# Spreckels Distribution Center

## AIR QUALITY IMPACT ANALYSIS

## CITY OF MANTECA

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| | |
|---|---|
| % | Percent |
| °F | degrees Fahrenheit |
| µg/$m^3$ | Microgram per Cubic Meter |
| 1992 CO Plan | 1992 Federal Attainment Plan for Carbon Monoxide |
| AB 2595 | California Clean Air Act |
| AQIA | Air Quality Impact Analysis |
| AQP | Air Quality Plans |
| BAAQMD | Bay Area Air Quality Management District |
| BACM | Best Available Control Measure |
| $C_2H_3Cl$ | vinyl chloride |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CalEEMod | California Emissions Estimator Model |
| CalEPA | California EPA |
| 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 |
| City | City of Manteca |
| CO | carbon monoxide |
| COHb | carboxyhemoglobin |
| EIR | Environmental Impact Report |
| EMFAC | EMissions FACtor model |
| EPA | Environmental Protection Agency |
| GHG | greenhouse gas |
| $H_2S$ | hydrogen sulfide |
| ISR | Indirect Source Review |
| MM | mitigation measure |
| mph | miles per hour |
| MWELO | Model Water Efficient Landscape Ordinance |
| NAAQS | National Ambient Air Quality Standards |
| NO | nitric oxide |
| $NO_2$ | nitrogen dioxide |
| $NO_X$ | nitrogen oxides |

| | |
|---|---|
| $O_2$ | oxygen |
| $O_2$ deficiency | chronic hypoxemia |
| $O_3$ | ozone |
| Pb | Lead |
| PM | Particulate Matter |
| $PM_{10}$ | Particulate matter 10 microns or less |
| $PM_{2.5}$ | Particulate matter 2.5 microns or less |
| ppm | parts per million |
| Project | Spreckels Distribution Center |
| RECLAIM | Regional Clean Air Incentives Market |
| ROG | reactive organic gases |
| RTP | Regional Transportation Plan |
| SCS | Sustainable Communities Strategy |
| SF | square feet |
| SIP | State Implementation Plan |
| SJVAB | San Joaquin Valley Air Basin |
| SJVAPCD | San Joaquin Valley Air Pollution Control District |
| SMAQMD | Sacramento Metropolitan Air Quality Management District |
| $SO_2$ | sulfur dioxide |
| $SO_4$ | sulfates |
| $SO_X$ | sulfur oxides |
| TAC | toxic air contaminant |
| Title I | Non-Attainment Provisions |
| Title II | Mobile Source Provisions |
| TRU | Transport Refrigeration Unit |
| VOC | Volatile Organic Compounds |
| vph | vehicles per hour |
| YSAQMD | Yolo-Solano Air Quality Management District |

# EXECUTIVE SUMMARY

## ES.1 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES

San Joaquin Valley Air Pollution Control District (SJVAPCD) Rules that are currently applicable during construction activity for this Project include, but are not limited to: Rule 4102 (Nuisance) (1) and Regulation VIII (Fugitive $PM_{10}$ Prohibitions) (2). It should be noted that these Rules represent Best Available Control Measures (BACMs) and are not mitigation since they are regulatory requirements.

**RULE 4102**

The purpose of this rule is to prohibit a facility from posing as a nuisance to surrounding receptors and can impose penalties for nuisance issues such as dust, smoke, excess emissions, etc. Compliance with this rule ensures that the area around the Project site will not be adversely impacted by such issues. The following measures shall be incorporated into Project plans and specifications as implementation of SJVAPCD Rule 4102 (1).

**REGULATION VIII**

SJVAPCD Regulation VIII is a series of regulations to reduce and/or eliminate generation of particulate matter (PM) that can adversely impact visibility as well as the health and safety of people on-site or in the vicinity of the Project. The following measures shall be incorporated into Project plans and specifications as implementation of SJVAPCD Regulation VIII (2).

**RULE 8011**

The purpose of this rule is to reduce ambient concentration of fine particulate matter ($PM_{10}$) by requiring actions to prevent, reduce or mitigate anthropogenic (human-caused) fugitive dust emissions (3).

**RULE 8021**

The purpose of this rule is to limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities. This rule places limits on opacity and equipment operation under certain adverse weather conditions (4).

**RULE 8041**

The purpose of this rule is to require that equipment and vehicles leaving the construction site control the amount of dirt, soil, or mud that is tracked offsite and onto public roadways. This helps eliminate or minimize dust generation and opacity degradation (5).

**RULE 8051**

The purpose of this rule is to limit fugitive dust from open areas, i.e., areas on a construction site that are not actively being constructed upon but may generate wind-blown dust (6).

**RULE 9510**

The purpose of this rule, also known as the Indirect Source Review (ISR) Rule, is to reduce emissions associated with construction and operational activities of development projects within the San Joaquin Valley (7).

## ES.2 CONSTRUCTION-SOURCE MITIGATION MEASURES

The Project would not exceed any thresholds of significance for construction-source emissions. As such, a less than significant impact would occur for Project-related construction-source emissions and no mitigation would be required.

## ES.3 OPERATIONAL-SOURCE MITIGATION MEASURES

The Project would not exceed any thresholds of significance for operational-source emissions. As such, a less than significant impact would occur for Project-related operational-source emissions and no mitigation would be required. Nonetheless, the Project would incorporate the following mitigation measures (MM) which would reduce criteria pollutant emissions associated with the operation of the Project. However, it should be noted that, conservatively, no credit was taken for implementation of the measures in the analysis.

**MM AQ-1**

Prior to issuance of occupancy permits, all on-site outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) shall be required to be powered by electricity, compressed natural gas, or gasoline and all indoor cargo handling equipment shall be required to be powered by electricity.

**MM AQ-2**

All landscape equipment (e.g. leaf blower) used for property management shall be electric powered only. The property manager/facility owner shall provide documentation (e.g., purchase, rental, and/or services agreement) to the Development Services Department to verify, to the City's satisfaction, that all landscaping equipment utilized will be electric powered.

# 1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed Spreckels Distribution Center (Project). The purpose of this AQIA is to evaluate the potential air quality impacts associated with construction and operation of the proposed Project and identify measures, as necessary, to reduce emissions in comparison to thresholds established by the SJVAPCD.

## 1.1 SITE LOCATION

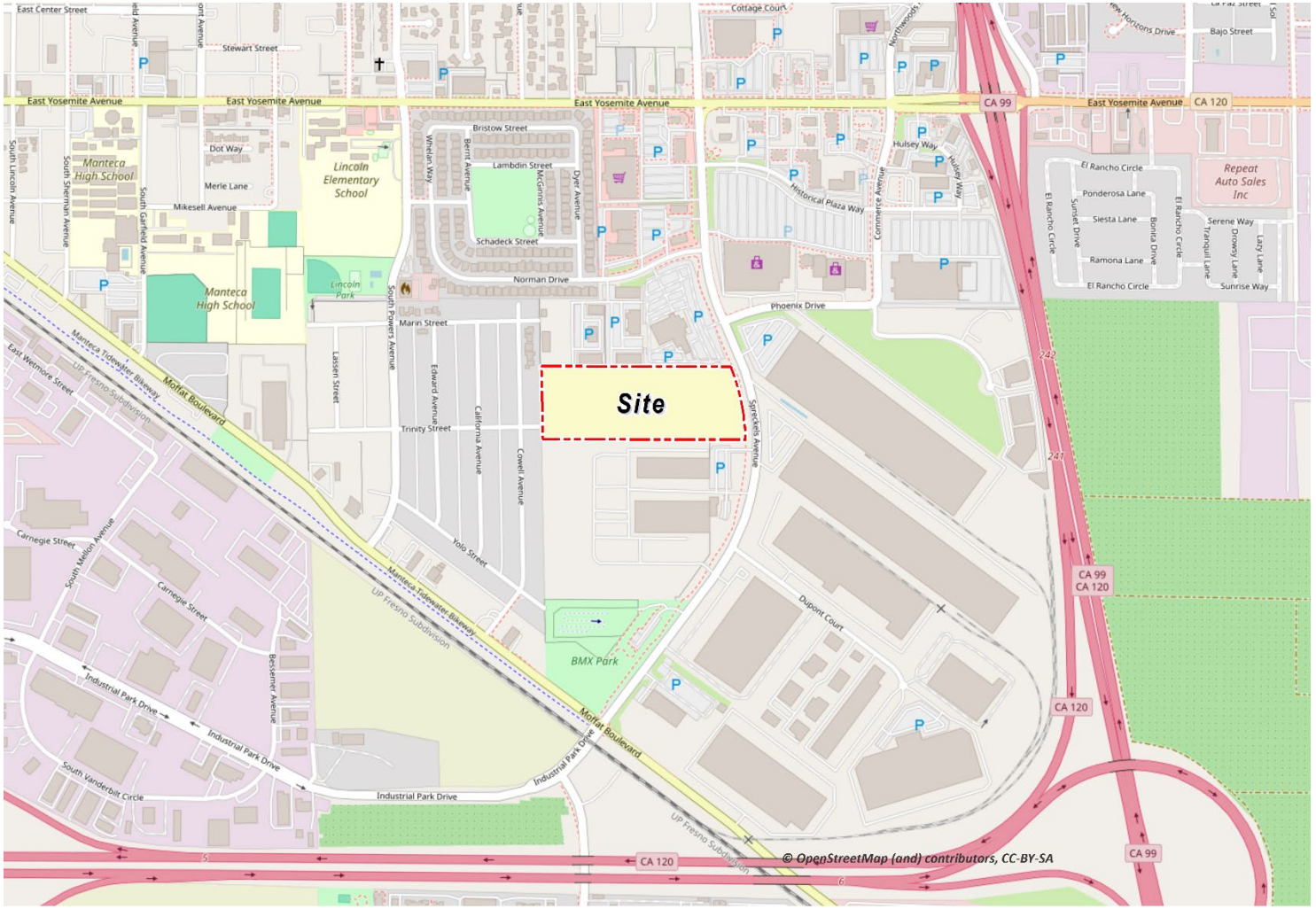
The proposed Spreckels Distribution Center (Project) is located at 407 Spreckels Avenue in the City of Manteca, as shown in Exhibit 1-A.

## 1.2 PROJECT DESCRIPTION

The Project Applicant is processing a Conditional Use Permit and Site Plan Review for the proposed Project to redevelop the Project site with a modern, 289,449 square feet (SF) warehouse and office building with 46 truck dock doors, 180 standard parking spaces, six (6) accessible parking spaces, and 63 truck trailer spaces. Of the total square footage of the building, the Project would allocate 296,230 sf for warehousing/distribution and 8,000 sf for office uses. Currently, the Project site is vacant and undeveloped, consisting primarily of ruderal grasses, which appear to be regularly disked. An eight-foot solid sound wall extends along the western site boundary, and the Manteca Tidewater Bikeway extends along the eastern site boundary.

A preliminary site plan for the proposed Project is shown in Exhibit 1-B. The proposed Project has an anticipated opening year of 2026.

## EXHIBIT 1-A: LOCATION MAP

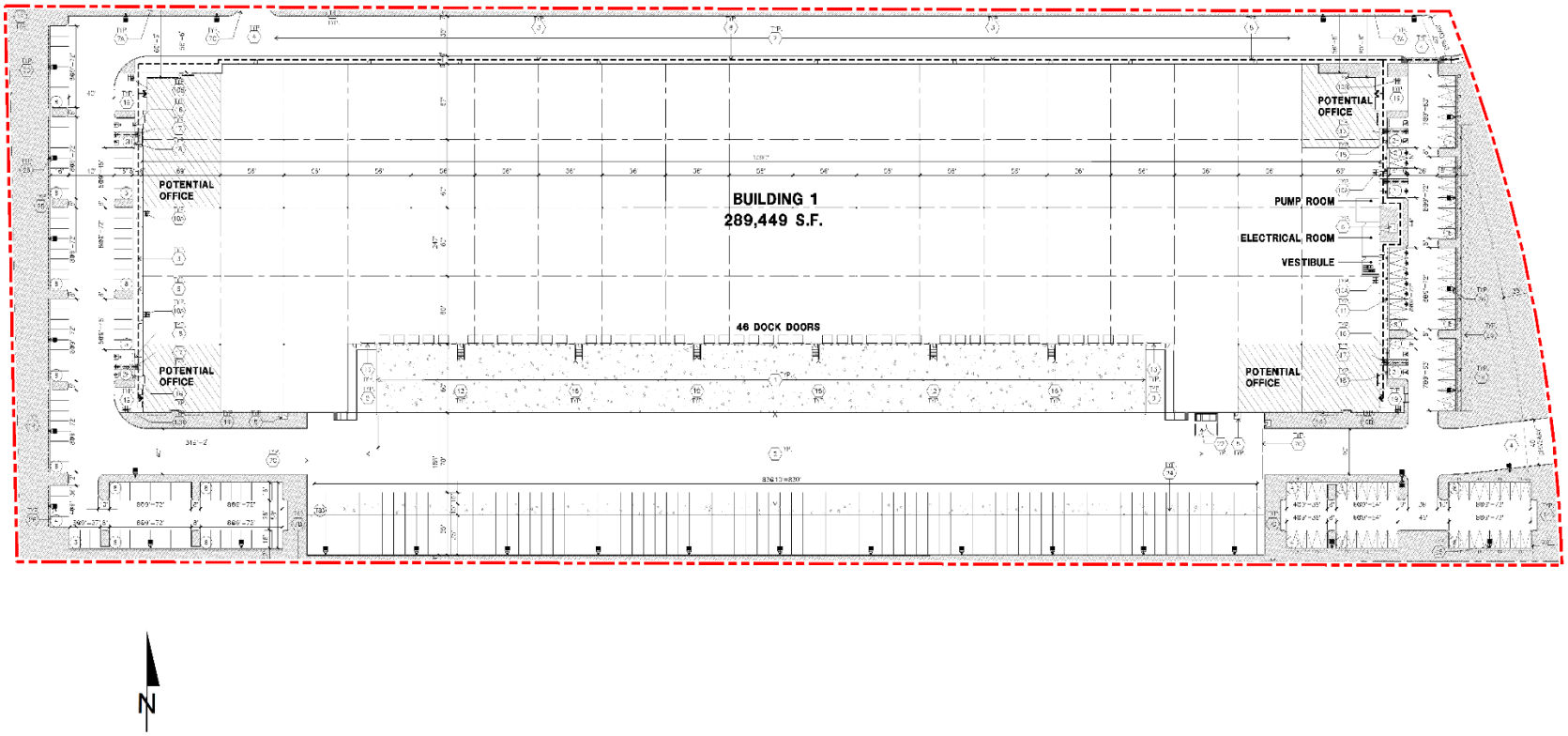



**LEGEND:**

N

Site Boundary

## EXHIBIT 1-B: PRELIMINARY SITE PLAN



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# 2 AIR QUALITY SETTING

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

## 2.1 SAN JOAQUIN VALLEY AIR BASIN

The Project site is located in San Joaquin County, which is part of the San Joaquin Valley Air Basin (SJVAB) and is under the jurisdiction of the SJVAPCD. The air quality assessment for the proposed Project includes estimating emissions associated with short-term construction and long-term operation of the proposed Project. A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the SJVAPCD, have created guidelines and requirements to conduct air quality analyses. The SJVAPCD's current guidelines, included in its *California Environmental Quality Act and Federal Conformity Guidelines*, were adhered to in the assessment of air quality impacts for the proposed Project.

The SJVAB consists of eight counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and the SJVAB portion of Kern. The SJVAB is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, and the Tehachapi mountains to the south.

## 2.2 REGIONAL CLIMATE

Air quality in the Project area is not only affected by various emissions sources (mobile, industry, etc.) but is also affected by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall.

The SJVAB has an inland Mediterranean climate with warm, dry summers and relatively cool nights and cool winters with sparse rainfall. The most significant weather pattern within the San Joaquin Valley is the semi-permanent subtropical high-pressure cell, referred to as the "Pacific High." During the summer, the Pacific High is positioned near the coast of northern California and redirects storms originating from the ocean to the north, resulting in essentially rainless summer months. During the winter, the Pacific High moves southerly allowing storms to pass through the San Joaquin Valley, resulting in most of the precipitation during December through April. During the summer, the predominant surface winds travel from the northwest and enter the Valley through the Carquinez strait to flow towards the Tehachapi Mountains. This northwesterly wind flow is interrupted in early fall by the emergence of southeasterly winds which become progressively more prevalent as winter approaches. Wind speeds are generally highest during the spring and lightest in fall and winter. The cool air flowing through the Carquinez strait is warmed as it travels southerly through the Valley. Once reaching the southern end of the Valley, the average high temperature during the summer is nearly 100 degrees Fahrenheit (°F) with relatively low humidity, causing large temperature variations throughout the day. Temperatures during the summer often drop into the upper 60s. In winter, the average high temperatures reach the mid-50s and the average low drops to the mid-30s. Snow and thunderstorms are infrequent.

Additionally, another high-pressure cell, known as the "Great Basin High," develops east of the

Sierra Nevada Mountain Range during winter. When this cell is weak, a layer of cool, damp air becomes trapped in the basin and extensive fog results. During inversions, a mass of warm dry air sits over cooler air near the ground, essentially trapping the air mass below and adversely affecting regional air quality. Surface-based inversions, while shallow and typically short-lived, are present most mornings. Elevated inversions, while less frequent than ground-based inversions, are typically longer lasting and create more severe air stagnation problems. The winter season characteristically has the poorest conditions for vertical mixing of the entire year.

## 2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SJVAB is determined by its terrain and geographical location. The SJVAB is surrounded by mountains that restrict air movement and limit the dispersion of pollutants out of the basin.

Wind patterns across this region are characterized by light northerly and northeasterly winds, with an average speed of seven miles per hour. In the summer, winds from the north flow south and southeasterly through the Valley, through the Tehachapi Pass and into the Southeast Desert Air Basin. In the late fall and winter, cold winds from the south flow northerly and northwesterly into the Valley. Wind speed and direction determine the dispersion of air pollutants.

## 2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (8):

**TABLE 2-1: CRITERIA POLLUTANTS**

| Criteria Pollutant | Description | Sources | Health Effects |
|---|---|---|---|
| CO | CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone ($O_3$), motor vehicles operating at slow speeds are the primary source of CO in the SJVAB. The highest ambient CO concentrations are generally found near congested | Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment, and residential heating. | Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen ($O_2$) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with $O_2$ transport and competing with $O_2$ to combine with hemoglobin present in the |

**TABLE 2-1: CRITERIA POLLUTANTS**

| Criteria Pollutant | Description | Sources | Health Effects |
|---|---|---|---|
| | transportation corridors and intersections. | | 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, 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 $SO_2$.<br><br>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.<br><br>Some population-based studies indicate that the mortality and morbidity |

**TABLE 2-1: CRITERIA POLLUTANTS**

| Criteria Pollutant | Description | Sources | Health Effects |
|---|---|---|---|
| | | | 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. |
| $NO_X$ | $NO_X$ consists of nitric oxide (NO), nitrogen dioxide ($NO_2$) and nitrous oxide ($N_2O$) and are formed when nitrogen ($N_2$) combines with $O_2$. Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. $NO_X$ is typically created during combustion processes and are major contributors to smog formation and acid deposition. $NO_2$ is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, $NO_2$ is the most abundant in the atmosphere. As ambient concentrations of $NO_2$ are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of $NO_2$ than those indicated by a regional monitoring station. | 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.<br><br>In animals, exposure to levels of $NO_2$ considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in |

**TABLE 2-1: CRITERIA POLLUTANTS**

| Criteria Pollutant | Description | Sources | Health Effects |
|---|---|---|---|
| | | | 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 reactive organic gases (ROG) 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 pre-existing 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 participate in multiple outdoor sports and live in communities with high $O_3$ levels.<br><br>$O_3$ exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of |

**TABLE 2-1: CRITERIA POLLUTANTS**

| Criteria Pollutant | Description | Sources | Health Effects |
|---|---|---|---|
| | | | 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 in 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.<br><br>$PM_{2.5}$: A similar air pollutant to $PM_{10}$ consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include $SO_4$ formed from $SO_2$ release from power plants and industrial facilities and nitrates that are formed from $NO_X$ release from power plants, automobiles, and other types of combustion | Sources of $PM_{10}$ include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, $NO_X$, $SO_X$, organics) as well as from the incomplete combustion of any fuel.<br><br>$PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, $NO_X$, $SO_X$, organics). | 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, and an increased mortality from lung cancer.<br><br>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 children without asthma, and to increased medication use in children and adults with asthma. Recent studies show lung |

**TABLE 2-1: CRITERIA POLLUTANTS**

| Criteria Pollutant | Description | Sources | Health Effects |
|---|---|---|---|
| | 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. | | function growth in children is reduced with long term exposure to particulate matter.<br>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 $PM_{2.5}$. |
| 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 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. | Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing, and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored. | 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 2-1: CRITERIA POLLUTANTS**

| Criteria Pollutant | Description | Sources | Health Effects |
|---|---|---|---|
| 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. |
| Lead (Pb) | Pb is a heavy metal that is highly persistent in the environment and considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions. | 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.<br><br>Pb poisoning can cause anemia, lethargy, seizures, and death; although it 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 |

**TABLE 2-1: CRITERIA POLLUTANTS**

| Criteria Pollutant | Description | Sources | Health Effects |
|---|---|---|---|
| | | | 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. |
| Odor | Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (9). | Odors can come from many sources including animals, human activities, industry, nature, and vehicles. | Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress. |

## 2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SJVAPCD 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 public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (10).

