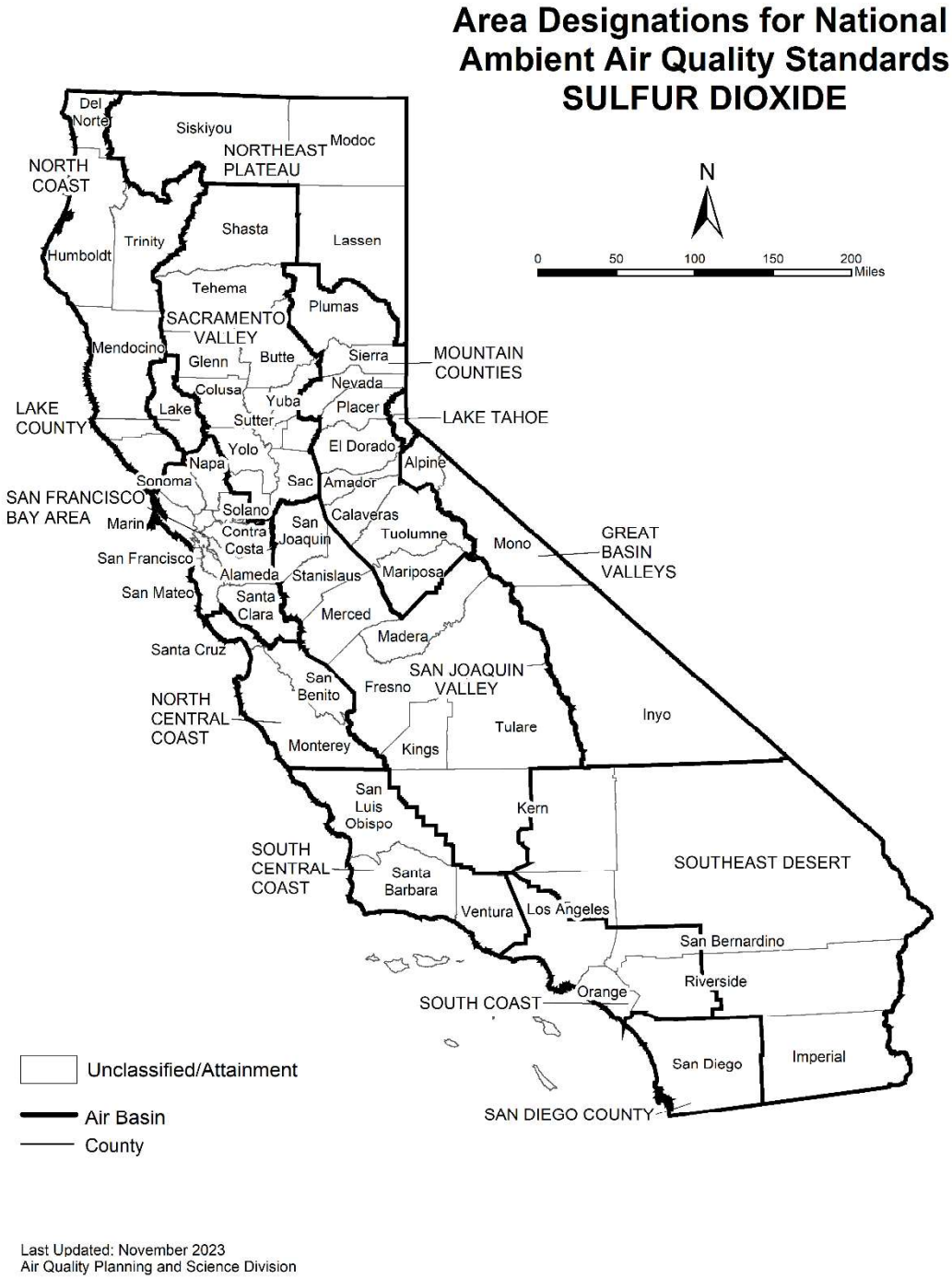