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 presented in Table 2-1. 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), $SO_2$, $NO_2$, $PM_{10}$, $PM_{2.5}$, and visible reducing particles are not to be exceeded at any time in any consecutive three-year period; all other values are not to be equaled or exceeded. The air quality in a region is considered to be in attainment by federal standards if the measured ambient air pollutant levels for $O_3$, $PM_{10}$, $PM_{2.5}$, and those based on annual averages or arithmetic mean are not

exceeded more than once per year. The $O_3$ standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/$m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard (11).

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

| Ambient Air Quality Standards | | | | | | |
|---|---|---|---|---|---|---|
| **Pollutant** | **Averaging Time** | **California Standards [1]** | | **National Standards [2]** | | |
| | | **Concentration [3]** | **Method [4]** | **Primary [3,5]** | **Secondary [3,6]** | **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 µg/m$^3$ | 15 µg/m$^3$ | |
| **Carbon Monoxide (CO)** | 1 Hour | 20 ppm (23 mg/m$^3$) | Non-Dispersive Infrared Photometry (NDIR) | 35 ppm (40 mg/m$^3$) | — | Non-Dispersive Infrared Photometry (NDIR) |
| | 8 Hour | 9.0 ppm (10 mg/m$^3$) | | 9 ppm (10 mg/m$^3$) | — | |
| | 8 Hour (Lake Tahoe) | 6 ppm (7 mg/m$^3$) | | — | — | |
| **Nitrogen Dioxide ($NO_2$)[10]** | 1 Hour | 0.18 ppm (339 µg/m$^3$) | Gas Phase Chemiluminescence | 100 ppb (188 µg/m$^3$) | — | Gas Phase Chemiluminescence |
| | Annual Arithmetic Mean | 0.030 ppm (57 µg/m$^3$) | | 0.053 ppm (100 µg/m$^3$) | Same as Primary Standard | |
| **Sulfur Dioxide ($SO_2$)[11]** | 1 Hour | 0.25 ppm (655 µg/m$^3$) | Ultraviolet Fluorescence | 75 ppb (196 µg/m$^3$) | — | Ultraviolet 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 …**

**For more information please call ARB-PIO at (916) 322-2990** **California Air Resources Board (5/4/16)**

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

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ 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 December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. 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 $\mu g/m^3$. 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 SJVAPCD monitors levels of various criteria pollutants at 38 permanent monitoring stations and 5 Photochemical Assessment Monitoring Stations (PAMS) throughout the air district (12). On January 25, 2024, CARB adopted the proposed 2023 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SJVAB (13). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SJVAB.

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

| Criteria Pollutant | State Designation | Federal Designation |
|---|---|---|
| $O_3$ – 1-hour standard | Nonattainment | -- |
| $O_3$ – 8-hour standard | Nonattainment | Nonattainment |
| $PM_{10}$ | Nonattainment | Attainment |
| $PM_{2.5}$ | Nonattainment | Nonattainment |
| CO | Attainment | Unclassifiable/Attainment |
| $NO_2$ | Attainment | Unclassifiable/Attainment |
| $SO_2$ | Attainment | Unclassifiable/Attainment |
| Pb | Attainment | Unclassifiable/Attainment |
| Sulfates | Attainment | -- |
| Hydrogen Sulfide | Unclassified | -- |
| Vinyl Chloride | Unclassified | -- |
| Visibility Reducing Particulates | Unclassified | -- |

"-" = The national 1-hour $O_3$ standard was revoked effective June 15, 2005.

## 2.7 LOCAL AIR QUALITY

The most recent three (3) years of data available is shown in Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for $O_3$, $NO_2$, $PM_{10}$, and $PM_{2.5}$ was obtained using the CARB iADAM: Air Quality and Data Statistics and the Air Quality and Meteorological Information System (AQMIS) (14) (15). Data for $SO_2$ has been omitted as attainment is regularly met and few monitoring stations measure $SO_2$ concentrations. It should be noted that the table below is provided for informational purposes.

Data from the Manteca-530 Fishback Road monitoring station, located approximately 2.5 miles west of the Project site, was utilized for $PM_{10}$ and $PM_{2.5}$. Because data for $O_3$ and $NO_2$ is not available from the Manteca monitoring station, data from the Stockton-University Park

monitoring station, located approximately 12.5 miles northwest of the Project site, was utilized for these pollutants.

**TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2021-2023**

| Pollutant | Standard | Year | | |
|---|---|---|---|---|
| | | 2021 | 2022 | 2023 |
| $O_3$ | | | | |
| Maximum Federal 1-Hour Concentration (ppm) | | 0.040 | 0.141 | 0.086 |
| Maximum Federal 8-Hour Concentration (ppm) | | 0.036 | 0.113 | 0.068 |
| Number of Days Exceeding Federal 1-Hour Standard | > 0.09 ppm | 0 | 1 | 0 |
| Number of Days Exceeding State 1-Hour Standard | | 0 | 1 | 0 |
| Number of Days Exceeding Federal 8-Hour Standard | > 0.070 ppm | 0 | 1 | 0 |
| Number of Days Exceeding State 8-Hour Standard | > 0.075 ppm | 0 | 1 | 0 |
| $NO_2$ | | | | |
| Maximum Federal 1-Hour Concentration | > 0.100 ppm | 0.034 | 0.044 | 0.045 |
| Maximum State 1-Hour Concentration | > 0.180 ppm | 0.034 | 0.044 | 0.045 |
| Annual Federal Standard Design Value | | 0.034 | 0.039 | 0.039 |
| Annual State Standard Design Value | | 0.030 | 0.040 | 0.050 |
| Number of Days Exceeding Federal 1-Hour Standard | > 0.100 ppm | 0 | 0 | 0 |
| Number of Days Exceeding State 1-Hour Standard | > 0.18 ppm | 0 | 0 | 0 |
| $PM_{10}$ | | | | |
| Maximum Federal 24-Hour Concentration (µg/m$^3$) | > 150 µg/m$^3$ | 201.9 | 129.7 | 191.9 |
| Annual Federal Arithmetic Mean (µg/m$^3$) | | 33.3 | 29.2 | 25.8 |
| Number of Days Exceeding Federal 24-Hour Standard | > 150 µg/m$^3$ | 2 | 0 | 1 |
| $PM_{2.5}$ | | | | |
| Maximum Federal 24-Hour Concentration (µg/m$^3$) | > 35 µg/m$^3$ | 58.7 | 39.0 | 38.0 |
| Maximum State 24-Hour Concentration (µg/m$^3$) | | 58.7 | 37.6 | 38.0 |
| Annual Federal Arithmetic Mean (µg/m$^3$) | >12 µg/m$^3$ | 11.7 | 9.0 | 7.8 |
| Annual State Arithmetic Mean (µg/m$^3$) | >12 µg/m$^3$ | -- | -- | 7.9 |
| Number of Samples Exceeding Federal 24-Hour Standard | > 35 µg/m$^3$ | 11 | 3 | 3 |

Source: California Air Resource Board iADAM: Air Quality Data Statistics and AQMIS
ppm = Parts Per Million
µg/m$^3$ – microgram per cubic meter
-- = data not available

## 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 (16). The EPA has jurisdiction over emissions sources that are under the authority of the federal

government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (17). The CAA also mandates that states submit and implement State Implementation Plan (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) (18) (19). 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 2-3 (previously presented) provides the NAAQS within the SJVAB.

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

#### CALIFORNIA AIR RESOURCES BOARD

The CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for $SO_4$, 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 SJVAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (20) (16).

Local air quality management districts, such as the SJVAPCD, 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 Plans (AQP) 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 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.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that became effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (21). The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items (22):

#### NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).

- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty EV supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).

- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is projected to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

### 2.8.3 AIR QUALITY ATTAINMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SJVAB. For the NAAQS, the Project region within the SJVAB is in nonattainment for $O_3$ (8-hour) and $PM_{2.5}$. For the CAAQS, the Project region within the SJVAB is in nonattainment for $O_3$ (1-hour and 8-hour), $PM_{10}$, and $PM_{2.5}$. In response, the SJVAPCD has adopted a series of Air Quality Attainment Plans (AQAPs) to meet the state and federal ambient air quality standards (23). AQAPs 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 AQAP and Project consistency with the AQAP is provided in Section 3.7.

## 2.9 REGIONAL AIR QUALITY IMPROVEMENT

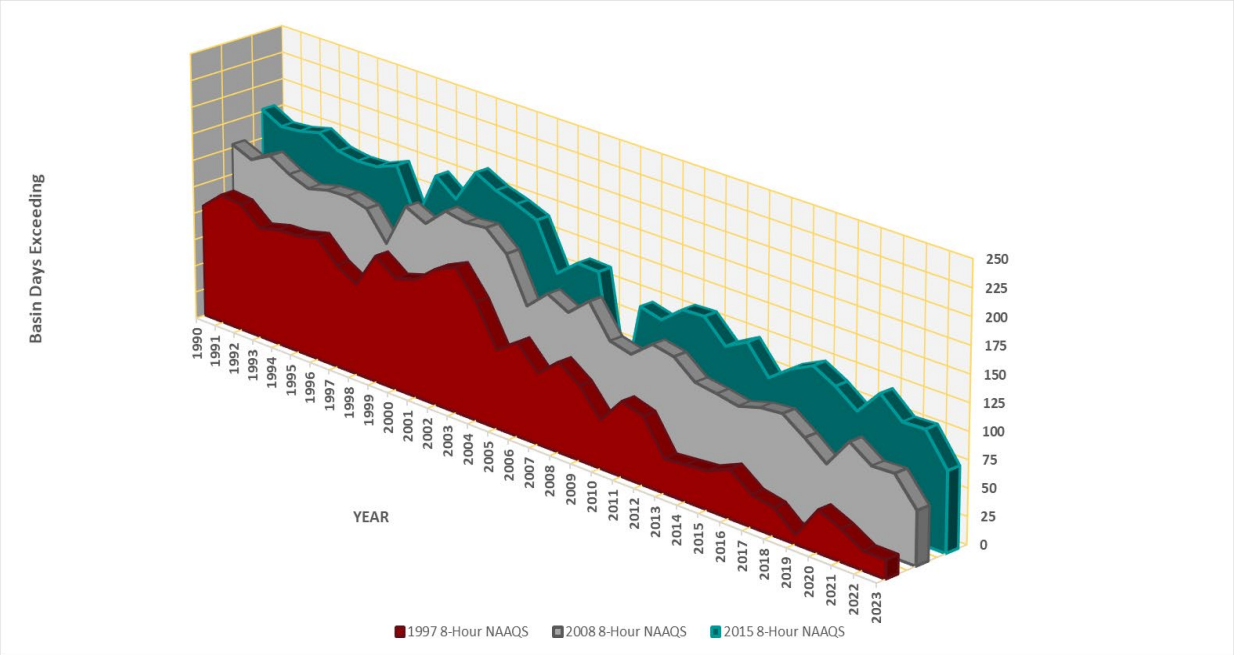
The Project is within the jurisdiction of the SJVAPCD and is located in the San Joaquin Valley Air Basin (SJVAB). SJVAPCD rule development has resulted in improvement in air quality for the SJVAB. Nearly all control programs developed through the early 2000s relied on (i) the development and application of cleaner technology; (ii) add-on emission controls, and (iii) uniform CEQA review throughout the SJVAB. Industrial emission sources have been significantly reduced by this approach and vehicular emissions have been reduced by technologies implemented at the state level by CARB.

The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the SJVAB improving over the course of the past decades.

Emissions of $O_3$, $NO_X$, $PM_{10}$, and $PM_{2.5}$ have been decreasing in the SJVAB since 1980 and are projected to continue to decrease despite challenging geography and meteorology that exacerbate the formation and retention of high levels of air pollution. In addition, the Valley is one of the fastest growing regions in California, with increasing population resulting in increasing vehicle miles traveled (VMTs). Although vehicle miles traveled in the Valley continue to increase, $NO_X$ and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. $NO_x$ emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. $O_3$ contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1990 and 2023. For 2023, there was an overall increase in exceedance days compared with the

1990 period. However, as shown on Table 2-5, $O_3$ levels have increased in the past three years due to higher temperatures and stagnant weather conditions. Notwithstanding, $O_3$ levels in the SJVAB have generally decreased over the last 30 years (24).

**TABLE 2-5: SJVAB $O_3$ TREND**

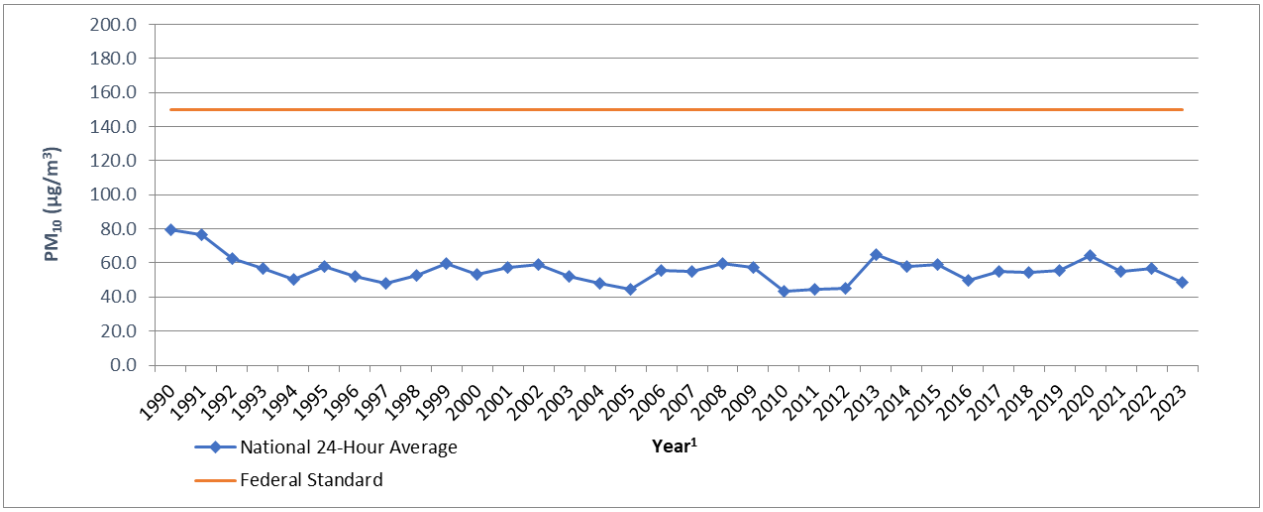



Source: 2024 CARB, iADAM: Top Four Summary: $PM_{10}$ 24-Hour Averages (1990-2023)

[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

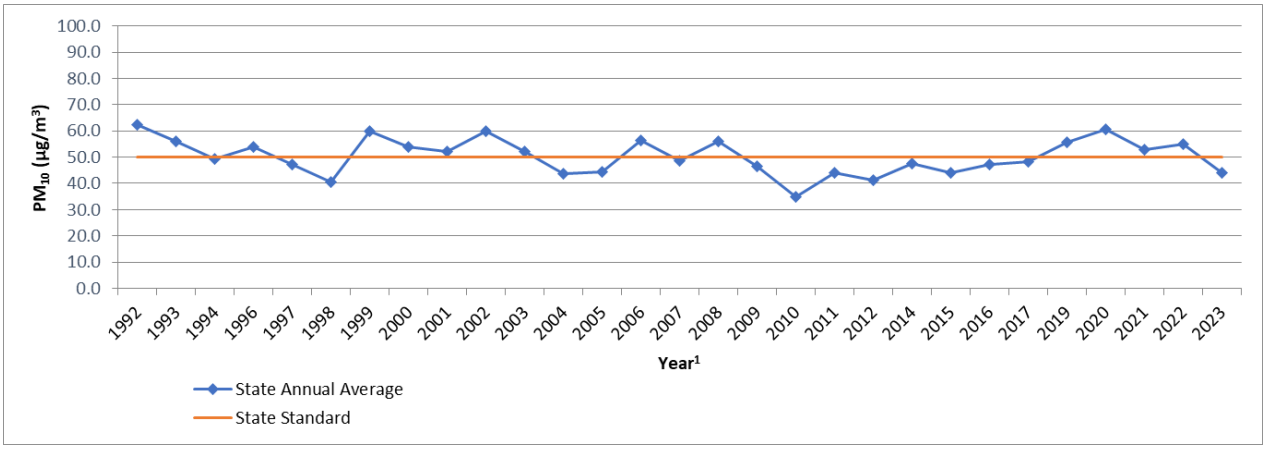
The most recent $PM_{10}$ statistics show an overall improvement as illustrated in Tables 2-6 and 2-7. During the period for which data is available, the 24-hour national annual average concentration for $PM_{10}$ decreased by approximately 39%, from 79.3 microgram per cubic meter (µg/m³) in 1990 to 48.4 µg/m³ in 2023 (24). The 24-hour state annual average concentration for $PM_{10}$, have decreased by approximately 45%, from 80.0 µg/m³ in 1990 to 44.2 µg/m³ in 2023 (24).

**TABLE 2-6: SJVAB AVERAGE 24-HOUR CONCENTRATION $PM_{10}$ TREND (BASED ON FEDERAL STANDARD)[1]**




Source: 2024 CARB, iADAM: Top Four Summary: $PM_{10}$ 24-Hour Averages (1990-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

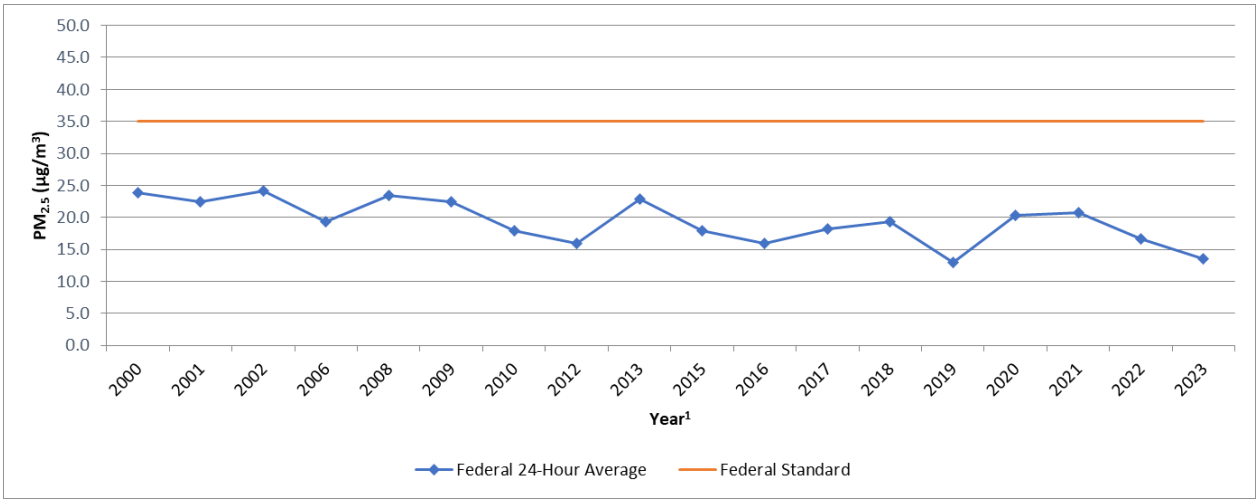
**TABLE 2-7: SJVAB ANNUAL AVERAGE CONCENTRATION $PM_{10}$ TREND (BASED ON STATE STANDARD)[1]**




Source: 2024 CARB, iADAM: Top Four Summary: $PM_{10}$ 24-Hour Averages (1990-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

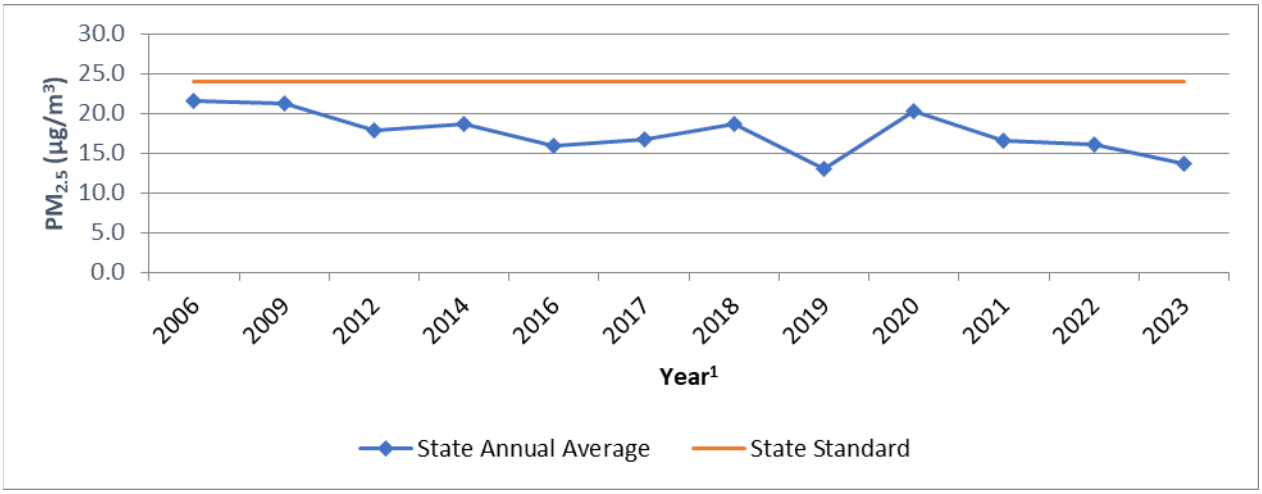
Tables 2-8 and 2-9 shows the most recent 24-hour average $PM_{2.5}$ concentrations in the SJVAB from 2000 through 2023. Overall, the national and state annual average concentrations have decreased by almost 43% respectively (24).