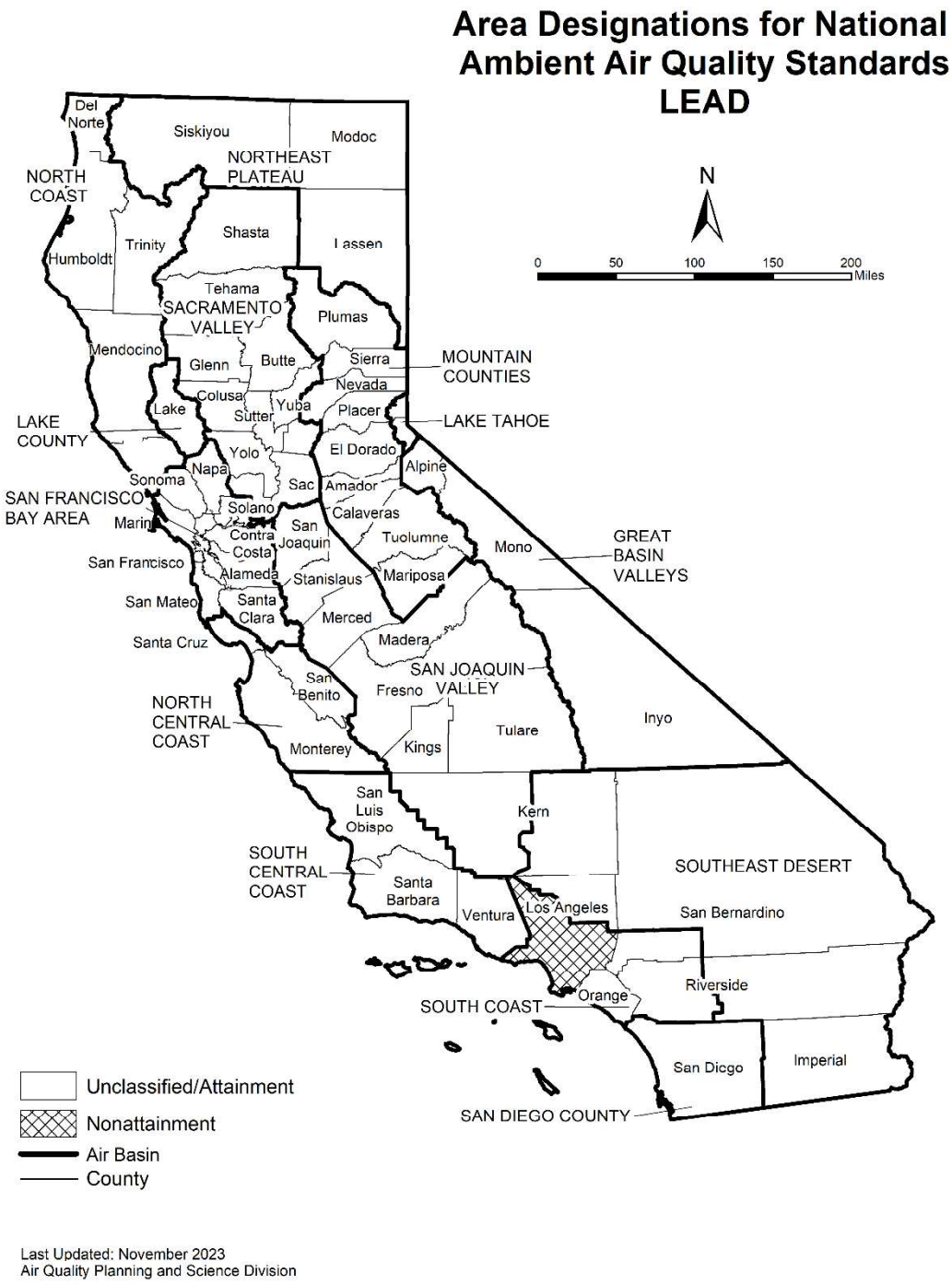