**TABLE 2-8: SJVAB 24-HOUR AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON FEDERAL STANDARD)[1]**




Source: 2024 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (2000-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

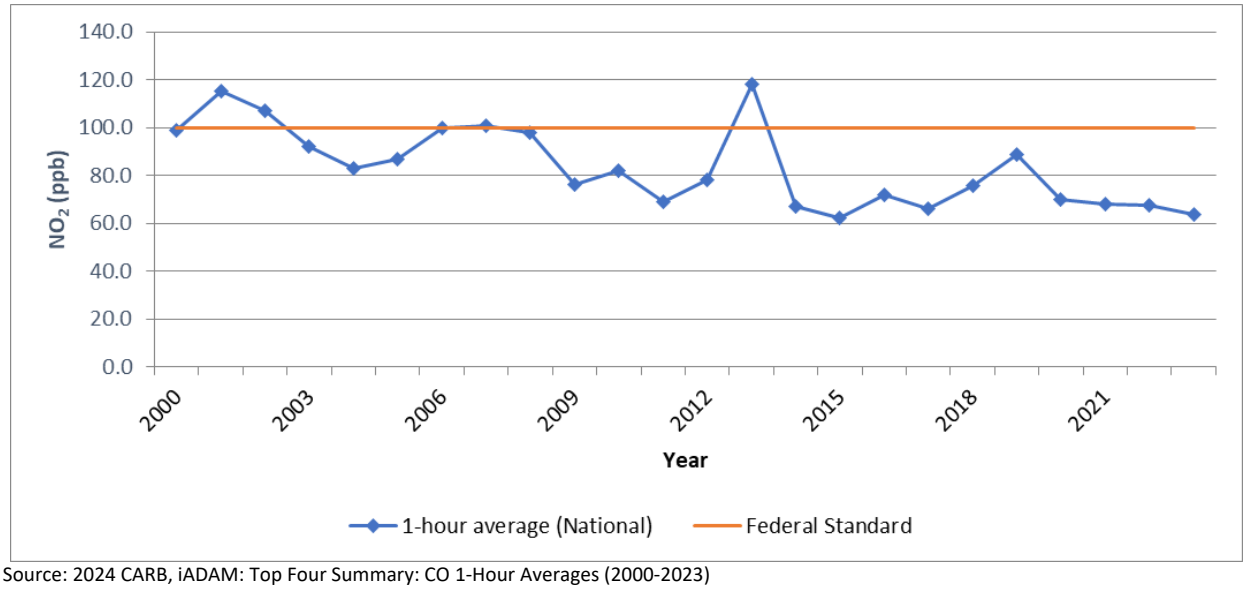
**TABLE 2-9: SJVAB ANNUAL AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON STATE STANDARD)[1]**




Source: 2024 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (2000-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

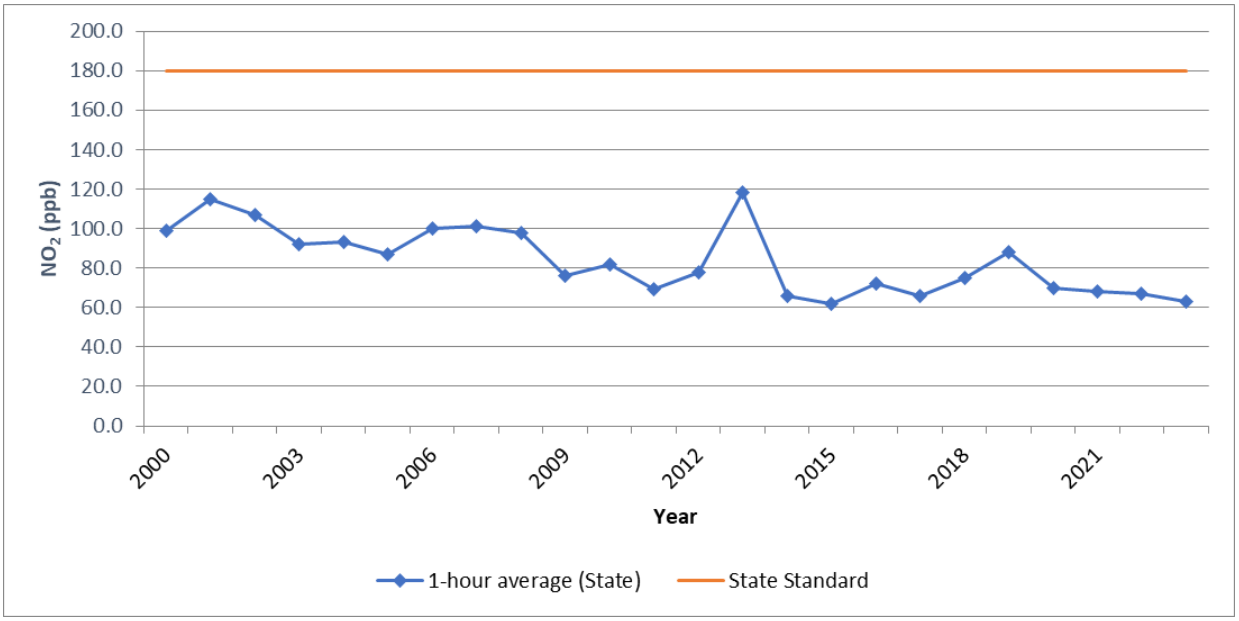
The most recent $NO_2$ data for the SJVAB is shown in Tables 2-11 and 2-12 (24). Over the last 20 years, $NO_2$ values have decreased significantly; the peak 1-hour national and state averages for 2023 is approximately 36% lower than what it was during 2000. $NO_2$ is formed from $NO_X$ emissions, which also contribute to $O_3$. As a result, the majority of the future emission control measures would be implemented as part of the overall $O_3$ control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's $NO_X$ emissions.

**TABLE 2-11: SJVAB 1-HOUR AVERAGE CONCENTRATION $NO_2$ TREND (BASED ON FEDERAL STANDARD)**




Source: 2024 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (2000-2023)

**TABLE 2-12: SJVAB 1-HOUR AVERAGE CONCENTRATION $NO_2$ TREND (BASED ON STATE STANDARD)**




Source: 2024 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (2000-2023)

### 2.9.1 TOXIC AIR CONTAMINANTS (TAC) TRENDS

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary sources, and consumer products. According to the *Ambient and Emission Trends of Toxic Air Contaminants in California* journal article (25) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene ($C_6H_6$), and 1,3-butadiene ($C_4H_6$); those that are derived from stationary sources: perchloroethylene ($C_2Cl_4$) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde ($CH_2O$) and acetaldehyde ($C_2H_4O$)[1]. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

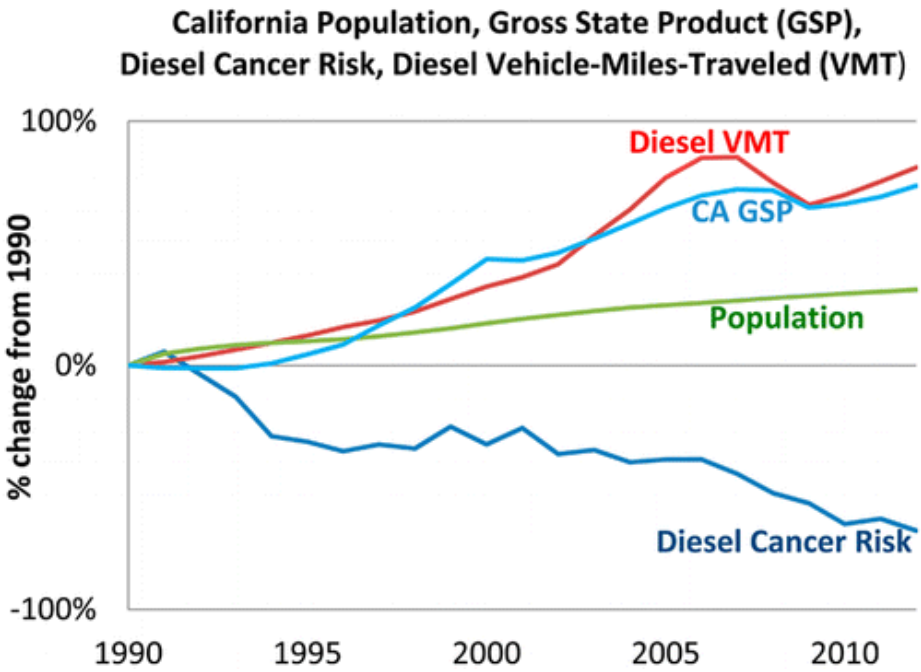
#### MOBILE SOURCE TACS

CARB introduced two programs that aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase "Check Engine" or "Service Engine Soon." The system would also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. CARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 pounds (lbs). CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990-2012. 1,3-Butadiene concentrations also declined 85% from 1990-2012 as a result of the use of reformulated gasoline and motor vehicle regulations (25).

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (<15 ppm) diesel fuel. As a result of these measures, DPM concentrations have declined 68% since 2000, even though the state's population increased 31% and the amount of diesel vehicles miles traveled increased 81%, as shown on Exhibit 2-B. With the implementation of these diesel-related control regulations, CARB expects a DPM decline of 71% for 2000-2020.

[1] It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

**EXHIBIT 2-A: DPM AND DIESEL VEHICLE MILES TREND**




Source: 2020 CARB

**DIESEL REGULATIONS**

CARB has adopted several iterations of regulations for diesel trucks that are aimed at reducing DPM. More specifically, CARB Drayage Truck Regulation (26), CARB statewide On-road Truck and Bus Regulation (27) require accelerated implementation of "clean trucks" into the statewide truck fleet. In other words, older more polluting trucks would be replaced with newer, cleaner trucks as a function of these regulatory requirements.

Moreover, the average statewide DPM emissions for Heavy Duty Trucks (HDT), in terms of grams of DPM generated per mile traveled, would dramatically be reduced due to the aforementioned regulatory requirements.

Diesel emissions identified in this analysis would therefore overstate future DPM emissions since not all the regulatory requirements are reflected in the modeling.

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# 3 PROJECT AIR QUALITY IMPACT

## 3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SJVAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

## 3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *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 (28):

- 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 SJVAPCD has developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (29). The SJVAPCD's *CEQA Air Quality Significance Thresholds* indicate that any projects in the SJVAB with annual emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

**TABLE 3-1: MAXIMUM ANNUAL REGIONAL EMISSIONS THRESHOLDS**

| Pollutant | Regional Construction Threshold | Regional Operational Thresholds |
|---|---|---|
| $NO_X$ | 10 tons/year | 10 tons/year |
| VOC | 10 tons/year | 10 tons/year |
| $PM_{10}$ | 15 tons/year | 15 tons/year |
| $PM_{2.5}$ | 15 tons/year | 15 tons/year |
| $SO_X$ | 27 tons/year | 27 tons/year |
| CO | 100 tons/year | 100 tons/year |

## 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.

In July 2024, the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SJVAPCD, released the latest version of CalEEMod version 2022.1.1.26. 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 (30). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 and 3.2.

The proposed Project was modeled in CalEEMod assuming 289,449 square feet of Refrigerated Warehouse-No Rail space. Additionally, the User Defined Industrial land use was used in order to separately model emissions that would occur as a result of Project truck trips. Passenger vehicle trips, as well as all other emission sources, were modeled under the Refrigerated Warehouse-No Rail land use.

## 3.4 CONSTRUCTION EMISSIONS

### 3.4.1 CONSTRUCTION ACTIVITIES

Construction activities associated with the Project will 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:

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

#### GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions.” Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Per client-provided data, this analysis assumes that earthwork activities are expected to balance on site and no import or export of soils would be required.

#### 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 are presented below in Table 3-2. Vendor trips include the delivery of building materials and construction equipment to the Project site, while hauling trips include the hauling away of demolition material and the import/export of soil. Worker trips for all phases 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. Since construction of the proposed Project does not require any demolition activities or any soil import or export, no hauling trips would be required.

**TABLE 3-2: CONSTRUCTION TRIP ASSUMPTIONS**

| Construction Activity | Worker Trips Per Day | Vendor Trips Per Day | Hauling Trips Per Day |
|---|---|---|---|
| Site Preparation | 8 | 1 | 0 |
| Grading | 15 | 4 | 0 |
| Building Construction | 122 | 37 | 0 |
| Paving | 15 | 6 | 0 |
| Architectural Coating | 25 | 0 | 0 |

### 3.4.2 CONSTRUCTION DURATION

For purposes of analysis, construction of the Project was expected to commence in February 2025 and last through December 2025. The construction schedule utilized in the analysis, shown in Table 3-3, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[2]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (31).

**TABLE 3-3: CONSTRUCTION DURATION**

| Construction Activity | Start Date | End Date | Working Days |
|---|---|---|---|
| Site Preparation | 2/1/2025 | 2/7/2025 | 5 |
| Grading | 2/8/2025 | 3/5/2025 | 18 |
| Building Construction | 3/6/2025 | 12/8/2025 | 198 |
| Paving | 10/28/2025 | 12/8/2025 | 30 |

[2] As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3 "Off-Road Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

| Construction Activity | Start Date | End Date | Working Days |
|---|---|---|---|
| Architectural Coating | 10/28/2025 | 12/8/2025 | 30 |

### 3.4.3 CONSTRUCTION EQUIPMENT

Consistent with industry standards, typical construction practices, as well as information provided by the Project applicant, each piece of equipment listed in Table 3-4 would 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.

**TABLE 3-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS**

| Construction Activity | Equipment[1] | Amount | Hours Per Day |
|---|---|---|---|
| Site Preparation | Crawler Tractors | 3 | 8 |
| Grading | Excavators | 1 | 8 |
| | Graders | 1 | 8 |
| | Rubber Tired Dozers | 1 | 8 |
| | Scrapers | 3 | 8 |
| Building Construction | Cranes | 1 | 8 |
| | Forklifts | 3 | 8 |
| | Generator Sets | 1 | 8 |
| | Tractors/Loaders/Backhoes | 4 | 8 |
| | Welders | 1 | 8 |
| Paving | Pavers | 2 | 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 during the site preparation phase of Project construction.

### 3.4.4 CONSTRUCTION EMISSIONS SUMMARY

The estimated maximum annual construction emissions without mitigation are summarized in Table 3-5. Detailed 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 SJVAPCD.

**TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY**

| Year | Emissions (ton/year) | | | | | |
|---|---|---|---|---|---|---|
| | **VOC** | **$NO_X$** | **CO** | **$SO_X$** | **$PM_{10}$** | **$PM_{2.5}$** |
| 2025 | 0.94 | 1.86 | 2.63 | < 0.005 | 0.23 | 0.11 |
| **Maximum Annual Emissions** | **0.94** | **1.86** | **2.63** | **< 0.005** | **0.23** | **0.11** |
| SJVAPCD Regional Threshold | 10 | 10 | 100 | 27 | 15 | 15 |
| **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 be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- Stationary Source Emissions
- On-site Cargo Equipment Emissions
- Transport Refrigeration Unit (TRU) Emissions

### 3.5.1 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 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

### 3.5.2 ENERGY SOURCE EMISSIONS

#### COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

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

### 3.5.3 MOBILE SOURCE EMISSIONS

The Project-related emissions derive primarily from 614 vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Proposed Warehouse 407 Spreckels Avenue Traffic Study* were utilized in this analysis (32).

#### APPROACH FOR ANALYSIS OF THE PROJECT

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed uses. For the proposed industrial uses, it is important to note that although the proposed Project traffic study does not breakdown passenger cars by type, this analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[3] & LDT2[4]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. To account for emissions generated by passenger cars, the following fleet mix was utilized in this analysis:

**TABLE 3-6: PASSENGER CAR FLEET MIX**

| Land Use | % Vehicle Type | | | | |
|---|---|---|---|---|---|
| | LDA | LDT1 | LDT2 | MDV | MCY |
| High Cube Cold Storage Warehouse | 53.16% | 4.05% | 21.85% | 18.60% | 2.35% |

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

Vehicle trip lengths for off-site truck trips were based on an average travel distance of 46.74 miles/one-way trip and an assumption of 100 percent primary trips. This truck trip length was

[3] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[4] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

calculated based on StreetLight™ Data's Truck Volume Metrics for medium heavy-duty trucks (2- and 3-axle trucks) and heavy heavy-duty trucks (4+ axle trucks). Based on this data, average trip lengths of 19.5 miles and 93.8 miles was assumed for medium heavy-duty trucks and heavy heavy-duty trucks, respectively. Additionally, based on StreetLight™ data it was assumed that 82.5% of truck activity would occur within the San Joaquin Air Pollution Control District. Passenger vehicle trip lengths are based on CalEEMod model defaults.

**TABLE 3-7: TRUCK FLEET MIX**

| Land Use | % Vehicle Type | | | |
|---|---|---|---|---|
| | LHDT1 | LHDT2 | MHDT | HHDT |
| High Cube Cold Storage Warehouse | 20.18% | 4.82% | 25.00% | 50.00% |

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips. The truck fleet mix is based on the mix of 2-, 3-, and 4-axle trucks presented in the Project traffic study.

#### FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

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

### 3.5.4 STATIONARY SOURCE EMISSIONS

The proposed Project was conservatively assumed to include installation of one 300 horsepower diesel-powered emergency fire pump and one 700 horsepower diesel-powered emergency generator. The emergency engines were each estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. Emissions associated with the stationary emergency diesel-powered emergency engines were calculated using CalEEMod.

### 3.5.5 ON-SITE CARGO HANDLING EQUIPMENT SOURCE EMISSIONS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this Project, on-site modeled operational equipment includes up to two (2) 175 horsepower (hp), natural gas-powered cargo handling equipment – port tractor operating 4 hours a day[5] for 365 days of the year.

### 3.5.6 TRANSPORT REFRIGERATION UNIT (TRU) EMISSIONS

In order to account for the possibility of refrigerated uses, trucks associated with the cold-storage land use are assumed to also have TRUs. Therefore, for modeling purposes, all 217 daily truck trips were assumed to potentially include TRUs. TRUs are accounted for during on-site and off-site travel. The TRU calculations are based on the EMFAC Offroad Emissions, developed by the

[5] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

CARB. EMFAC does not provide emission rates per hour or mile as with the on-road emission model and only provides emission inventories. Emission results are produced in tons per day while all activity, fuel consumption and horsepower hours were reported at annual levels. The emission inventory is based on specific assumptions including the average horsepower rating of specific types of equipment and the hours of operation annually. These assumptions are not always consistent with assumptions used in the modeling of project level emissions. Therefore, the emissions inventory was converted into emission rates to accurately calculate emissions from TRU operation associated with project level details. This was accomplished by converting the annual horsepower hours to daily operational characteristics and converting the daily emission levels into hourly emission rates based on the total emission of each criteria pollutant by equipment type and the average daily hours of operation. TRU emission calculations are provided in Appendix 3.3.

### 3.5.7 OPERATIONAL EMISSIONS SUMMARY

The estimated annual operational-source emissions are summarized in Table 3-8. Detailed operation model outputs for the Project are presented in Appendix 3.2. Project operational activities would not exceed the numerical thresholds of significance established by the SJVAPCD. Thus, mitigation is not required.

**TABLE 3-8: SUMMARY OF PEAK OPERATIONAL EMISSIONS – WITHOUT MITIGATION**

| Source | Emissions (ton/year) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
| Mobile Source | 0.33 | 4.12 | 2.96 | 0.04 | 1.6 | 0.47 |
| Area Source | 1.39 | 0.01 | 1.13 | < 0.005 | < 0.005 | < 0.005 |
| Energy Source | < 0.005 | 0.07 | 0.06 | < 0.005 | 0.01 | 0.01 |
| Stationary Source | 0.03 | 0.08 | 0.07 | < 0.005 | < 0.005 | < 0.005 |
| On-site Cargo Equipment | 0.04 | 0.14 | 6 | 0 | 0.01 | 0.01 |
| TRU Source | 4.27 | 4.57 | 0.5 | 0 | 0.17 | 0.15 |
| **Project Maximum Annual Emissions** | **6.06** | **8.99** | **10.72** | **0.04** | **1.79** | **0.64** |
| SJVAPCD Regional Threshold | 10 | 10 | 100 | 27 | 15 | 15 |
| **Threshold Exceeded?** | **NO** | **NO** | **NO** | **NO** | **NO** | **NO** |

Source: CalEEMod operational-source emissions are presented in Appendix 3.3.