Area Designations for National Ambient Air Quality Standards
SULFUR DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Colusa
Nevada
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Tulare
Inyo
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
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Table 17
National Ambient Air Quality Standards Area Designations for Lead (particulate)

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	U/A
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	U/A
SAN DIEGO COUNTY	U/A
SAN FRANCISCO BAY AREA AIR BASIN	U/A
SAN JOAQUIN VALLEY AIR BASIN	U/A
SOUTH CENTRAL COAST AIR BASIN	U/A
SOUTH COAST AIR BASIN	
Los Angeles County (portion)[13]	N
Remainder of Air Basin	U/A
SOUTHEAST DESERT AIR BASIN	U/A

[13] Portion of County in Air Basin, not including Channel Islands

Figure 17


Area Designations for National Ambient Air Quality Standards
LEAD
N
0
50
100
150
200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
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APPENDIX 3.1:

CALEEMOD EMISSIONS MODEL OUTPUTS

16462 - Forest Lawn Cathedral City Detailed Report

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7.3. Overall Health & Equity Scores

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	16462 - Forest Lawn Cathedral City
Construction Start Date	4/1/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	10.0
Location	69855 E, 69855 Ramon Rd, Cathedral City, CA 92234, USA
County	Riverside-Salton Sea
City	Cathedral City
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5673
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.30

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Place of Worship	287	1000sqft	3.28	287,000	62,105	—	—	—

Other Asphalt Surfaces	66.1	1000sqft	1.52	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.06	1.68	42.2	60.5	0.31	0.83	17.5	18.3	0.83	6.05	6.88	—	42,529	42,529	0.69	5.33	71.0	44,206
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.00	4.97	7.02	35.1	0.05	0.10	2.53	2.63	0.10	0.61	0.71	—	7,674	7,674	0.22	0.29	0.24	7,767
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.59	0.54	4.20	16.7	0.03	0.07	1.86	1.93	0.07	0.51	0.58	—	4,666	4,666	0.10	0.38	3.25	4,784
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.11	0.10	0.77	3.04	0.01	0.01	0.34	0.35	0.01	0.09	0.11	—	773	773	0.02	0.06	0.54	792

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	2.06	1.68	42.2	60.5	0.31	0.83	17.5	18.3	0.83	6.05	6.88	—	42,529	42,529	0.69	5.33	71.0	44,206
2027	0.90	0.82	4.01	26.2	0.04	0.07	1.95	2.02	0.07	0.47	0.54	—	5,684	5,684	0.14	0.26	8.37	5,772
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.83	0.75	4.29	22.4	0.04	0.07	1.95	2.02	0.07	0.47	0.54	—	5,490	5,490	0.15	0.27	0.24	5,574
2027	0.81	0.73	4.16	21.9	0.04	0.07	1.95	2.02	0.07	0.47	0.54	—	5,431	5,431	0.14	0.26	0.22	5,511
2028	5.00	4.97	7.02	35.1	0.05	0.10	2.53	2.63	0.10	0.61	0.71	—	7,674	7,674	0.22	0.29	0.24	7,767
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.49	0.44	4.20	14.1	0.03	0.07	1.86	1.93	0.07	0.51	0.58	—	4,666	4,666	0.10	0.38	3.25	4,784
2027	0.59	0.54	2.90	16.7	0.03	0.05	1.39	1.43	0.05	0.34	0.38	—	3,950	3,950	0.10	0.18	2.58	4,010
2028	0.37	0.36	0.87	4.83	0.01	0.01	0.38	0.39	0.01	0.09	0.10	—	1,102	1,102	0.03	0.05	0.63	1,118
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.09	0.08	0.77	2.58	0.01	0.01	0.34	0.35	0.01	0.09	0.11	—	773	773	0.02	0.06	0.54	792
2027	0.11	0.10	0.53	3.04	< 0.005	0.01	0.25	0.26	0.01	0.06	0.07	—	654	654	0.02	0.03	0.43	664
2028	0.07	0.07	0.16	0.88	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	182	182	< 0.005	0.01	0.10	185

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.66	8.46	0.37	14.9	0.01	0.03	0.51	0.54	0.02	0.13	0.15	882	1,161	2,043	88.2	0.03	1.74	4,259
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	6.39	6.37	0.28	1.67	0.01	0.01	0.51	0.52	0.01	0.13	0.14	882	1,042	1,924	88.2	0.03	0.24	4,139
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.39	7.30	0.22	7.20	< 0.005	0.02	0.28	0.29	0.01	0.07	0.08	882	835	1,716	88.2	0.02	0.56	3,928
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.35	1.33	0.04	1.31	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	146	138	284	14.6	< 0.005	0.09	650