### 3.5.8 POTENTIAL EMISSIONS IN OTHER AIR DISTRICTS

The proposed Project's truck and TRU trip related emissions that could occur outside of the air district in which the Project is located (SJVAPCD) are presented. More specifically, travel within the Bay Area Air Quality Management District (BAAQMD), Sacramento Metropolitan Air Quality Management District (SMAQMD), and Yolo-Solano Air Quality Management District (YSAQMD) were evaluated. Table 3-9 summarizes the thresholds of significance for the neighboring air

districts. Table 3-10 below provides a summary of the percentage breakdown of truck travel by air district based on the Streetlight™ data as presented in Section 3.5.3 above.

**TABLE 3-9: AIR QUALITY THRESHOLDS FOR NEIGHBORING AIR DISTRICTS**

| Pollutant | Threshold | | |
|---|---|---|---|
| | BAAQMD | SMAQMD | YSAQMD |
| VOC | 54 lbs/day, 10 tons/yr | 65 lbs/day | 10 tons/yr |
| $NO_X$ | 54 lbs/day, 10 tons/yr | 65 lbs/day | 10 tons/yr |
| CO | N/A | N/A | N/A |
| $SO_X$ | N/A | N/A | N/A |
| $PM_{10}$ | 82 lbs/day, 15 tons/yr | 80 lbs/day, 14.6 tons/yr | 80 lbs/day |
| $PM_{2.5}$ | 54 lbs/day, 10 tons/yr | 82 lbs/day, 15 tons/yr | N/A |

Source: BAAQMD, SMAQMD, YSAQMD

**TABLE 3-10: ACTIVITY BY AIR DISTRICT**

| Air District | Truck Activity |
|---|---|
| BAAQMD | 8.5% |
| SMAQMD | 7.9% |
| YSAQMD | 1.1% |

The percentages on Table 3-10 were then applied to the truck and TRU emissions that are a subset to the emissions totals presented on Table 3-8.

Tables 3-11 through 3-13 summarize the emissions that could occur due to off-site truck and TRU travel within the aforementioned air districts.

**TABLE 3-11: OPERATIONAL EMISSIONS - BAAQMD**

| Source | Emissions | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | VOC lbs/ day | VOC tons/ yr | $NO_X$ lbs/ day | $NO_X$ tons/ yr | $PM_{10}$ lbs/ day | $PM_{10}$ tons/ yr | $PM_{2.5}$ lbs/ day | $PM_{2.5}$ tons/ yr |
| Mobile Source | 0.24 | 0.03 | 5.03 | 0.65 | 0.96 | 0.13 | 0.29 | 0.04 |
| TRU Source | 2.73 | 0.36 | 2.92 | 0.39 | 0.11 | 0.01 | 0.10 | 0.01 |
| **Project Maximum Annual Emissions** | **2.97** | **0.39** | **7.95** | **1.04** | **1.07** | **0.14** | **0.39** | **0.05** |
| BAAQMD Regional Threshold | 54 | 10 | 54 | 10 | 82 | 15 | 54 | 10 |
| **Threshold Exceeded?** | **NO** | **NO** | **NO** | **NO** | **NO** | **NO** | **NO** | **NO** |

Source: CalEEMod BAAQMD operational-source emissions are presented in Appendix 3.4.

**TABLE 3-12: OPERATIONAL EMISSIONS - SMAQMD**

| Source | Emissions | | | | | |
|---|---|---|---|---|---|---|
| | **VOC** lbs/day | **$NO_X$** lbs/day | **$PM_{10}$** lbs/day | **$PM_{10}$** tons/yr | **$PM_{2.5}$** lbs/day | **$PM_{2.5}$** tons/yr |
| Mobile Source | 0.23 | 4.82 | 0.89 | 0.12 | 0.27 | 0.04 |
| TRU Source | 2.54 | 2.72 | 0.10 | 0.01 | 0.09 | 0.01 |
| **Project Maximum Annual Emissions** | **2.77** | **7.54** | **0.99** | **0.13** | **0.36** | **0.05** |
| SMAQMD Regional Threshold | 65 | 65 | 80 | 14.6 | 82 | 15 |
| **Threshold Exceeded?** | **NO** | **NO** | **NO** | **NO** | **NO** | **NO** |

Source: CalEEMod SMAQMD operational-source emissions are presented in Appendix 3.5.

**TABLE 3-13: OPERATIONAL EMISSIONS - YSAQMD**

| Source | Emissions | | |
|---|---|---|---|
| | **VOC** tons/yr | **$NO_X$** tons/yr | **$PM_{10}$** lbs/day |
| Mobile Source | 0.02 | 0.32 | 0.12 |
| TRU Source | 0.05 | 0.05 | 0.01 |
| **Project Maximum Annual Emissions** | **0.07** | **0.37** | **0.13** |
| YSAQMD Regional Threshold | 10 | 10 | 80 |
| **Threshold Exceeded?** | **NO** | **NO** | **NO** |

Source: CalEEMod YSAQMD operational-source emissions are presented in Appendix 3.6.

## 3.6 CO "HOT SPOT" ANALYSIS

It should be noted that SJVAPCD has not established its own guidelines for CO hot spots analysis. Since the SJVAPCD guidelines are based on SCAQMD methodology, it is appropriate to apply the SCAQMD criteria when analyzing CO hot spots within the SJVAPCD.

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. Over the last two decades, background CO concentrations have been significantly reduced due to regulatory controls on tailpipe emissions, and the air basin is currently in attainment for CO.

The SCAQMD's 2003 AQMP 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 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 2-4 in this report, the background 1-hour and 8-hour concentrations are well below the applicable AAQS. As such, Project-related traffic at any intersections within the air basin would not cause or contribute to a CO hotspot since the background concentrations are low and any contribution from project traffic would be negligible. The project would not significantly contribute to the formation of a CO hotspot.

## 3.7 CONSISTENCY WITH AIR QUALITY ATTAINMENT PLANS

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the San Joaquin Valley set forth a comprehensive set of programs that will lead the SJVAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance with the indicators discussed below.

### 3.7.1 CONSISTENCY CRITERION NO. 1

***Determination that an AQAP is being implemented in the area where the Project is being proposed.***

The proposed Project is located in San Joaquin County, within the jurisdiction of the SJVAPCD. The SJVAPCD has implemented the current AQAP, as approved by CARB.

### 3.7.2 CONSISTENCY CRITERION NO. 2

***The proposed Project must be consistent with the growth assumptions of the applicable AQAP.***

The City of Manteca General Plan designates the Project site for Light Industrial (LI) uses, and the site is zoned Business Industrial Park (BIP) (33). The Project Applicant proposes land uses that are consistent with development anticipated under the site's existing General Plan land use and zoning designations. The Project would therefore conform to local land use plans, and the proposed Project is considered to be consistent with the growth assumptions of the applicable AQAP.

### 3.7.3 CONSISTENCY CRITERION NO. 3

***The Project must contain in its design all reasonably available and feasible air quality control measures.***

The Project would be required to comply with all applicable SJVAPCD Rules and Regulations, including, but not limited to, Rule 4102 (Nuisance) and Regulation VIII (Fugitive $PM_{10}$ Prohibitions).

#### AQAP CONSISTENCY CONCLUSION

The proposed Project's proposed land use designation for the subject site is consistent with the land use designation discussed in the General Plan and is thus consistent with the growth

assumptions of the applicable AQAP. Furthermore, the Project would be required to comply with all applicable SJVAPCD Rules and Regulations and would not exceed significance thresholds established by the SJVAPCD for construction or operational emissions. As such, the proposed Project is considered to be consistent with the AQAP.

## 3.8 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The proposed Project consists of 289,449 square feet (SF) of high-cube cold storage warehouse use. As such, the potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered as sensitive receptors.

Receptors in the Project study area are described below and shown in Exhibit 3-A. All distances are measured from the Project site's boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site. The selection of receptor locations is based on Federal Highway Administration (FHWA) guidelines and is consistent with additional guidance provided by Caltrans and the Federal Transit Administration (FTA). Distance is measured in a straight line from the Project boundary to each receptor location.

R1: Location R1 represents the existing residence at 1098 Norman Drive, approximately 452 feet north of the Project site.

R2: Location R2 represents the potential worker receptor at 1148 Norman Drive, immediately to the north of the Project site.

R3: Location R3 represents the existing residence at 1002 Trinity Street, immediately to southwest of the Project site.

R4: Location R4 represents the existing residence at 332 Cowell Avenue, immediately to the west of the Project site.

R5: Location R5 represents the existing residence at 320 Cowell Avenue, approximately 103 feet northwest of the Project site.

R6: Location R6 represents the potential worker receptor located approximately 116 feet south of the Project site.

R7: Location R7 represents Manteca High School at 450 E. Yosemite Avenue, approximately 1,596 feet northwest of the Project site.

R8: Location R8 represents Lincoln Elementary School at 165 S. Powers Avenue, approximately 1,231 feet northwest of the Project site.

Based on Exhibit 3-A, and as described above, the nearest sensitive receptors are R3 and R4, which are located adjacent to the Project site.

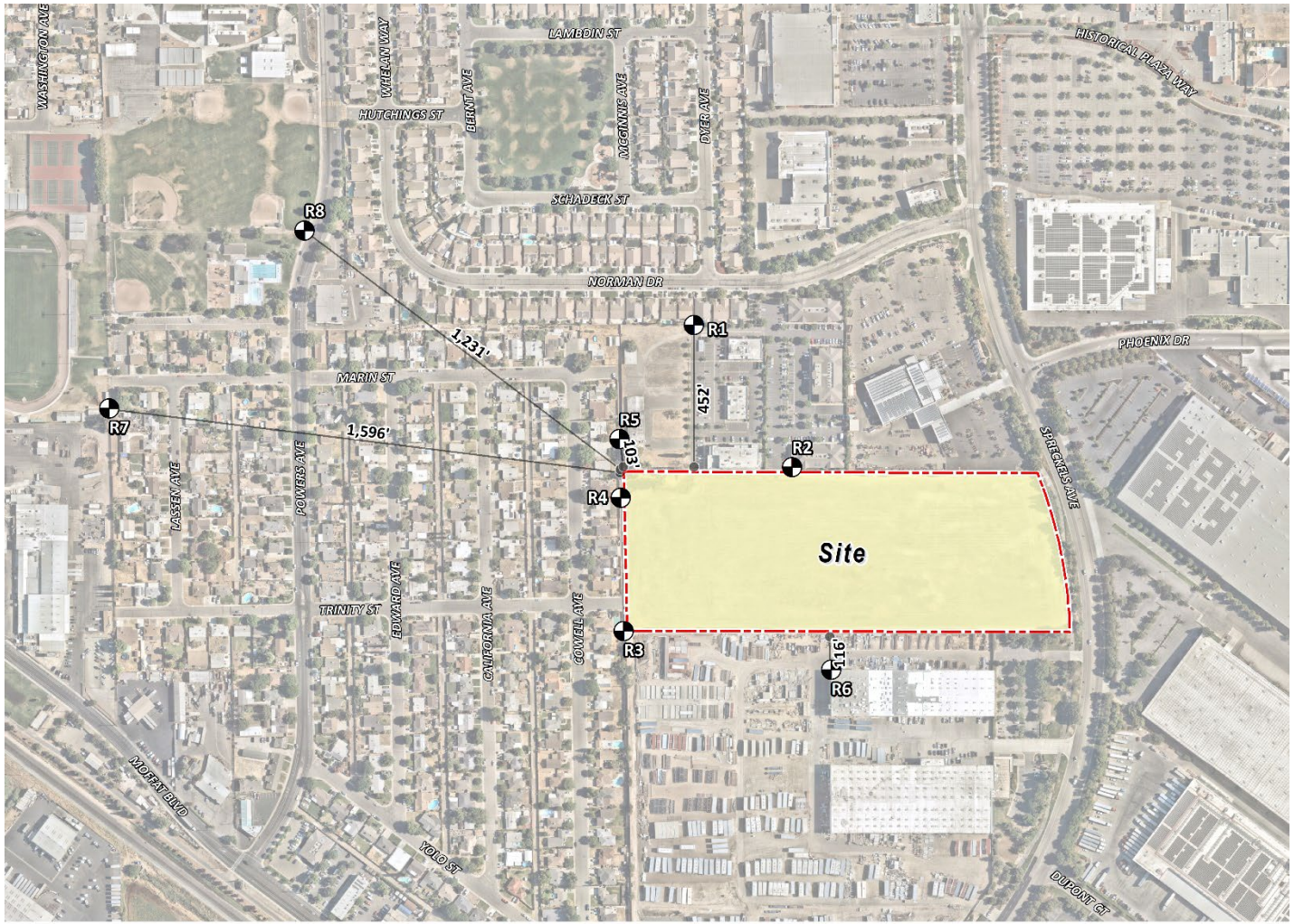
Based on thresholds established in SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (34), project-related impacts on air quality may be significant when on-site emissions from construction or operational activities exceed the screening threshold of 100 pounds per day. Should Project on-site construction or operational emissions exceed this threshold, it is recommended that an ambient air quality analysis be performed. Because on-site emissions

generated as a result of construction or operation of the proposed Project would not exceed this screening threshold, the proposed Project would not cause or contribute to a violation of the AAQS, and preparation of an ambient air quality analysis is not required.

The Project would have a potentially significant health risk impact if it results in a maximum incremental cancer risk from emission of Toxic Air Contaminants (TACs) of ≥ 20 in one million and/or a chronic and acute hazard index that is ≥1.0. In the case of the Project, the TAC of concern is diesel particulate matter (DPM) that could be generated by Project construction activities, and on-site and off-site DPM that would result from on-going Project operations.

For purposes of this evaluation, a Health Risk Assessment (HRA) has been prepared by Urban Crossroads, Inc. under a separate cover. The results of the *Spreckels Distribution Center Construction and Operational Health Risk Assessment* (Urban Crossroads, Inc.) indicate that Project emissions would not exceed the applicable cancer and non-cancer health risk thresholds established by SJVAPCD (35).

**EXHIBIT 3-A: SENSITIVE RECEPTOR LOCATIONS**




**LEGEND:**

N

Receptor Locations

Distance from receptor to Project site boundary (in feet)

## 3.9 ODORS

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

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

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SJVAPCD Rule 4102 to prevent occurrences of public nuisances. Therefore, the proposed Project does not have the potential to generate objectionable odors and no mitigation is required.

## 3.10 CUMULATIVE IMPACTS

Related projects could contribute to an existing or projected air quality exceedance because the Basin is currently non-attainment for $O_3$, $PM_{10}$, and $PM_{2.5}$.

Based on the SJVAPCD's *Guide for Assessing and Mitigating Air Quality* Impacts (34), if a project would not exceed the construction or operational significance thresholds and would not violate or lead to additional violations of the NAAQS and CAAQS, then the project would also have a less than significant impact with regard to cumulative impacts as well:

> *"By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of State and federal ambient air quality standards is a function of successful implementation of the District's attainment plans. Consequently, the District's applicant of thresholds of significance for criteria pollutants is relevant to*

*the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.*

*A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program."*

The proposed Project would not exceed SJVAPCD significance thresholds for construction or operational emissions. As such, the Project's cumulative impacts would be considered less than significant.

As shown in Table 3-14, Project operational emissions are negligible relative to emissions at the County and Basin level. Emissions at the County and Basin level would remain essentially unchanged with approval of the proposed Project.

**TABLE 3-14: COMPARISON OF COUNTY, BASIN, AND PROJECT EMISSIONS**

| | Emissions (ton/year) | | | | | |
|---|---|---|---|---|---|---|
| | **VOC** | **$NO_X$** | **CO** | **$SO_X$** | **$PM_{10}$** | **$PM_{2.5}$** |
| San Joaquin County | 13,980 | 9,928 | 35,223 | 329 | 10,439 | 2,519 |
| San Joaquin Valley Air Basin | 379,634 | 76,772 | 470,879 | 3,478 | 120,664 | 42,986 |
| Project | 6.06 | 8.92 | 10.66 | 0.04 | 1.78 | 0.63 |
| Project Percentage of San Joaquin County | 0.043% | 0.090% | 0.030% | 0.012% | 0.017% | 0.025% |
| Project Percentage of San Joaquin Valley Air Basin | 0.002% | 0.012% | 0.002% | 0.001% | 0.001% | 0.001% |

Source: CARB CEPAM 2019 v. 1.03, CY 2020 emissions.

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# 5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Spreckels Distribution Center. 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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### EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

### PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Professionals
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

### PROFESSIONAL CERTIFICATIONS

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.

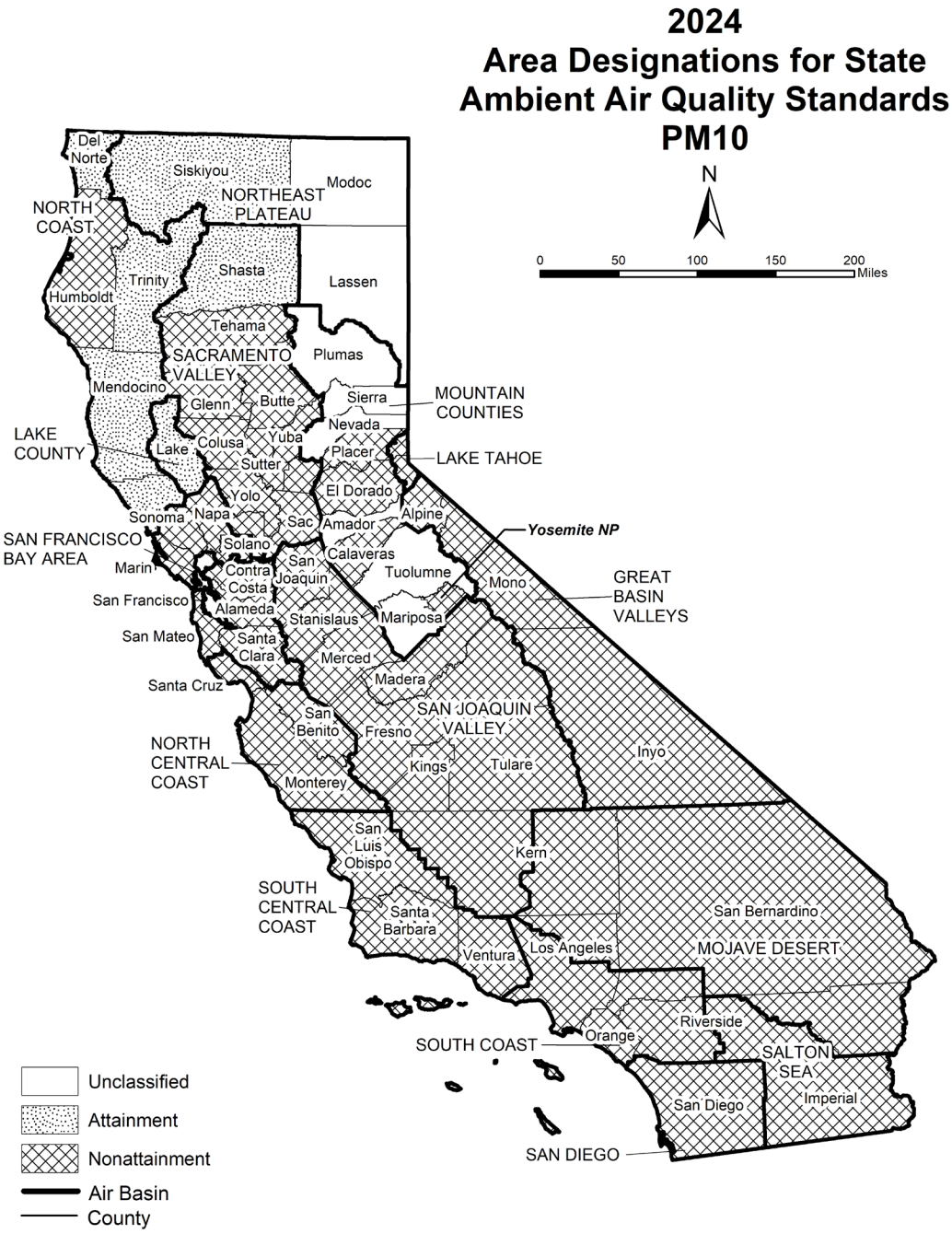
## Figure 1


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

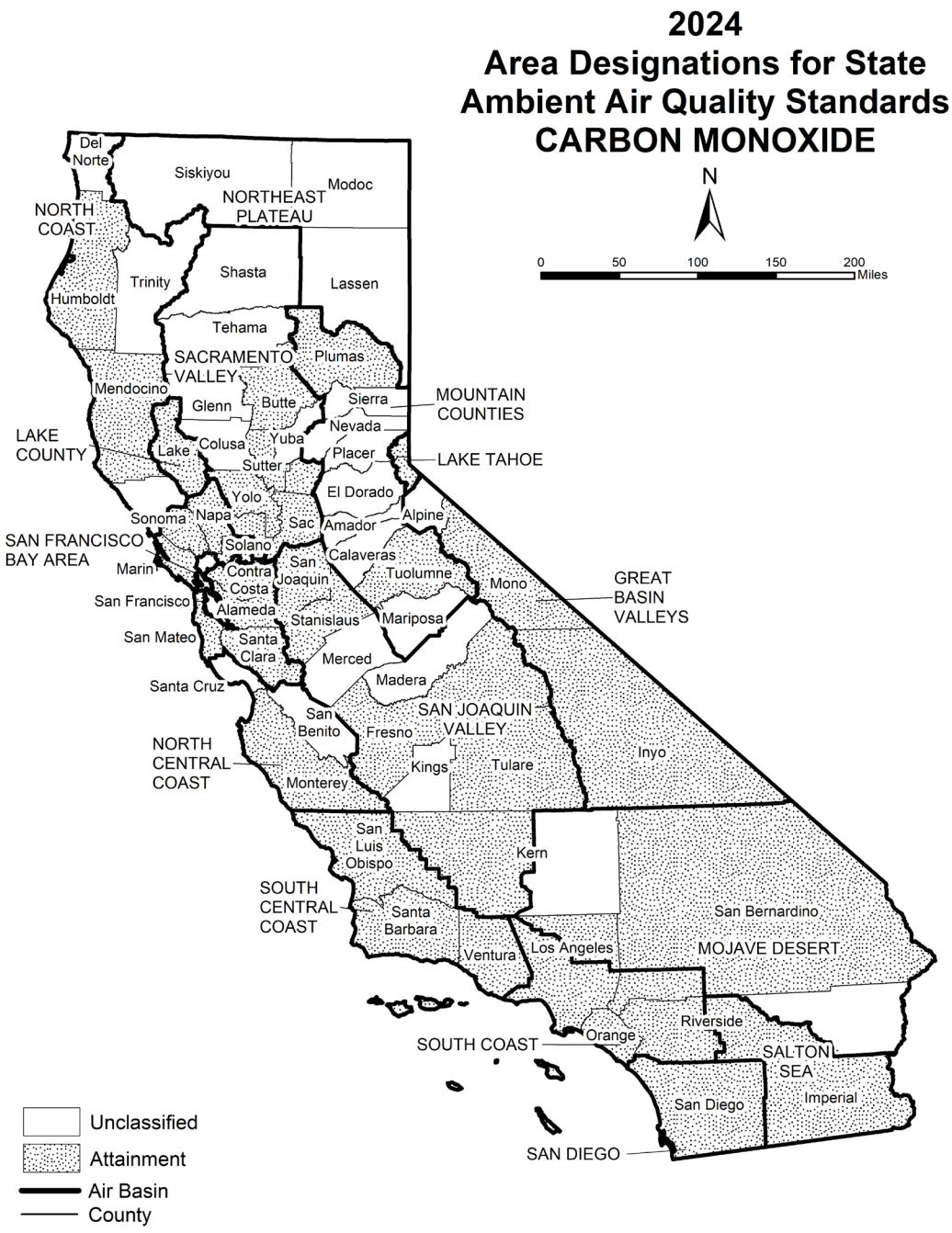
## Table 4
## California Ambient Air Quality Standards Area Designations for Carbon Monoxide*