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.27	0.24	0.23	2.41	0.01	< 0.005	0.51	0.52	< 0.005	0.13	0.13	—	611	611	0.02	0.03	1.54	621
Area	8.39	8.22	0.11	12.5	< 0.005	0.02	—	0.02	0.02	—	0.02	—	51.3	51.3	< 0.005	< 0.005	—	51.5
Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	482	482	0.05	0.01	—	485
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	—	16.5
Waste	—	—	—	—	—	—	—	—	—	—	—	882	0.00	882	88.1	0.00	—	3,085
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20	0.20
Total	8.66	8.46	0.37	14.9	0.01	0.03	0.51	0.54	0.02	0.13	0.15	882	1,161	2,043	88.2	0.03	1.74	4,259
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.22	0.20	0.25	1.64	0.01	< 0.005	0.51	0.52	< 0.005	0.13	0.13	—	544	544	0.02	0.03	0.04	552
Area	6.17	6.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	482	482	0.05	0.01	—	485
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	—	16.5
Waste	—	—	—	—	—	—	—	—	—	—	—	882	0.00	882	88.1	0.00	—	3,085
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20	0.20

Total	6.39	6.37	0.28	1.67	0.01	0.01	0.51	0.52	0.01	0.13	0.14	882	1,042	1,924	88.2	0.03	0.24	4,139
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.13	0.12	0.13	1.02	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	311	311	0.01	0.01	0.36	316
Area	7.26	7.18	0.05	6.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.3	25.3	< 0.005	< 0.005	—	25.4
Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	482	482	0.05	0.01	—	485
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	—	16.5
Waste	—	—	—	—	—	—	—	—	—	—	—	882	0.00	882	88.1	0.00	—	3,085
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20	0.20
Total	7.39	7.30	0.22	7.20	< 0.005	0.02	0.28	0.29	0.01	0.07	0.08	882	835	1,716	88.2	0.02	0.56	3,928
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.02	0.02	0.19	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	51.4	51.4	< 0.005	< 0.005	0.06	52.3
Area	1.33	1.31	0.01	1.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.19	4.19	< 0.005	< 0.005	—	4.21
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	79.9	79.9	0.01	< 0.005	—	80.3
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	2.71	2.71	< 0.005	< 0.005	—	2.72
Waste	—	—	—	—	—	—	—	—	—	—	—	146	0.00	146	14.6	0.00	—	511
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	1.35	1.33	0.04	1.31	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	146	138	284	14.6	< 0.005	0.09	650

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.36	0.36	4.51	18.2	0.03	0.06	—	0.06	0.06	—	0.06	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	3.82	3.82	—	0.58	0.58	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.25	1.00	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.33	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	218	218	0.01	0.01	0.70	221
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.1	31.1	< 0.005	< 0.005	0.08	32.4
Hauling	0.14	0.09	5.00	1.16	0.03	0.09	1.22	1.31	0.09	0.31	0.40	—	4,486	4,486	0.04	0.70	9.34	4,706

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.02	11.0
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.78
Hauling	0.01	< 0.005	0.29	0.06	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	246	246	< 0.005	0.04	0.22	258
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.82
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
Hauling	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.7	40.7	< 0.005	0.01	0.04	42.7

3.3. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.52	2.71	30.0	0.05	0.10	—	0.10	0.10	—	0.10	—	5,532	5,532	0.22	0.04	—	5,551
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.11	1.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	227	227	0.01	< 0.005	—	228
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.6	37.6	< 0.005	< 0.005	—	37.8
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.55	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	254	254	0.01	0.01	0.81	258
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.1	31.1	< 0.005	< 0.005	0.08	32.4
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.51	9.51	< 0.005	< 0.005	0.01	9.63

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.33
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.59
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.22
Hauling	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	0.00

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.30	2.13	19.0	0.03	0.06	—	0.06	0.06	—	0.06	—	3,135	3,135	0.13	0.03	—	3,146
Dust From Material Movement	—	—	—	—	—	—	2.33	2.33	—	0.95	0.95	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	129	129	0.01	< 0.005	—	129

Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	—	21.4
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.33	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	218	218	0.01	0.01	0.70	221
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.1	31.1	< 0.005	< 0.005	0.08	32.4
Hauling	1.07	0.71	37.1	8.59	0.23	0.66	9.05	9.71	0.66	2.32	2.98	—	33,328	33,328	0.32	5.24	69.4	34,966
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.15	8.15	< 0.005	< 0.005	0.01	8.26
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.33
Hauling	0.04	0.03	1.60	0.36	0.01	0.03	0.37	0.40	0.03	0.09	0.12	—	1,370	1,370	0.01	0.22	1.23	1,436
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.35	1.35	< 0.005	< 0.005	< 0.005	1.37

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.22
Hauling	0.01	0.01	0.29	0.07	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	227	227	< 0.005	0.04	0.20	238

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.25	2.15	15.7	0.03	0.05	—	0.05	0.05	—	0.05	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.25	2.15	15.7	0.03	0.05	—	0.05	0.05	—	0.05	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	0.95	6.93	0.01	0.02	—	0.02	0.02	—	0.02	—	1,163	1,163	0.05	0.01	—	1,167
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.02	0.02	0.17	1.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	193	193	0.01	< 0.005	—	193
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.55	0.58	10.7	0.00	0.00	1.58	1.58	0.00	0.37	0.37	—	1,752	1,752	0.07	0.06	5.60	1,778
Vendor	0.07	0.05	1.41	0.61	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,367	1,367	0.02	0.19	3.58	1,427
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.45	0.63	6.05	0.00	0.00	1.58	1.58	0.00	0.37	0.37	—	1,492	1,492	0.02	0.06	0.15	1,510
Vendor	0.07	0.05	1.51	0.63	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,369	1,369	0.02	0.19	0.09	1,425
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.25	3.35	0.00	0.00	0.69	0.69	0.00	0.16	0.16	—	705	705	0.01	0.03	1.07	714
Vendor	0.03	0.02	0.65	0.27	< 0.005	0.01	0.17	0.17	0.01	0.05	0.05	—	605	605	0.01	0.08	0.68	630
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.61	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	117	117	< 0.005	< 0.005	0.18	118
Vendor	0.01	< 0.005	0.12	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	100	100	< 0.005	0.01	0.11	104
Hauling	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	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.25	2.15	15.7	0.03	0.05	—	0.05	0.05	—	0.05	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.25	2.15	15.7	0.03	0.05	—	0.05	0.05	—	0.05	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.18	1.53	11.2	0.02	0.03	—	0.03	0.03	—	0.03	—	1,878	1,878	0.08	0.02	—	1,885
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.28	2.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	311	311	0.01	< 0.005	—	312
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.58	0.52	0.52	9.94	0.00	0.00	1.58	1.58	0.00	0.37	0.37	—	1,718	1,718	0.02	0.06	5.06	1,740
Vendor	0.07	0.05	1.34	0.59	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,337	1,337	0.02	0.18	3.31	1,393
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.49	0.43	0.57	5.64	0.00	0.00	1.58	1.58	0.00	0.37	0.37	—	1,463	1,463	0.02	0.06	0.13	1,481
Vendor	0.07	0.05	1.44	0.60	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,338	1,338	0.02	0.18	0.09	1,391
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.32	0.37	5.05	0.00	0.00	1.12	1.12	0.00	0.26	0.26	—	1,117	1,117	0.01	0.04	1.56	1,131
Vendor	0.05	0.03	1.00	0.42	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	955	955	0.01	0.13	1.02	994
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.92	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	185	185	< 0.005	0.01	0.26	187
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	158	158	< 0.005	0.02	0.17	165
Hauling	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	0.00

3.11. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.25	0.25	2.15	15.7	0.03	0.05	—	0.05	0.05	—	0.05	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.38	2.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	468	468	0.02	< 0.005	—	470
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	77.5	77.5	< 0.005	< 0.005	—	77.8
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.41	0.52	5.23	0.00	0.00	1.58	1.58	0.00	0.37	0.37	—	1,436	1,436	0.02	0.06	0.12	1,453
Vendor	0.06	0.04	1.39	0.57	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,306	1,306	0.02	0.18	0.08	1,359
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.17	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	273	273	< 0.005	0.01	0.35	277
Vendor	0.01	0.01	0.24	0.10	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	232	232	< 0.005	0.03	0.24	242
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.2	45.2	< 0.005	< 0.005	0.06	45.8
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.5	38.5	< 0.005	0.01	0.04	40.1
Hauling	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	0.00