| 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 |

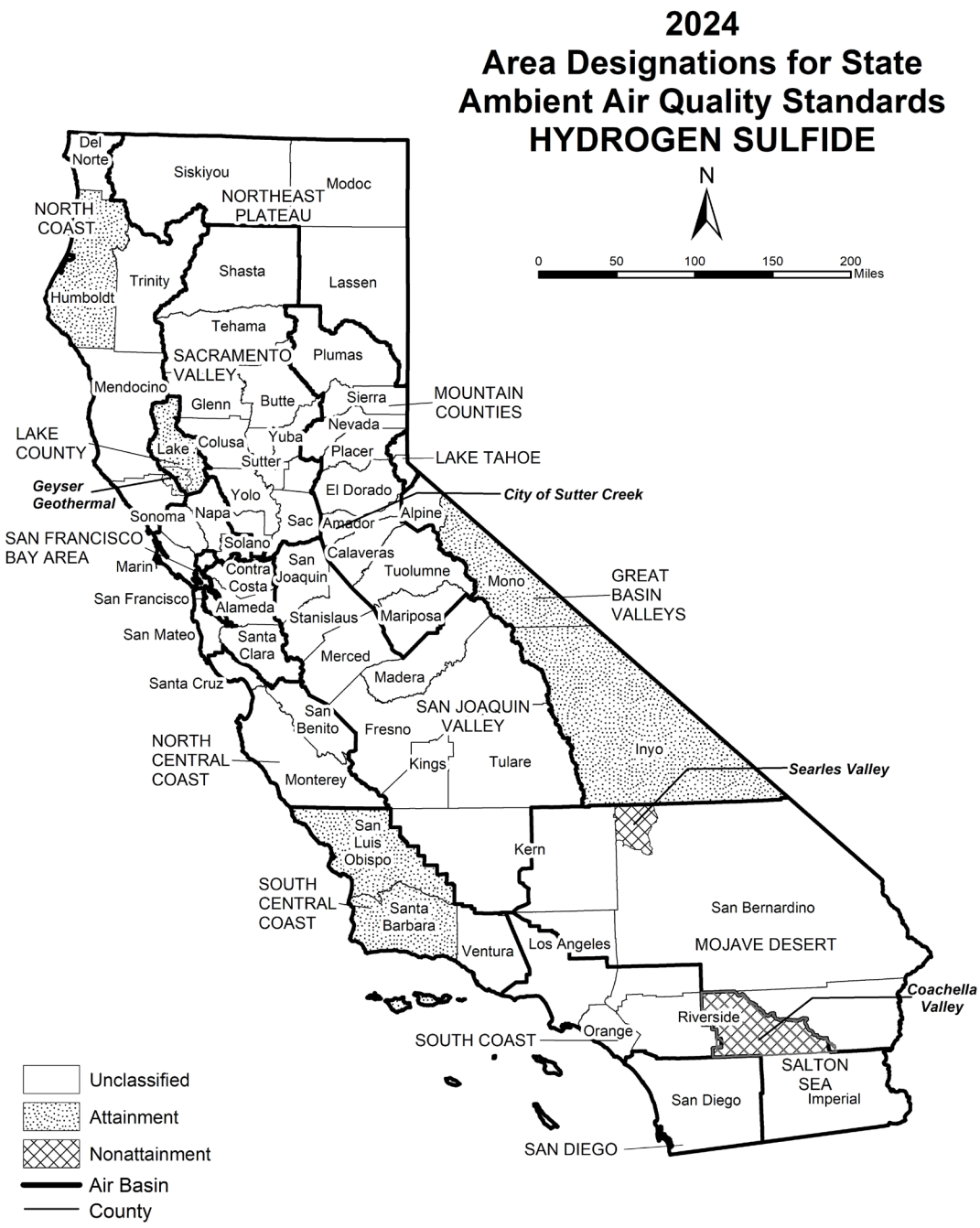
| Area | Designations |
|---|---|
| NORTH CENTRAL COAST AIR BASIN | U |
| NORTH COAST AIR BASIN | |
| Del Norte County | U |
| Humboldt County | A |
| Mendocino County | U |
| Sonoma County (portion) | |
| - Geyser Geothermal Area[5] | A |
| - Remainder of County | U |
| Trinity County | U |
| NORTHEAST 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**

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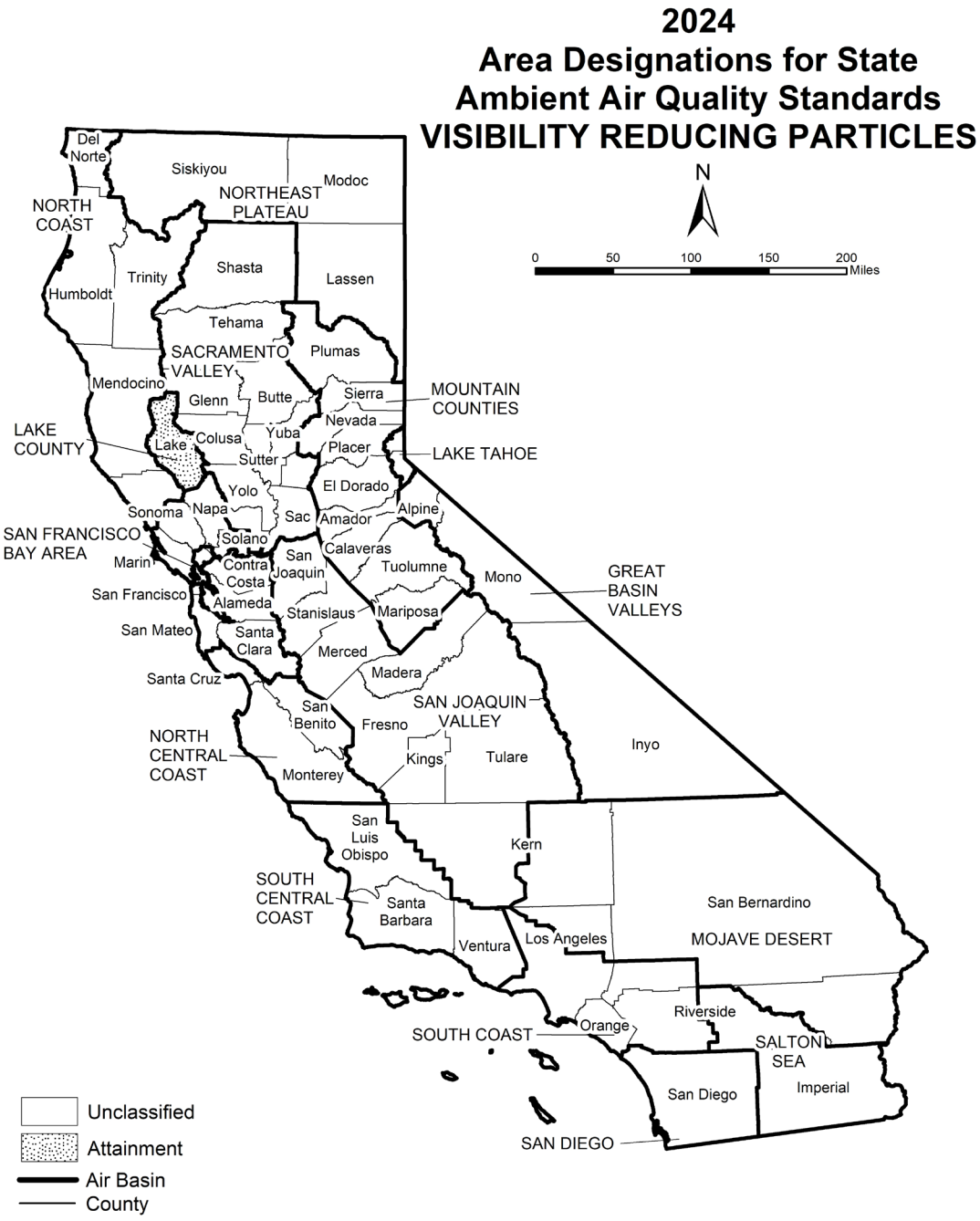
Air Quality Planning and Science Division, CARB

## 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




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 |

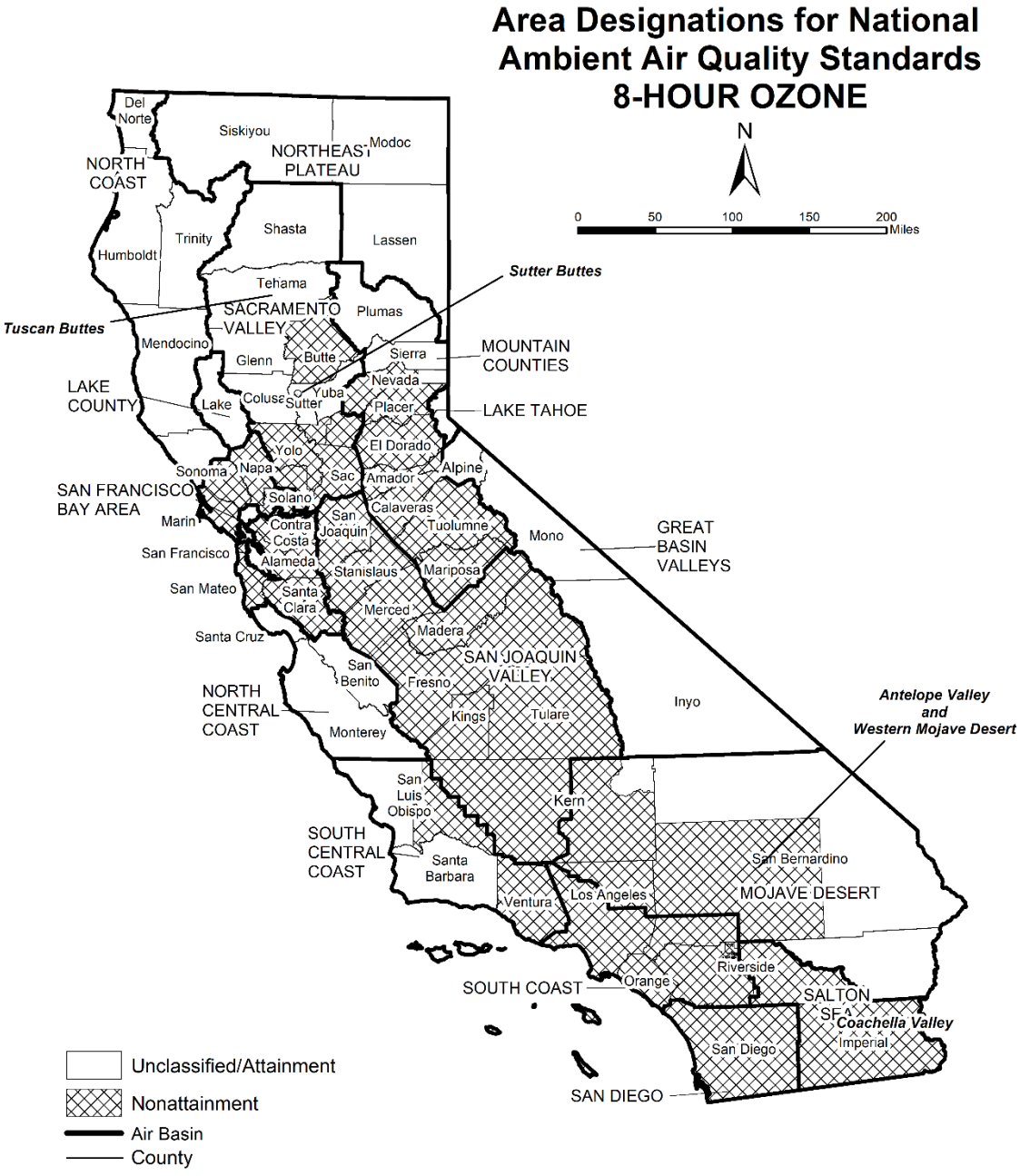
* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

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

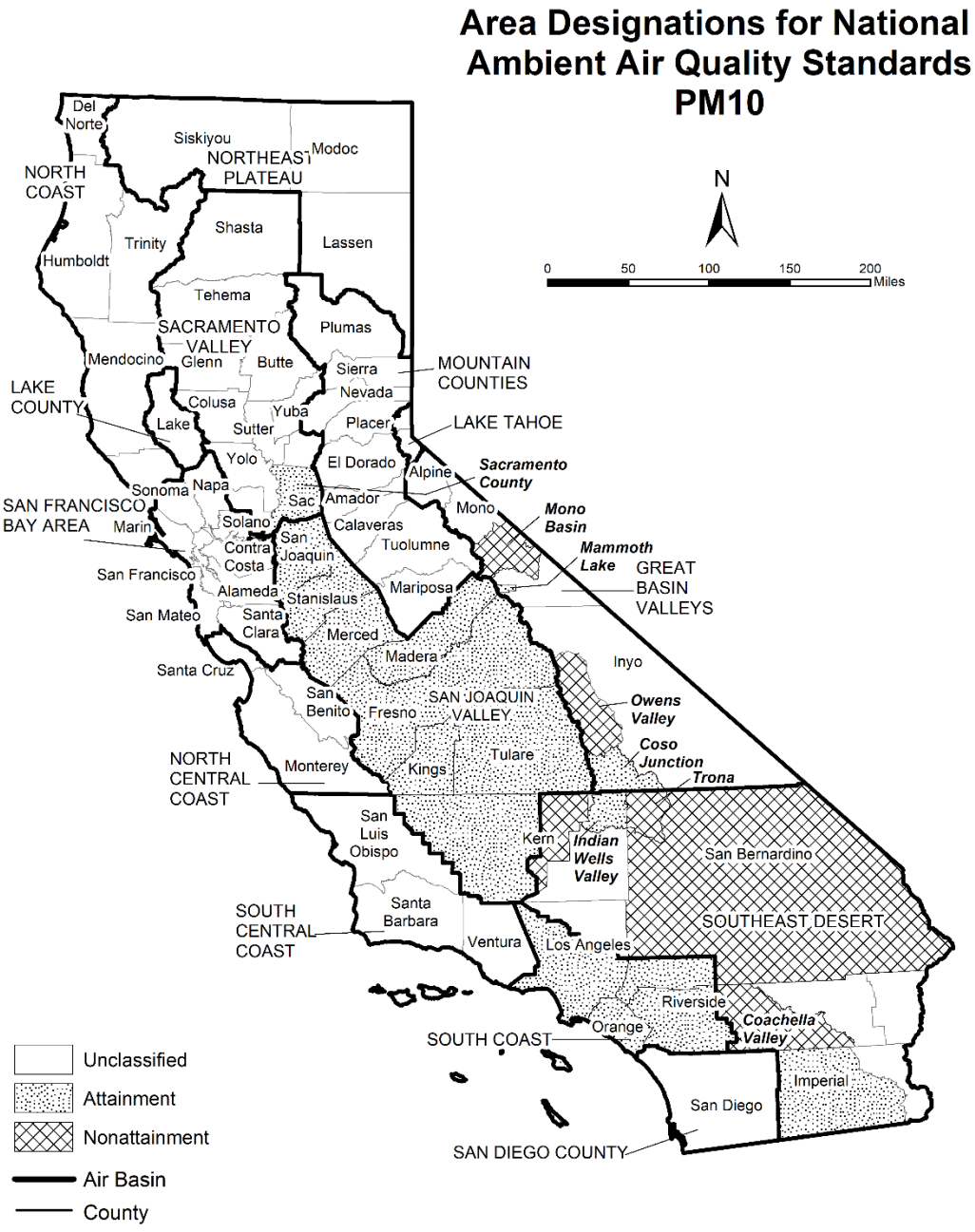

Area Designations for National Ambient Air Quality Standards
8-HOUR OZONE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Sutter Buttes
Tuscan Buttes
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Sutter
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
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Antelope Valley and Western Mojave Desert
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 |
| 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
SACRAMENTO VALLEY
Plumas
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
SAN FRANCISCO BAY AREA
Marin
Solano
Calaveras
Mono
Mono Basin
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.

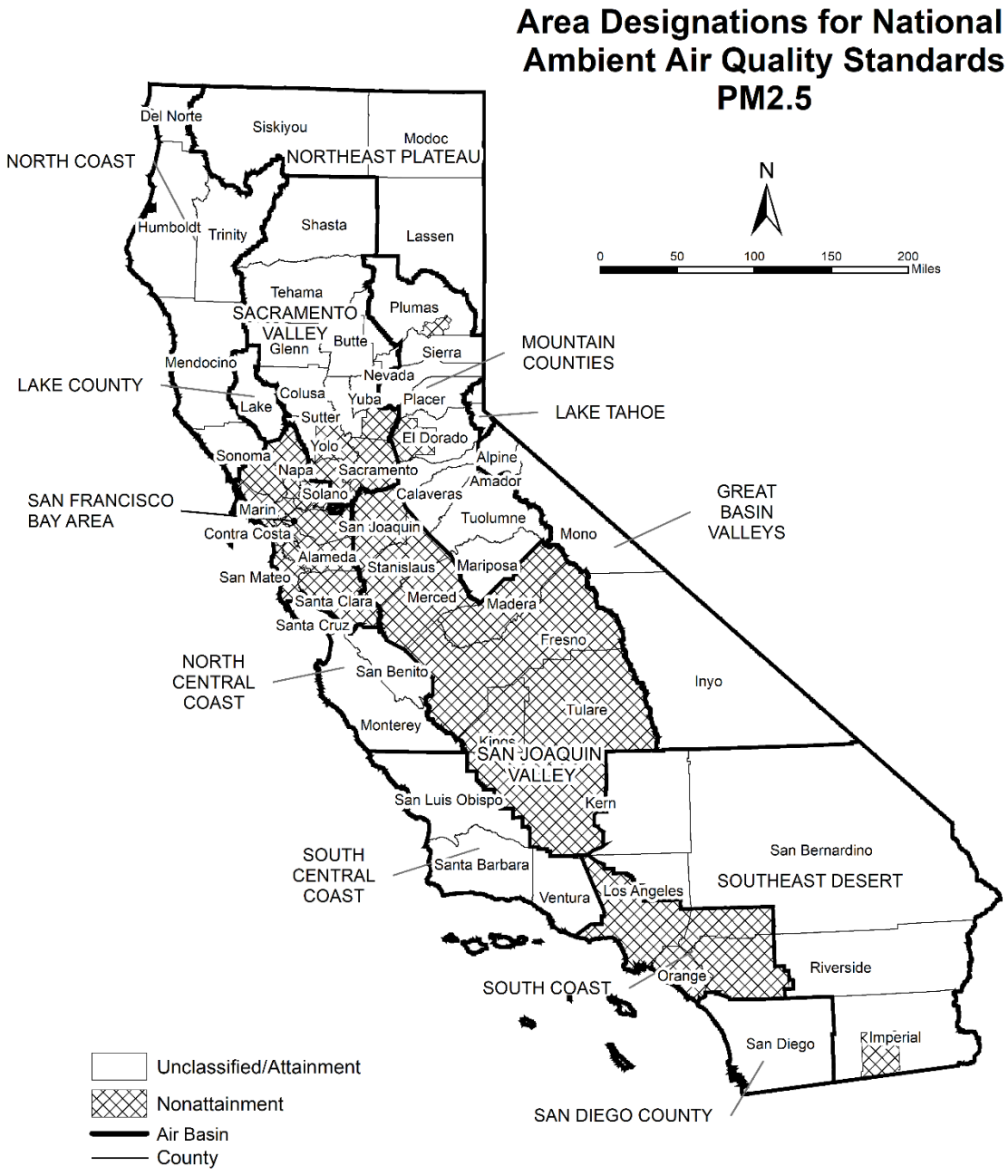
[8] For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[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
Merced
Santa Clara
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
Last Updated: November 2023
Air Quality Planning and Science Division

## 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

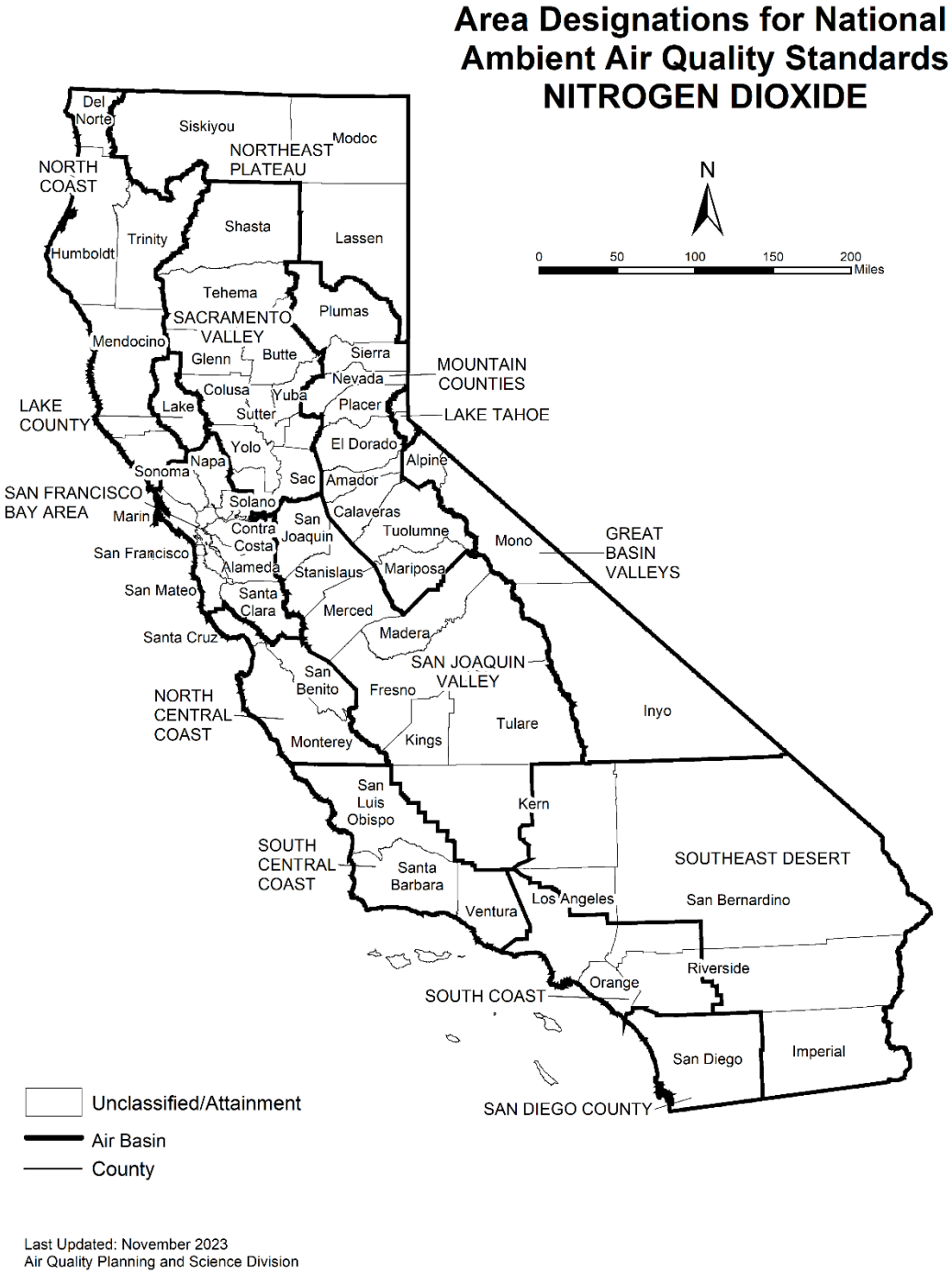

Last Updated: November 2023
Air Quality Planning and Science Division

## 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 TAHOE
LAKE COUNTY
Lake
Sutter
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
Tulare
Inyo
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
Last Updated: November 2023
Air Quality Planning and Science Division

## Table 16
## National Ambient Air Quality Standards Area Designations for Sulfur Dioxide*

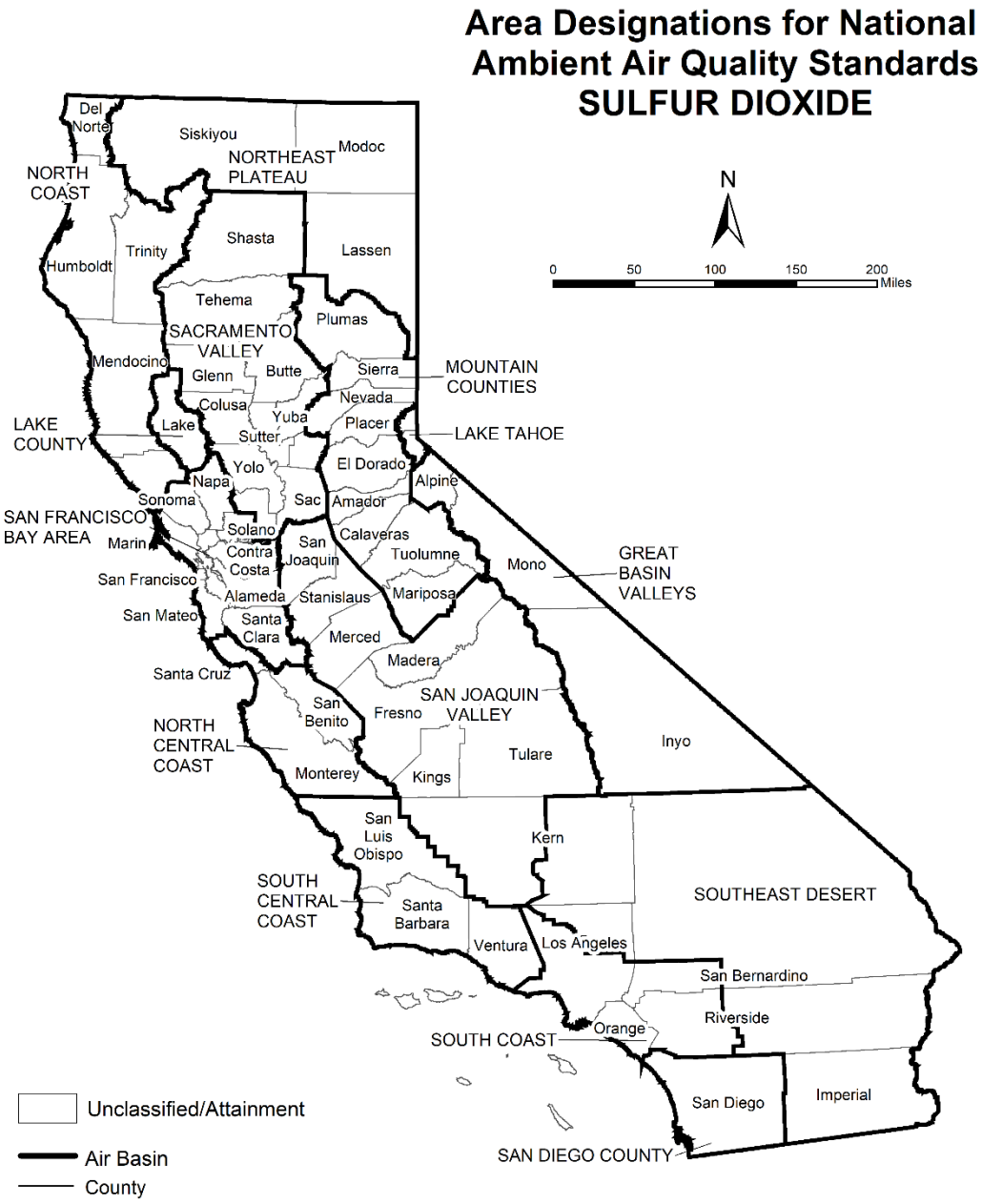
| Area | Designations |
|---|---|
| GREAT BASIN VALLEYS AIR BASIN | U/A |
| LAKE COUNTY AIR BASIN | U/A |
| LAKE TAHOE AIR BASIN | U/A |
| MOUNTAIN COUNTIES AIR BASIN | U/A |
| NORTH CENTRAL COAST AIR BASIN | U/A |
| NORTH COAST AIR BASIN | U/A |
| NORTHEAST PLATEAU AIR BASIN | U/A |
| SACRAMENTO VALLEY 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
Shasta
Lassen
Trinity
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
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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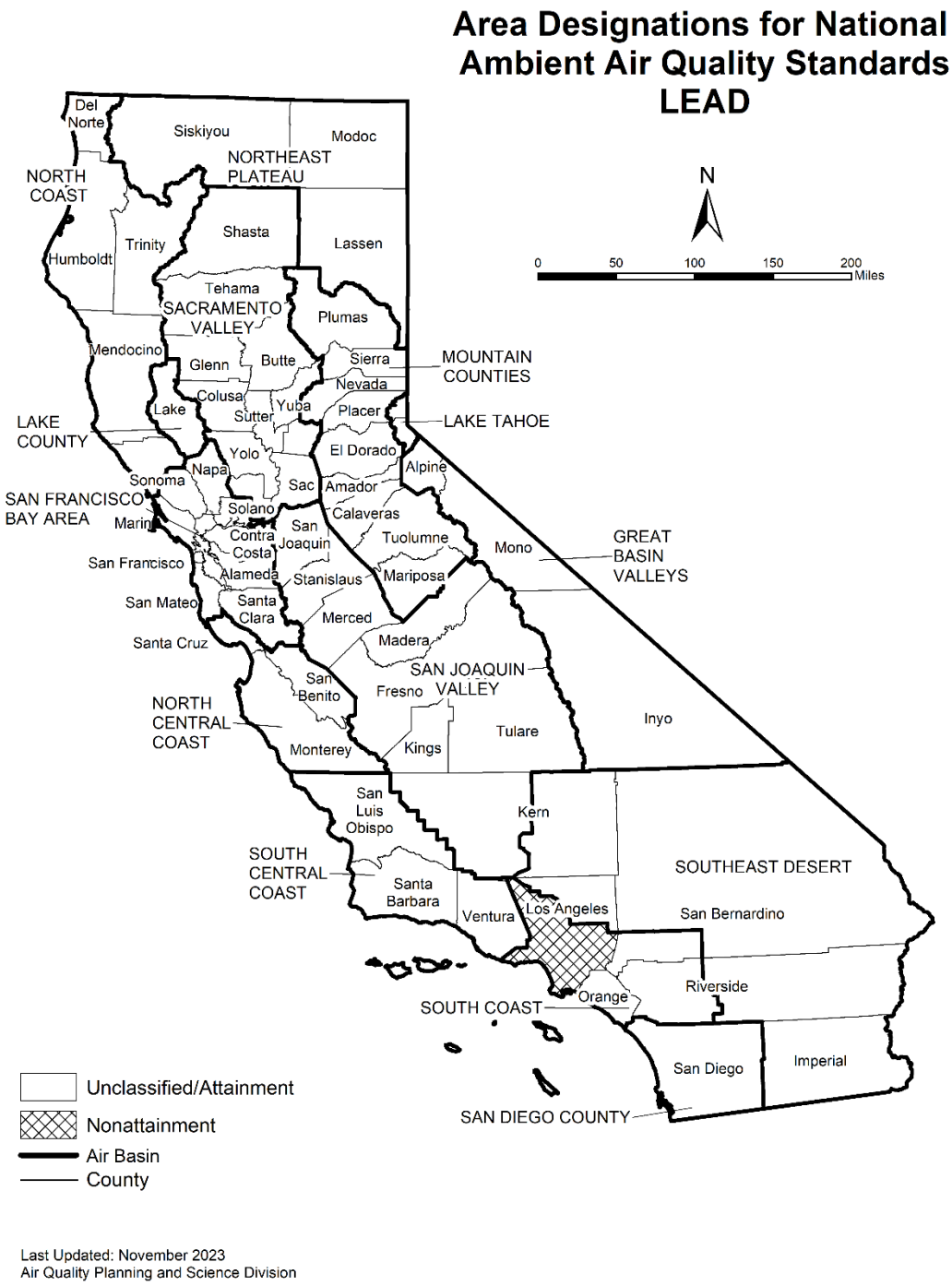
Air Quality Planning and Science Division

## 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 PROJECT CONSTRUCTION EMISSIONS MODEL OUTPUTS

# 15639 Spreckels Distribution Center Construction Detailed Report

## Table of Contents

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 15639 Spreckels Distribution Center Construction |
| Construction Start Date | 3/1/2025 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.40 |
| Precipitation (days) | 9.00 |
| Location | 37.79226630248337, -121.19957343281175 |
| County | San Joaquin |
| City | Manteca |
| Air District | San Joaquin Valley APCD |
| Air Basin | San Joaquin Valley |
| TAZ | 2132 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.26 |

## 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 |
|---|---|---|---|---|---|---|---|---|
| Refrigerated Warehouse-No Rail | 289 | 1000sqft | 6.64 | 289,450 | 116,279 | — | — | — |
| Parking Lot | 5.52 | Acre | 5.52 | 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. | 2.19 | 1.86 | 14.1 | 22.8 | 0.04 | 0.52 | 1.30 | 1.83 | 0.48 | 0.32 | 0.80 | — | 5,093 | 5,093 | 0.19 | 0.22 | 7.06 | 5,171 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 50.9 | 50.4 | 33.7 | 34.7 | 0.07 | 1.39 | 2.83 | 4.22 | 1.28 | 1.02 | 2.30 | — | 8,009 | 8,009 | 0.32 | 0.27 | 0.23 | 8,043 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 5.40 | 5.17 | 10.2 | 14.4 | 0.02 | 0.39 | 0.88 | 1.27 | 0.36 | 0.23 | 0.59 | — | 3,309 | 3,309 | 0.11 | 0.13 | 1.74 | 3,352 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.99 | 0.94 | 1.86 | 2.63 | < 0.005 | 0.07 | 0.16 | 0.23 | 0.07 | 0.04 | 0.11 | — | 548 | 548 | 0.02 | 0.02 | 0.29 | 555 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 2.19 | 1.86 | 14.1 | 22.8 | 0.04 | 0.52 | 1.30 | 1.83 | 0.48 | 0.32 | 0.80 | — | 5,093 | 5,093 | 0.19 | 0.22 | 7.06 | 5,171 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 50.9 | 50.4 | 33.7 | 34.7 | 0.07 | 1.39 | 2.83 | 4.22 | 1.28 | 1.02 | 2.30 | — | 8,009 | 8,009 | 0.32 | 0.27 | 0.23 | 8,043 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 5.40 | 5.17 | 10.2 | 14.4 | 0.02 | 0.39 | 0.88 | 1.27 | 0.36 | 0.23 | 0.59 | — | 3,309 | 3,309 | 0.11 | 0.13 | 1.74 | 3,352 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.99 | 0.94 | 1.86 | 2.63 | < 0.005 | 0.07 | 0.16 | 0.23 | 0.07 | 0.04 | 0.11 | — | 548 | 548 | 0.02 | 0.02 | 0.29 | 555 |

# 3. Construction Emissions Details

## 3.1. Site Preparation (2025) - 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 | 1.04 | 0.88 | 7.67 | 7.42 | 0.01 | 0.55 | — | 0.55 | 0.51 | — | 0.51 | — | 1,046 | 1,046 | 0.04 | 0.01 | — | 1,050 |
| Dust From Material Movement | — | — | — | — | — | — | 0.41 | 0.41 | — | 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 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Roa Equipment | 0.01 | 0.01 | 0.11 | 0.10 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 14.3 | 14.3 | < 0.005 | < 0.005 | — | 14.4 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 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 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 2.37 | 2.37 | < 0.005 | < 0.005 | — | 2.38 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 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 | 0.03 | 0.03 | 0.03 | 0.31 | 0.00 | 0.00 | 0.06 | 0.06 | 0.00 | 0.01 | 0.01 | — | 62.7 | 62.7 | < 0.005 | < 0.005 | 0.01 | 63.5 |
| Vendor | < 0.005 | < 0.005 | 0.04 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 28.3 | 28.3 | < 0.005 | < 0.005 | < 0.005 | 29.6 |
| 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 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.88 | 0.88 | < 0.005 | < 0.005 | < 0.005 | 0.89 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.39 | 0.39 | < 0.005 | < 0.005 | < 0.005 | 0.41 |
| 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 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.15 | 0.15 | < 0.005 | < 0.005 | < 0.005 | 0.15 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.06 | 0.06 | < 0.005 | < 0.005 | < 0.005 | 0.07 |
| 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 |

## 3.3. Grading (2025) - 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 | 4.30 | 3.62 | 33.5 | 29.1 | 0.07 | 1.39 | — | 1.39 | 1.28 | — | 1.28 | — | 7,770 | 7,770 | 0.32 | 0.06 | — | 7,797 |
| Dust From Material Movement | — | — | — | — | — | — | 2.67 | 2.67 | — | 0.98 | 0.98 | — | — | — | — | — | — | — |
| 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 | 0.21 | 0.18 | 1.65 | 1.44 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 383 | 383 | 0.02 | < 0.005 | — | 385 |
| Dust From Material Movement | — | — | — | — | — | — | 0.13 | 0.13 | — | 0.05 | 0.05 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.04 | 0.03 | 0.30 | 0.26 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 63.4 | 63.4 | < 0.005 | < 0.005 | — | 63.7 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.06 | 0.06 | 0.62 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 125 | 125 | < 0.005 | 0.01 | 0.01 | 127 |
| Vendor | 0.01 | < 0.005 | 0.15 | 0.05 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 113 | 113 | < 0.005 | 0.02 | 0.01 | 118 |
| 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 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 6.34 | 6.34 | < 0.005 | < 0.005 | 0.01 | 6.43 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.59 | 5.59 | < 0.005 | < 0.005 | 0.01 | 5.84 |
| 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 | — | 1.05 | 1.05 | < 0.005 | < 0.005 | < 0.005 | 1.06 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.92 | 0.92 | < 0.005 | < 0.005 | < 0.005 | 0.97 |
| 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. Building Construction (2025) - 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 | 1.58 | 1.32 | 12.4 | 16.1 | 0.03 | 0.51 | — | 0.51 | 0.47 | — | 0.47 | — | 2,921 | 2,921 | 0.12 | 0.02 | — | 2,931 |
| 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 | 1.58 | 1.32 | 12.4 | 16.1 | 0.03 | 0.51 | — | 0.51 | 0.47 | — | 0.47 | — | 2,921 | 2,921 | 0.12 | 0.02 | — | 2,931 |
| 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 | 0.86 | 0.72 | 6.74 | 8.71 | 0.02 | 0.28 | — | 0.28 | 0.25 | — | 0.25 | — | 1,584 | 1,584 | 0.06 | 0.01 | — | 1,590 |
| 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 | 0.16 | 0.13 | 1.23 | 1.59 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 262 | 262 | 0.01 | < 0.005 | — | 263 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.55 | 0.51 | 0.34 | 6.34 | 0.00 | 0.00 | 1.02 | 1.02 | 0.00 | 0.24 | 0.24 | — | 1,125 | 1,125 | 0.05 | 0.04 | 4.18 | 1,143 |
| Vendor | 0.06 | 0.03 | 1.30 | 0.44 | 0.01 | 0.01 | 0.28 | 0.30 | 0.01 | 0.08 | 0.09 | — | 1,048 | 1,048 | 0.02 | 0.15 | 2.88 | 1,097 |
| 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 | 0.47 | 0.46 | 5.03 | 0.00 | 0.00 | 1.02 | 1.02 | 0.00 | 0.24 | 0.24 | — | 1,016 | 1,016 | 0.03 | 0.04 | 0.11 | 1,030 |
| Vendor | 0.05 | 0.03 | 1.39 | 0.45 | 0.01 | 0.01 | 0.28 | 0.30 | 0.01 | 0.08 | 0.09 | — | 1,048 | 1,048 | 0.02 | 0.15 | 0.07 | 1,095 |
| 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 | 0.28 | 0.25 | 0.21 | 2.80 | 0.00 | 0.00 | 0.55 | 0.55 | 0.00 | 0.13 | 0.13 | — | 565 | 565 | 0.01 | 0.02 | 0.98 | 573 |
| Vendor | 0.03 | 0.02 | 0.73 | 0.24 | < 0.005 | 0.01 | 0.15 | 0.16 | 0.01 | 0.04 | 0.05 | — | 568 | 568 | 0.01 | 0.08 | 0.67 | 594 |
| 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 | 0.05 | 0.05 | 0.04 | 0.51 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 93.6 | 93.6 | < 0.005 | < 0.005 | 0.16 | 94.9 |
| Vendor | 0.01 | < 0.005 | 0.13 | 0.04 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 94.1 | 94.1 | < 0.005 | 0.01 | 0.11 | 98.4 |
| 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 |