3.13. Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	1.92	10.4	0.02	0.03	—	0.03	0.03	—	0.03	—	1,598	1,598	0.06	0.01	—	1,604
Paving	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	87.6	87.6	< 0.005	< 0.005	—	87.9
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	< 0.005	< 0.005	0.02	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.5	14.5	< 0.005	< 0.005	—	14.6
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.09	0.87	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	238	238	< 0.005	0.01	0.02	241
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.02	14.1
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.31	2.31	< 0.005	< 0.005	< 0.005	2.34
Vendor	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	0.00
Hauling	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	0.00

3.15. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.86	1.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	3.74	3.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.75	9.75	< 0.005	< 0.005	—	9.79
Architectural Coatings	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.61	1.61	< 0.005	< 0.005	—	1.62
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.10	1.05	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	287	287	< 0.005	0.01	0.02	291
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.8	16.8	< 0.005	< 0.005	0.02	17.0
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.78	2.78	< 0.005	< 0.005	< 0.005	2.82
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.27	0.24	0.23	2.41	0.01	< 0.005	0.51	0.52	< 0.005	0.13	0.13	—	611	611	0.02	0.03	1.54	621
Other Asphalt Surfaces	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	0.00
Total	0.27	0.24	0.23	2.41	0.01	< 0.005	0.51	0.52	< 0.005	0.13	0.13	—	611	611	0.02	0.03	1.54	621
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.22	0.20	0.25	1.64	0.01	< 0.005	0.51	0.52	< 0.005	0.13	0.13	—	544	544	0.02	0.03	0.04	552
Other Asphalt Surfaces	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	0.00
Total	0.22	0.20	0.25	1.64	0.01	< 0.005	0.51	0.52	< 0.005	0.13	0.13	—	544	544	0.02	0.03	0.04	552
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.02	0.02	0.02	0.19	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	51.4	51.4	< 0.005	< 0.005	0.06	52.3
Other Asphalt Surfaces	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	0.00
Total	0.02	0.02	0.02	0.19	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	51.4	51.4	< 0.005	< 0.005	0.06	52.3

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	446	446	0.04	0.01	—	449
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	446	446	0.04	0.01	—	449
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	446	446	0.04	0.01	—	449
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	446	446	0.04	0.01	—	449
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	73.9	73.9	0.01	< 0.005	—	74.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	73.9	73.9	0.01	< 0.005	—	74.3

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Place of Worship	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Other Asphalt Surfaces	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
Total	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Other Asphalt Surfaces	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
Total	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.2	36.2	< 0.005	< 0.005	—	36.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.00
Other Asphalt Surfaces	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
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.99	5.99	< 0.005	< 0.005	—	6.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	6.15	6.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.22	2.05	0.11	12.5	< 0.005	0.02	—	0.02	0.02	—	0.02	—	51.3	51.3	< 0.005	< 0.005	—	51.5
Total	8.39	8.22	0.11	12.5	< 0.005	0.02	—	0.02	0.02	—	0.02	—	51.3	51.3	< 0.005	< 0.005	—	51.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	6.15	6.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6.17	6.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.12	1.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.20	0.18	0.01	1.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.19	4.19	< 0.005	< 0.005	—	4.21

Total	1.33	1.31	0.01	1.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.19	4.19	< 0.005	< 0.005	—	4.21

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	—	16.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	—	16.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	—	16.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	16.4	16.4	< 0.005	< 0.005	—	16.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.00	2.71	2.71	< 0.005	< 0.005	—	2.72
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	2.71	2.71	< 0.005	< 0.005	—	2.72

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	882	0.00	882	88.1	0.00	—	3,085
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	882	0.00	882	88.1	0.00	—	3,085
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	882	0.00	882	88.1	0.00	—	3,085
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	882	0.00	882	88.1	0.00	—	3,085
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	146	0.00	146	14.6	0.00	—	511
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	146	0.00	146	14.6	0.00	—	511