## 3.7. Paving (2025) - 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 | 0.95 | 0.80 | 7.45 | 9.98 | 0.01 | 0.35 | — | 0.35 | 0.32 | — | 0.32 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,517 |
| Paving | 0.48 | 0.48 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.08 | 0.07 | 0.61 | 0.82 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 124 | 124 | 0.01 | < 0.005 | — | 125 |
| Paving | 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 | 0.01 | 0.01 | 0.11 | 0.15 | < 0.005 | 0.01 | — | 0.01 | < 0.005 | — | < 0.005 | — | 20.6 | 20.6 | < 0.005 | < 0.005 | — | 20.6 |
| 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 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.06 | 0.06 | 0.62 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 125 | 125 | < 0.005 | 0.01 | 0.01 | 127 |
| Vendor | 0.01 | 0.01 | 0.23 | 0.07 | < 0.005 | < 0.005 | 0.05 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 170 | 170 | < 0.005 | 0.03 | 0.01 | 178 |
| 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 | 0.01 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.02 | 10.7 |
| Vendor | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 14.0 | 14.0 | < 0.005 | < 0.005 | 0.02 | 14.6 |
| 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 | — | 1.75 | 1.75 | < 0.005 | < 0.005 | < 0.005 | 1.77 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.31 | 2.31 | < 0.005 | < 0.005 | < 0.005 | 2.42 |
| 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. Architectural Coating (2025) - 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 | 0.21 | 0.17 | 1.18 | 1.52 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 178 | 178 | 0.01 | < 0.005 | — | 179 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coating | 47.0 | 47.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.02 | 0.01 | 0.10 | 0.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 14.6 | 14.6 | < 0.005 | < 0.005 | — | 14.7 |
| Architectural Coatings | 3.86 | 3.86 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 2.42 | 2.42 | < 0.005 | < 0.005 | — | 2.43 |
| Architectural Coatings | 0.70 | 0.70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.10 | 0.09 | 0.09 | 1.01 | 0.00 | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | — | 203 | 203 | 0.01 | 0.01 | 0.02 | 206 |
| 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 | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 17.1 | 17.1 | < 0.005 | < 0.005 | 0.03 | 17.4 |
| 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 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.83 | 2.83 | < 0.005 | < 0.005 | < 0.005 | 2.88 |
| 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

## 4.10. 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 |
|---|---|---|---|---|---|---|
| Site Preparation | Site Preparation | 2/1/2025 | 2/7/2025 | 5.00 | 5.00 | — |
| Grading | Grading | 2/8/2025 | 3/5/2025 | 5.00 | 18.0 | — |
| Building Construction | Building Construction | 3/6/2025 | 12/8/2025 | 5.00 | 198 | — |

| | | | | | | |
|---|---|---|---|---|---|---|
| Paving | Paving | 10/28/2025 | 12/8/2025 | 5.00 | 30.0 | — |
| Architectural Coating | Architectural Coating | 10/28/2025 | 12/8/2025 | 5.00 | 30.0 | — |

## 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 |
|---|---|---|---|---|---|---|---|
| Site Preparation | Crawler Tractors | Diesel | Average | 3.00 | 8.00 | 87.0 | 0.43 |
| Grading | Excavators | Diesel | Average | 1.00 | 8.00 | 36.0 | 0.38 |
| Grading | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Grading | Scrapers | Diesel | Average | 3.00 | 8.00 | 423 | 0.48 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 8.00 | 367 | 0.29 |
| Building Construction | Forklifts | Diesel | Average | 3.00 | 8.00 | 82.0 | 0.20 |
| Building Construction | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Building Construction | Welders | Diesel | Average | 1.00 | 8.00 | 46.0 | 0.45 |
| Paving | Pavers | Diesel | Average | 2.00 | 8.00 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Average | 2.00 | 8.00 | 89.0 | 0.36 |
| Paving | Rollers | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Architectural Coating | Air Compressors | Diesel | Average | 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 |
|---|---|---|---|---|
| Site Preparation | — | — | — | — |

| | | | | |
|---|---|---|---|---|
| Site Preparation | Worker | 7.50 | 11.9 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | 1.00 | 9.10 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 15.0 | 11.9 | LDA,LDT1,LDT2 |
| Grading | Vendor | 4.00 | 9.10 | HHDT,MHDT |
| Grading | Hauling | 0.00 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 122 | 11.9 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 37.0 | 9.10 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 11.9 | LDA,LDT1,LDT2 |
| Paving | Vendor | 6.00 | 9.10 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 24.3 | 11.9 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | 0.00 | 9.10 | 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 | 434,175 | 144,725 | 14,427 |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (cy) | Material Exported (cy) | Acres Graded (acres) | Material Demolished (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Site Preparation | — | — | 7.50 | 0.00 | — |
| Grading | — | — | 72.0 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 5.52 |

### 5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|---|---|---|---|
| Water Exposed Area | 3 | 74% | 74% |

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Refrigerated Warehouse-No Rail | 0.00 | 0% |
| Parking Lot | 5.52 | 100% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 0.00 | 204 | 0.03 | < 0.005 |

## 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 | 20.4 | annual days of extreme heat |
| Extreme Precipitation | 1.60 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 0.00 | 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 | 0 | 0 | 0 | N/A |
| Drought | 0 | 0 | 0 | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 0 | 0 | 0 | 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 | 1 | 1 | 1 | 2 |
| Drought | 1 | 1 | 1 | 2 |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 1 | 1 | 1 | 2 |

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 | 58.2 |
| AQ-PM | 55.3 |
| AQ-DPM | 81.4 |
| Drinking Water | 99.0 |
| Lead Risk Housing | 54.1 |
| Pesticides | 91.0 |
| Toxic Releases | 52.0 |
| Traffic | 73.5 |
| Effect Indicators | — |
| CleanUp Sites | 29.5 |
| Groundwater | 39.4 |

| | |
|---|---|
| Haz Waste Facilities/Generators | 58.8 |
| Impaired Water Bodies | 0.00 |
| Solid Waste | 22.1 |
| Sensitive Population | — |
| Asthma | 91.0 |
| Cardio-vascular | 94.3 |
| Low Birth Weights | 33.0 |
| Socioeconomic Factor Indicators | — |
| Education | 63.9 |
| Housing | 68.1 |
| Linguistic | 55.6 |
| Poverty | 78.1 |
| Unemployment | 76.1 |

## 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 | 28.03798281 |
| Employed | 15.32144232 |
| Median HI | 45.72051841 |
| Education | — |
| Bachelor's or higher | 10.07314256 |
| High school enrollment | 100 |
| Preschool enrollment | 56.79455922 |
| Transportation | — |
| Auto Access | 81.29090209 |
| Active commuting | 58.95034005 |

| | |
|---|---|
| Social | — |
| 2-parent households | 41.93506993 |
| Voting | 53.79186449 |
| Neighborhood | — |
| Alcohol availability | 50.53252919 |
| Park access | 81.35506224 |
| Retail density | 58.05209804 |
| Supermarket access | 69.85756448 |
| Tree canopy | 69.03631464 |
| Housing | — |
| Homeownership | 50.03208007 |
| Housing habitability | 64.35262415 |
| Low-inc homeowner severe housing cost burden | 65.41768254 |
| Low-inc renter severe housing cost burden | 66.40574875 |
| Uncrowded housing | 34.15886052 |
| Health Outcomes | — |
| Insured adults | 53.66354421 |
| Arthritis | 12.5 |
| Asthma ER Admissions | 4.7 |
| High Blood Pressure | 18.2 |
| Cancer (excluding skin) | 27.6 |
| Asthma | 21.6 |
| Coronary Heart Disease | 15.5 |
| Chronic Obstructive Pulmonary Disease | 13.3 |
| Diagnosed Diabetes | 44.3 |
| Life Expectancy at Birth | 16.1 |
| Cognitively Disabled | 29.3 |
| Physically  Disabled | 23.7 |

| | |
|---|---|
| Heart Attack ER Admissions | 9.3 |
| Mental Health Not Good | 31.0 |
| Chronic Kidney Disease | 35.4 |
| Obesity | 23.9 |
| Pedestrian Injuries | 74.3 |
| Physical Health Not Good | 32.6 |
| Stroke | 26.0 |
| Health Risk Behaviors | — |
| Binge Drinking | 30.9 |
| Current Smoker | 20.8 |
| No Leisure Time for Physical Activity | 33.2 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |
| Children | 25.4 |
| Elderly | 54.5 |
| English Speaking | 58.9 |
| Foreign-born | 25.7 |
| Outdoor Workers | 31.7 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 37.3 |
| Traffic Density | 74.0 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 73.6 |
| Other Decision Support | — |
| 2016 Voting | 44.3 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 89.0 |
| Healthy Places Index Score for Project Location (b) | 39.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | Yes |
| 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 | Construction schedule based on data provided by the Project applicant. |
| Construction: Off-Road Equipment | Construction equipment estimated by the Project applicant. |
| Construction: Trips and VMT | Vendor trips apportioned to the site preparation, grading, building construction, and paving phases based on the duration of each phase. |

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# APPENDIX 3.2:

# CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS

# 15639 Spreckels Distribution Center Ops SJVAPCD Detailed Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 15639 Spreckels Distribution Center Ops SJVAPCD |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.40 |
| Precipitation (days) | 9.00 |
| Location | 37.79197075484117, -121.1992052878777 |
| County | San Joaquin |
| City | Manteca |
| Air District | San Joaquin Valley APCD |
| Air Basin | San Joaquin Valley |
| TAZ | 2132 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.26 |

## 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 |
|---|---|---|---|---|---|---|---|---|
| Refrigerated Warehouse-No Rail | 289 | 1000sqft | 6.64 | 289,450 | 116,279 | — | — | PC |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 289 | User Defined Unit | 0.00 | 0.00 | 0.00 | — | — | Trucks |
| Parking Lot | 5.52 | Acre | 5.52 | 0.00 | 0.00 | — | — | — |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 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. | 13.4 | 12.5 | 33.1 | 40.1 | 0.30 | 0.72 | 11.5 | 12.2 | 0.70 | 3.04 | 3.74 | 275 | 36,055 | 36,329 | 29.1 | 4.41 | 394 | 38,765 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 11.1 | 10.3 | 35.1 | 25.4 | 0.30 | 0.70 | 11.5 | 12.2 | 0.68 | 3.04 | 3.72 | 275 | 35,744 | 36,019 | 29.1 | 4.43 | 298 | 38,363 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 10.2 | 9.63 | 23.4 | 23.2 | 0.21 | 0.43 | 8.38 | 8.81 | 0.41 | 2.22 | 2.63 | 275 | 27,103 | 27,378 | 28.9 | 3.34 | 326 | 29,422 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 1.87 | 1.76 | 4.28 | 4.23 | 0.04 | 0.08 | 1.53 | 1.61 | 0.08 | 0.40 | 0.48 | 45.5 | 4,487 | 4,533 | 4.79 | 0.55 | 54.0 | 4,871 |

### 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 | 3.26 | 2.62 | 29.4 | 24.3 | 0.29 | 0.50 | 11.5 | 12.0 | 0.48 | 3.04 | 3.53 | — | 30,756 | 30,756 | 0.53 | 4.01 | 99.4 | 32,063 |
| Area | 8.84 | 8.67 | 0.11 | 12.6 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 51.8 | 51.8 | < 0.005 | < 0.005 | — | 52.0 |
| Energy | 0.04 | 0.02 | 0.39 | 0.32 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 4,536 | 4,536 | 0.70 | 0.08 | — | 4,577 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 128 | 124 | 252 | 13.2 | 0.31 | — | 675 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 147 | 0.00 | 147 | 14.7 | 0.00 | — | 513 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 295 | 295 |
| Stationary | 1.26 | 1.15 | 3.21 | 2.93 | 0.01 | 0.17 | 0.00 | 0.17 | 0.17 | 0.00 | 0.17 | 0.00 | 588 | 588 | 0.02 | < 0.005 | 0.00 | 590 |
| Total | 13.4 | 12.5 | 33.1 | 40.1 | 0.30 | 0.72 | 11.5 | 12.2 | 0.70 | 3.04 | 3.74 | 275 | 36,055 | 36,329 | 29.1 | 4.41 | 394 | 38,765 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 3.15 | 2.51 | 31.5 | 22.1 | 0.29 | 0.50 | 11.5 | 12.0 | 0.48 | 3.04 | 3.53 | — | 30,497 | 30,497 | 0.54 | 4.03 | 2.58 | 31,713 |
| Area | 6.60 | 6.60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.04 | 0.02 | 0.39 | 0.32 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 4,536 | 4,536 | 0.70 | 0.08 | — | 4,577 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 128 | 124 | 252 | 13.2 | 0.31 | — | 675 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 147 | 0.00 | 147 | 14.7 | 0.00 | — | 513 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 295 | 295 |
| Stationary | 1.26 | 1.15 | 3.21 | 2.93 | 0.01 | 0.17 | 0.00 | 0.17 | 0.17 | 0.00 | 0.17 | 0.00 | 588 | 588 | 0.02 | < 0.005 | 0.00 | 590 |
| Total | 11.1 | 10.3 | 35.1 | 25.4 | 0.30 | 0.70 | 11.5 | 12.2 | 0.68 | 3.04 | 3.72 | 275 | 35,744 | 36,019 | 29.1 | 4.43 | 298 | 38,363 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 2.31 | 1.83 | 22.6 | 16.2 | 0.21 | 0.37 | 8.38 | 8.75 | 0.35 | 2.22 | 2.57 | — | 22,338 | 22,338 | 0.39 | 2.94 | 31.4 | 23,255 |
| Area | 7.70 | 7.62 | 0.05 | 6.21 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 25.5 | 25.5 | < 0.005 | < 0.005 | — | 25.6 |
| Energy | 0.04 | 0.02 | 0.39 | 0.32 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 4,536 | 4,536 | 0.70 | 0.08 | — | 4,577 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 128 | 124 | 252 | 13.2 | 0.31 | — | 675 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 147 | 0.00 | 147 | 14.7 | 0.00 | — | 513 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 295 | 295 |
| Stationary | 0.17 | 0.16 | 0.44 | 0.40 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 80.5 | 80.5 | < 0.005 | < 0.005 | 0.00 | 80.8 |
| Total | 10.2 | 9.63 | 23.4 | 23.2 | 0.21 | 0.43 | 8.38 | 8.81 | 0.41 | 2.22 | 2.63 | 275 | 27,103 | 27,378 | 28.9 | 3.34 | 326 | 29,422 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.42 | 0.33 | 4.12 | 2.96 | 0.04 | 0.07 | 1.53 | 1.60 | 0.06 | 0.40 | 0.47 | — | 3,698 | 3,698 | 0.06 | 0.49 | 5.19 | 3,850 |
| Area | 1.41 | 1.39 | 0.01 | 1.13 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.23 | 4.23 | < 0.005 | < 0.005 | — | 4.24 |
| Energy | 0.01 | < 0.005 | 0.07 | 0.06 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 751 | 751 | 0.12 | 0.01 | — | 758 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 21.2 | 20.5 | 41.7 | 2.18 | 0.05 | — | 112 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 24.3 | 0.00 | 24.3 | 2.43 | 0.00 | — | 84.9 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 48.8 | 48.8 |
| Stationary | 0.03 | 0.03 | 0.08 | 0.07 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | 0.00 | 13.3 | 13.3 | < 0.005 | < 0.005 | 0.00 | 13.4 |
| Total | 1.87 | 1.76 | 4.28 | 4.23 | 0.04 | 0.08 | 1.53 | 1.61 | 0.08 | 0.40 | 0.48 | 45.5 | 4,487 | 4,533 | 4.79 | 0.55 | 54.0 | 4,871 |

# 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | 1.64 | 1.52 | 0.72 | 14.6 | 0.03 | 0.01 | 2.72 | 2.73 | 0.01 | 0.69 | 0.70 | — | 2,890 | 2,890 | 0.12 | 0.07 | 9.65 | 2,925 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 1.63 | 1.10 | 28.6 | 9.70 | 0.26 | 0.49 | 8.80 | 9.29 | 0.47 | 2.36 | 2.83 | — | 27,866 | 27,866 | 0.41 | 3.93 | 89.7 | 29,139 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 3.26 | 2.62 | 29.4 | 24.3 | 0.29 | 0.50 | 11.5 | 12.0 | 0.48 | 3.04 | 3.53 | — | 30,756 | 30,756 | 0.53 | 4.01 | 99.4 | 32,063 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | 1.56 | 1.43 | 0.91 | 12.6 | 0.03 | 0.01 | 2.72 | 2.73 | 0.01 | 0.69 | 0.70 | — | 2,626 | 2,626 | 0.14 | 0.09 | 0.25 | 2,656 |
| User Defined Industrial | 1.59 | 1.07 | 30.6 | 9.56 | 0.26 | 0.49 | 8.80 | 9.29 | 0.47 | 2.36 | 2.83 | — | 27,871 | 27,871 | 0.41 | 3.94 | 2.33 | 29,058 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 3.15 | 2.51 | 31.5 | 22.1 | 0.29 | 0.50 | 11.5 | 12.0 | 0.48 | 3.04 | 3.53 | — | 30,497 | 30,497 | 0.54 | 4.03 | 2.58 | 31,713 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | 0.21 | 0.19 | 0.11 | 1.68 | < 0.005 | < 0.005 | 0.36 | 0.36 | < 0.005 | 0.09 | 0.09 | — | 325 | 325 | 0.02 | 0.01 | 0.50 | 329 |
| User Defined Industrial | 0.21 | 0.14 | 4.01 | 1.28 | 0.04 | 0.07 | 1.17 | 1.23 | 0.06 | 0.31 | 0.38 | — | 3,373 | 3,373 | 0.05 | 0.48 | 4.69 | 3,521 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 0.42 | 0.33 | 4.12 | 2.96 | 0.04 | 0.07 | 1.53 | 1.60 | 0.06 | 0.40 | 0.47 | — | 3,698 | 3,698 | 0.06 | 0.49 | 5.19 | 3,850 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 3,958 | 3,958 | 0.64 | 0.08 | — | 3,997 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 118 | 118 | 0.02 | < 0.005 | — | 119 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 4,076 | 4,076 | 0.66 | 0.08 | — | 4,116 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 3,958 | 3,958 | 0.64 | 0.08 | — | 3,997 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 118 | 118 | 0.02 | < 0.005 | — | 119 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 4,076 | 4,076 | 0.66 | 0.08 | — | 4,116 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Refrigerated Warehouse-No | — | — | — | — | — | — | — | — | — | — | — | — | 655 | 655 | 0.11 | 0.01 | — | 662 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 19.5 | 19.5 | < 0.005 | < 0.005 | — | 19.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 675 | 675 | 0.11 | 0.01 | — | 681 |

### 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | 0.04 | 0.02 | 0.39 | 0.32 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 460 | 460 | 0.04 | < 0.005 | — | 461 |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | 0.00 | 0.00 | 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 | 0.04 | 0.02 | 0.39 | 0.32 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 460 | 460 | 0.04 | < 0.005 | — | 461 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Refrigerated Warehouse-No Rail | 0.04 | 0.02 | 0.39 | 0.32 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 460 | 460 | 0.04 | < 0.005 | — | 461 |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | 0.00 | 0.00 | 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 | 0.04 | 0.02 | 0.39 | 0.32 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 460 | 460 | 0.04 | < 0.005 | — | 461 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | 0.01 | < 0.005 | 0.07 | 0.06 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 76.2 | 76.2 | 0.01 | < 0.005 | — | 76.4 |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | 0.00 | 0.00 | 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 | 0.01 | < 0.005 | 0.07 | 0.06 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 76.2 | 76.2 | 0.01 | < 0.005 | — | 76.4 |