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20	0.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20	0.20
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20	0.20
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20	0.20
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	4/1/2026	4/28/2026	5.00	20.0	—
Site Preparation	Site Preparation	4/29/2026	5/19/2026	5.00	15.0	—
Grading	Grading	4/29/2026	5/19/2026	5.00	15.0	—
Building Construction	Building Construction	5/20/2026	3/31/2028	5.00	488	—
Paving	Paving	3/6/2028	3/31/2028	5.00	20.0	—
Architectural Coating	Architectural Coating	3/6/2028	3/31/2028	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Final	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Tier 4 Final	4.00	8.00	87.0	0.43
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading	Crawler Tractors	Diesel	Tier 4 Final	3.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 4 Final	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Tier 4 Final	2.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	1.00	10.2	HHDT,MHDT
Demolition	Hauling	67.3	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	1.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	1.00	10.2	HHDT,MHDT
Grading	Hauling	500	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	121	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	44.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT

Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	24.1	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	24,300	0.00	3,963

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	5,383	—
Site Preparation	—	—	52.5	0.00	—
Grading	—	60,000	37.5	0.00	—
Paving	0.00	0.00	0.00	0.00	1.52

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction

Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Place of Worship	0.00	0%
Other Asphalt Surfaces	1.52	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	346	0.03	< 0.005
2027	0.00	346	0.03	< 0.005
2028	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Place of Worship	30.1	44.8	69.5	13,813	314	467	724	143,936
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	24,300	0.00	3,963

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Place of Worship	470,524	346	0.0330	0.0040	112,850
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Place of Worship	0.00	5,358,118
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Place of Worship	1,636	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Place of Worship	Household refrigerators and/or freezers	User Defined	150	0.02	0.60	0.00	1.00
Place of Worship	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
Place of Worship	Stand-alone retail refrigerators and freezers	User Defined	150	< 0.005	1.00	0.00	1.00
Place of Worship	Walk-in refrigerators and freezers	User Defined	150	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	20.5	annual days of extreme heat
Extreme Precipitation	0.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.90	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	6.29
AQ-DPM	42.2
Drinking Water	45.4
Lead Risk Housing	2.86

Pesticides	0.00
Toxic Releases	2.66
Traffic	75.4
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	22.1
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	0.00
Solid Waste	52.9
Sensitive Population	—
Asthma	17.9
Cardio-vascular	15.1
Low Birth Weights	0.35
Socioeconomic Factor Indicators	—
Education	21.7
Housing	51.4
Linguistic	12.3
Poverty	28.6
Unemployment	55.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	69.75490825
Employed	13.55062235
Median HI	79.18644938
Education	—

Bachelor's or higher	77.86475042
High school enrollment	10.47093545
Preschool enrollment	43.9753625
Transportation	—
Auto Access	76.73553189
Active commuting	13.58911844
Social	—
2-parent households	18.91441037
Voting	76.46605928
Neighborhood	—
Alcohol availability	93.43000128
Park access	10.50943154
Retail density	12.87052483
Supermarket access	24.17554215
Tree canopy	40.61337097
Housing	—
Homeownership	93.750802
Housing habitability	64.63492878
Low-inc homeowner severe housing cost burden	32.22122418
Low-inc renter severe housing cost burden	12.38290774
Uncrowded housing	91.95431798
Health Outcomes	—
Insured adults	75.63197742
Arthritis	0.0
Asthma ER Admissions	85.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0

Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	32.6
Cognitively Disabled	85.7
Physically Disabled	29.8
Heart Attack ER Admissions	79.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	65.7
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	97.9
Elderly	0.7
English Speaking	87.7
Foreign-born	25.4
Outdoor Workers	86.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	76.6
Traffic Density	47.3

Traffic Access	23.0
Other Indices	—
Hardship	23.1
Other Decision Support	—
2016 Voting	84.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	9.00
Healthy Places Index Score for Project Location (b)	51.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Schedule based on client data. Construction schedule will last for 2 years and will begin in April 2026 and end in March 2028.
Land Use	Total Project site is 4.8 acres.

Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days. Per client data, Tier 4 Final equipment will be assumed.
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	SCAQMD Rule 1113 Per client data, no architectural coating associated with exterior buildings. The analysis assumes that interior of occupied space will be painted.
Operations: Vehicle Data	Trip characteristics based on trip generation
Operations: Architectural Coatings	SCAQMD Rule 1113 Per client data, no architectural coating associated with exterior buildings.
Operations: Energy Use	Based on client provided data.
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively. Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater
Operations: Water and Waste Water	Based on client provided data.

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