## 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 | 6.21 | 6.21 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.39 | 0.39 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 2.24 | 2.07 | 0.11 | 12.6 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 51.8 | 51.8 | < 0.005 | < 0.005 | — | 52.0 |
| Total | 8.84 | 8.67 | 0.11 | 12.6 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 51.8 | 51.8 | < 0.005 | < 0.005 | — | 52.0 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 6.21 | 6.21 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.39 | 0.39 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 6.60 | 6.60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 1.13 | 1.13 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.07 | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.20 | 0.19 | 0.01 | 1.13 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.23 | 4.23 | < 0.005 | < 0.005 | — | 4.24 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 1.41 | 1.39 | 0.01 | 1.13 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.23 | 4.23 | < 0.005 | < 0.005 | — | 4.24 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 128 | 124 | 252 | 13.2 | 0.31 | — | 675 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 128 | 124 | 252 | 13.2 | 0.31 | — | 675 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 128 | 124 | 252 | 13.2 | 0.31 | — | 675 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | 128 | 124 | 252 | 13.2 | 0.31 | — | 675 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 21.2 | 20.5 | 41.7 | 2.18 | 0.05 | — | 112 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 21.2 | 20.5 | 41.7 | 2.18 | 0.05 | — | 112 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 147 | 0.00 | 147 | 14.7 | 0.00 | — | 513 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 147 | 0.00 | 147 | 14.7 | 0.00 | — | 513 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 147 | 0.00 | 147 | 14.7 | 0.00 | — | 513 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 147 | 0.00 | 147 | 14.7 | 0.00 | — | 513 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 24.3 | 0.00 | 24.3 | 2.43 | 0.00 | — | 84.9 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 24.3 | 0.00 | 24.3 | 2.43 | 0.00 | — | 84.9 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 295 | 295 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 295 | 295 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 295 | 295 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 295 | 295 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Refrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 48.8 | 48.8 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 48.8 | 48.8 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 1.26 | 1.15 | 3.21 | 2.93 | 0.01 | 0.17 | 0.00 | 0.17 | 0.17 | 0.00 | 0.17 | 0.00 | 588 | 588 | 0.02 | < 0.005 | 0.00 | 590 |
| Total | 1.26 | 1.15 | 3.21 | 2.93 | 0.01 | 0.17 | 0.00 | 0.17 | 0.17 | 0.00 | 0.17 | 0.00 | 588 | 588 | 0.02 | < 0.005 | 0.00 | 590 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 1.26 | 1.15 | 3.21 | 2.93 | 0.01 | 0.17 | 0.00 | 0.17 | 0.17 | 0.00 | 0.17 | 0.00 | 588 | 588 | 0.02 | < 0.005 | 0.00 | 590 |
| Total | 1.26 | 1.15 | 3.21 | 2.93 | 0.01 | 0.17 | 0.00 | 0.17 | 0.17 | 0.00 | 0.17 | 0.00 | 588 | 588 | 0.02 | < 0.005 | 0.00 | 590 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Generat | 0.03 | 0.03 | 0.08 | 0.07 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | 0.00 | 13.3 | 13.3 | < 0.005 | < 0.005 | 0.00 | 13.4 |
| Total | 0.03 | 0.03 | 0.08 | 0.07 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | 0.00 | 13.3 | 13.3 | < 0.005 | < 0.005 | 0.00 | 13.4 |

## 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

## 5.9. 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 |
|---|---|---|---|---|---|---|---|---|
| Refrigerated Warehouse-No Rail | 397 | 33.6 | 13.3 | 105,981 | 3,885 | 328 | 130 | 1,036,864 |
| User Defined Industrial | 217 | 18.2 | 7.24 | 57,926 | 10,147 | 852 | 338 | 2,707,460 |
| Parking Lot | 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 | 434,175 | 144,725 | 14,427 |

### 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) |
|---|---|---|---|---|---|
| Refrigerated Warehouse-No Rail | 7,082,055 | 204 | 0.0330 | 0.0040 | 1,436,010 |
| User Defined Industrial | 0.00 | 204 | 0.0330 | 0.0040 | 0.00 |
| Parking Lot | 210,635 | 204 | 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) |
|---|---|---|
| Refrigerated Warehouse-No Rail | 66,935,313 | 1,632,098 |
| User Defined Industrial | 0.00 | 0.00 |
| Parking Lot | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Refrigerated Warehouse-No Rail | 272 | — |
| User Defined Industrial | 0.00 | — |
| Parking Lot | 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 |
|---|---|---|---|---|---|---|---|
| Refrigerated Warehouse-No Rail | Cold storage | User Defined | 150 | 7.50 | 7.50 | 7.50 | 25.0 |

## 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 |
|---|---|---|---|---|---|---|
| Fire Pump | Diesel | 1.00 | 1.00 | 50.0 | 300 | 0.73 |
| Emergency Generator | Diesel | 1.00 | 1.00 | 50.0 | 700 | 0.73 |

### 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 | 20.4 | annual days of extreme heat |
| Extreme Precipitation | 1.60 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 0.00 | 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 | 0 | 0 | 0 | N/A |
| Drought | 0 | 0 | 0 | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 0 | 0 | 0 | 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 | 1 | 1 | 1 | 2 |
| Drought | 1 | 1 | 1 | 2 |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 1 | 1 | 1 | 2 |

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 | 58.2 |
| AQ-PM | 55.3 |
| AQ-DPM | 81.4 |
| Drinking Water | 99.0 |
| Lead Risk Housing | 54.1 |
| Pesticides | 91.0 |
| Toxic Releases | 52.0 |
| Traffic | 73.5 |
| Effect Indicators | — |
| CleanUp Sites | 29.5 |
| Groundwater | 39.4 |
| Haz Waste Facilities/Generators | 58.8 |
| Impaired Water Bodies | 0.00 |
| Solid Waste | 22.1 |
| Sensitive Population | — |
| Asthma | 91.0 |
| Cardio-vascular | 94.3 |
| Low Birth Weights | 33.0 |
| Socioeconomic Factor Indicators | — |

| | |
|---|---|
| Education | 63.9 |
| Housing | 68.1 |
| Linguistic | 55.6 |
| Poverty | 78.1 |
| Unemployment | 76.1 |

## 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 | 28.03798281 |
| Employed | 15.32144232 |
| Median HI | 45.72051841 |
| Education | — |
| Bachelor's or higher | 10.07314256 |
| High school enrollment | 100 |
| Preschool enrollment | 56.79455922 |
| Transportation | — |
| Auto Access | 81.29090209 |
| Active commuting | 58.95034005 |
| Social | — |
| 2-parent households | 41.93506993 |
| Voting | 53.79186449 |
| Neighborhood | — |
| Alcohol availability | 50.53252919 |
| Park access | 81.35506224 |
| Retail density | 58.05209804 |
| Supermarket access | 69.85756448 |

| | |
|---|---|
| Tree canopy | 69.03631464 |
| Housing | — |
| Homeownership | 50.03208007 |
| Housing habitability | 64.35262415 |
| Low-inc homeowner severe housing cost burden | 65.41768254 |
| Low-inc renter severe housing cost burden | 66.40574875 |
| Uncrowded housing | 34.15886052 |
| Health Outcomes | — |
| Insured adults | 53.66354421 |
| Arthritis | 12.5 |
| Asthma ER Admissions | 4.7 |
| High Blood Pressure | 18.2 |
| Cancer (excluding skin) | 27.6 |
| Asthma | 21.6 |
| Coronary Heart Disease | 15.5 |
| Chronic Obstructive Pulmonary Disease | 13.3 |
| Diagnosed Diabetes | 44.3 |
| Life Expectancy at Birth | 16.1 |
| Cognitively Disabled | 29.3 |
| Physically  Disabled | 23.7 |
| Heart Attack ER Admissions | 9.3 |
| Mental Health Not Good | 31.0 |
| Chronic Kidney Disease | 35.4 |
| Obesity | 23.9 |
| Pedestrian Injuries | 74.3 |
| Physical Health Not Good | 32.6 |
| Stroke | 26.0 |
| Health Risk Behaviors | — |

| | |
|---|---|
| Binge Drinking | 30.9 |
| Current Smoker | 20.8 |
| No Leisure Time for Physical Activity | 33.2 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |
| Children | 25.4 |
| Elderly | 54.5 |
| English Speaking | 58.9 |
| Foreign-born | 25.7 |
| Outdoor Workers | 31.7 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 37.3 |
| Traffic Density | 74.0 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 73.6 |
| Other Decision Support | — |
| 2016 Voting | 44.3 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 89.0 |
| Healthy Places Index Score for Project Location (b) | 39.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | Yes |
| 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 |
|---|---|
| Land Use | Project site is 14.83 acres. |
| Operations: Vehicle Data | Trip characteristics based on information provided in the Trip Generation. |
| Operations: Fleet Mix | Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks. |
| 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. |
| Operations: Energy Use | — |

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# APPENDIX 3.3:

# TRU EMISSION CALCULATIONS

## TRU Emissions

| | |
|---|---|
| 2026 | Year |
| San Joaquin | Region |

**Transport Refrigeration Unit - Instate Trailer**

| | |
|---|---|
| 55 | No. of Units |
| 4 | Hours/day |

**Transport Refrigeration Unit - Instate Truck**

| | |
|---|---|
| 54 | No. of Units |
| 4 | Hours/day |

| Total Two-Way TRU Trips per day |
|---|
| **217** |

| | Activity (hrs/year) |
|---|---|
| Transport Refrigeration Unit - Instate Trailer | 1,621,428 |
| Transport Refrigeration Unit - Instate Truck | 145,736 |

| Unit | | Emission Factor | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | ROG | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ | $CO_2$ |
| Transport Refrigeration Unit - Instate Trailer | Emissions (tons/day) | 1.93E-01 | 1.79E-01 | 2.35E-02 | 0.00E+00 | 3.92E-03 | 3.61E-03 | 3.54E+01 |
| | Emissions (lbs/hr) | 8.67E-02 | 8.06E-02 | 1.06E-02 | 0.00E+00 | 1.77E-03 | 1.63E-03 | 1.60E+01 |
| Transport Refrigeration Unit - Instate Truck | Emissions (tons/day) | 1.22E-02 | 1.55E-02 | 1.33E-03 | 0.00E+00 | 7.99E-04 | 7.35E-04 | 2.48E+00 |
| | Emissions (lbs/hr) | 6.12E-02 | 7.79E-02 | 6.66E-03 | 0.00E+00 | 4.00E-03 | 3.68E-03 | 1.24E+01 |

| Unit | Emissions (tons/yr) | | | | | | MT/yr |
|---|---|---|---|---|---|---|---|
| | ROG | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ | $CO_2$ |
| Transport Refrigeration Unit - Instate Trailer | 2.52 | 2.34 | 0.31 | 0.00 | 0.05 | 0.05 | 419.91 |
| Transport Refrigeration Unit - Instate Truck | 1.76 | 2.24 | 0.19 | 0.00 | 0.12 | 0.11 | 324.22 |
| Total | 4.27 | 4.57 | 0.50 | 0.00 | 0.17 | 0.15 | 744.14 |

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# APPENDIX 3.4:

# CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS – BAAQMD

# 15639 Spreckels Distribution Center Ops BAAQMD Detailed Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 15639 Spreckels Distribution Center Ops BAAQMD |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.40 |
| Precipitation (days) | 9.00 |
| Location | 37.79197075484117, -121.1992052878777 |
| County | San Joaquin |
| City | Manteca |
| Air District | San Joaquin Valley APCD |
| Air Basin | San Joaquin Valley |
| TAZ | 2132 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.26 |

## 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 |
|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 289 | User Defined Unit | 0.00 | 0.00 | 0.00 | — | — | Trucks |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 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. | 0.32 | 0.24 | 4.72 | 2.37 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | 0.00 | 3,062 | 3,062 | 0.07 | 0.44 | 9.26 | 3,204 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.31 | 0.22 | 5.03 | 2.44 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | 0.00 | 3,067 | 3,067 | 0.07 | 0.44 | 0.24 | 3,200 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.23 | 0.17 | 3.59 | 1.76 | 0.02 | 0.04 | 0.66 | 0.70 | 0.04 | 0.18 | 0.21 | 0.00 | 2,240 | 2,240 | 0.05 | 0.32 | 2.92 | 2,340 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.04 | 0.03 | 0.65 | 0.32 | < 0.005 | 0.01 | 0.12 | 0.13 | 0.01 | 0.03 | 0.04 | 0.00 | 371 | 371 | 0.01 | 0.05 | 0.48 | 387 |

### 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 | 0.32 | 0.24 | 4.72 | 2.37 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | — | 3,062 | 3,062 | 0.07 | 0.44 | 9.26 | 3,204 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.32 | 0.24 | 4.72 | 2.37 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | 0.00 | 3,062 | 3,062 | 0.07 | 0.44 | 9.26 | 3,204 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.31 | 0.22 | 5.03 | 2.44 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | — | 3,067 | 3,067 | 0.07 | 0.44 | 0.24 | 3,200 |
| Area | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.31 | 0.22 | 5.03 | 2.44 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | 0.00 | 3,067 | 3,067 | 0.07 | 0.44 | 0.24 | 3,200 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.23 | 0.17 | 3.59 | 1.76 | 0.02 | 0.04 | 0.66 | 0.70 | 0.04 | 0.18 | 0.21 | — | 2,240 | 2,240 | 0.05 | 0.32 | 2.92 | 2,340 |
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.23 | 0.17 | 3.59 | 1.76 | 0.02 | 0.04 | 0.66 | 0.70 | 0.04 | 0.18 | 0.21 | 0.00 | 2,240 | 2,240 | 0.05 | 0.32 | 2.92 | 2,340 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.04 | 0.03 | 0.65 | 0.32 | < 0.005 | 0.01 | 0.12 | 0.13 | 0.01 | 0.03 | 0.04 | — | 371 | 371 | 0.01 | 0.05 | 0.48 | 387 |
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.04 | 0.03 | 0.65 | 0.32 | < 0.005 | 0.01 | 0.12 | 0.13 | 0.01 | 0.03 | 0.04 | 0.00 | 371 | 371 | 0.01 | 0.05 | 0.48 | 387 |

# 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.32 | 0.24 | 4.72 | 2.37 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | — | 3,062 | 3,062 | 0.07 | 0.44 | 9.26 | 3,204 |
| Total | 0.32 | 0.24 | 4.72 | 2.37 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | — | 3,062 | 3,062 | 0.07 | 0.44 | 9.26 | 3,204 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.31 | 0.22 | 5.03 | 2.44 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | — | 3,067 | 3,067 | 0.07 | 0.44 | 0.24 | 3,200 |
| Total | 0.31 | 0.22 | 5.03 | 2.44 | 0.03 | 0.05 | 0.91 | 0.96 | 0.05 | 0.24 | 0.29 | — | 3,067 | 3,067 | 0.07 | 0.44 | 0.24 | 3,200 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.04 | 0.03 | 0.65 | 0.32 | < 0.005 | 0.01 | 0.12 | 0.13 | 0.01 | 0.03 | 0.04 | — | 371 | 371 | 0.01 | 0.05 | 0.48 | 387 |
| Total | 0.04 | 0.03 | 0.65 | 0.32 | < 0.005 | 0.01 | 0.12 | 0.13 | 0.01 | 0.03 | 0.04 | — | 371 | 371 | 0.01 | 0.05 | 0.48 | 387 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

### 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.3. 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 | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.4. 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

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

## 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 | 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

## 5.9. 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 |
|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 217 | 18.2 | 7.24 | 57,926 | 1,046 | 87.9 | 34.9 | 279,203 |

## 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 | 0.00 | 0.00 | — |

### 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) |
|---|---|---|---|---|---|
| User Defined Industrial | 0.00 | 204 | 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) |
|---|---|---|
| User Defined Industrial | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| User Defined Industrial | 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 |
|---|---|---|---|---|---|---|---|

## 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 | 20.4 | annual days of extreme heat |
| Extreme Precipitation | 1.60 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 0.00 | 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 | 0 | 0 | 0 | N/A |
| Drought | 0 | 0 | 0 | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 0 | 0 | 0 | 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 | 1 | 1 | 1 | 2 |
| Drought | 1 | 1 | 1 | 2 |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 1 | 1 | 1 | 2 |

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 | 58.2 |
| AQ-PM | 55.3 |
| AQ-DPM | 81.4 |
| Drinking Water | 99.0 |
| Lead Risk Housing | 54.1 |
| Pesticides | 91.0 |
| Toxic Releases | 52.0 |
| Traffic | 73.5 |
| Effect Indicators | — |
| CleanUp Sites | 29.5 |
| Groundwater | 39.4 |

| | |
|---|---|
| Haz Waste Facilities/Generators | 58.8 |
| Impaired Water Bodies | 0.00 |
| Solid Waste | 22.1 |
| Sensitive Population | — |
| Asthma | 91.0 |
| Cardio-vascular | 94.3 |
| Low Birth Weights | 33.0 |
| Socioeconomic Factor Indicators | — |
| Education | 63.9 |
| Housing | 68.1 |
| Linguistic | 55.6 |
| Poverty | 78.1 |
| Unemployment | 76.1 |

## 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 | 28.03798281 |
| Employed | 15.32144232 |
| Median HI | 45.72051841 |
| Education | — |
| Bachelor's or higher | 10.07314256 |
| High school enrollment | 100 |
| Preschool enrollment | 56.79455922 |
| Transportation | — |
| Auto Access | 81.29090209 |
| Active commuting | 58.95034005 |

| | |
|---|---|
| Social | — |
| 2-parent households | 41.93506993 |
| Voting | 53.79186449 |
| Neighborhood | — |
| Alcohol availability | 50.53252919 |
| Park access | 81.35506224 |
| Retail density | 58.05209804 |
| Supermarket access | 69.85756448 |
| Tree canopy | 69.03631464 |
| Housing | — |
| Homeownership | 50.03208007 |
| Housing habitability | 64.35262415 |
| Low-inc homeowner severe housing cost burden | 65.41768254 |
| Low-inc renter severe housing cost burden | 66.40574875 |
| Uncrowded housing | 34.15886052 |
| Health Outcomes | — |
| Insured adults | 53.66354421 |
| Arthritis | 12.5 |
| Asthma ER Admissions | 4.7 |
| High Blood Pressure | 18.2 |
| Cancer (excluding skin) | 27.6 |
| Asthma | 21.6 |
| Coronary Heart Disease | 15.5 |
| Chronic Obstructive Pulmonary Disease | 13.3 |
| Diagnosed Diabetes | 44.3 |
| Life Expectancy at Birth | 16.1 |
| Cognitively Disabled | 29.3 |
| Physically  Disabled | 23.7 |

| | |
|---|---|
| Heart Attack ER Admissions | 9.3 |
| Mental Health Not Good | 31.0 |
| Chronic Kidney Disease | 35.4 |
| Obesity | 23.9 |
| Pedestrian Injuries | 74.3 |
| Physical Health Not Good | 32.6 |
| Stroke | 26.0 |
| Health Risk Behaviors | — |
| Binge Drinking | 30.9 |
| Current Smoker | 20.8 |
| No Leisure Time for Physical Activity | 33.2 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |
| Children | 25.4 |
| Elderly | 54.5 |
| English Speaking | 58.9 |
| Foreign-born | 25.7 |
| Outdoor Workers | 31.7 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 37.3 |
| Traffic Density | 74.0 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 73.6 |
| Other Decision Support | — |
| 2016 Voting | 44.3 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 89.0 |
| Healthy Places Index Score for Project Location (b) | 39.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | Yes |
| 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 |
|---|---|
| Land Use | Project site is 14.83 acres. |
| Operations: Vehicle Data | Trip characteristics based on information provided in the Trip Generation. Accounts for truck travel in BAAQMD only. |
| Operations: Fleet Mix | Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks. |
| 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. |
| Operations: Energy Use | — |

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# APPENDIX 3.5:

# CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS – SMAQMD

# 15639 Spreckels Distribution Center Ops SMAQMD Detailed Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 15639 Spreckels Distribution Center Ops SMAQMD |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.40 |
| Precipitation (days) | 9.00 |
| Location | 37.79197075484117, -121.1992052878777 |
| County | San Joaquin |
| City | Manteca |
| Air District | San Joaquin Valley APCD |
| Air Basin | San Joaquin Valley |
| TAZ | 2132 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.26 |

## 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 |
|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 289 | User Defined Unit | 0.00 | 0.00 | 0.00 | — | — | Trucks |

## 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

## 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. | 0.31 | 0.23 | 4.52 | 2.31 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | 0.00 | 2,861 | 2,861 | 0.07 | 0.41 | 8.60 | 2,994 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.29 | 0.21 | 4.82 | 2.38 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | 0.00 | 2,866 | 2,866 | 0.07 | 0.41 | 0.22 | 2,991 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.22 | 0.16 | 3.44 | 1.71 | 0.02 | 0.03 | 0.61 | 0.65 | 0.03 | 0.16 | 0.20 | 0.00 | 2,093 | 2,093 | 0.05 | 0.30 | 2.72 | 2,187 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.04 | 0.03 | 0.63 | 0.31 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | 0.00 | 347 | 347 | 0.01 | 0.05 | 0.45 | 362 |

## 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 | 0.31 | 0.23 | 4.52 | 2.31 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | — | 2,861 | 2,861 | 0.07 | 0.41 | 8.60 | 2,994 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.31 | 0.23 | 4.52 | 2.31 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | 0.00 | 2,861 | 2,861 | 0.07 | 0.41 | 8.60 | 2,994 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.29 | 0.21 | 4.82 | 2.38 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | — | 2,866 | 2,866 | 0.07 | 0.41 | 0.22 | 2,991 |
| Area | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.29 | 0.21 | 4.82 | 2.38 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | 0.00 | 2,866 | 2,866 | 0.07 | 0.41 | 0.22 | 2,991 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.22 | 0.16 | 3.44 | 1.71 | 0.02 | 0.03 | 0.61 | 0.65 | 0.03 | 0.16 | 0.20 | — | 2,093 | 2,093 | 0.05 | 0.30 | 2.72 | 2,187 |
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.22 | 0.16 | 3.44 | 1.71 | 0.02 | 0.03 | 0.61 | 0.65 | 0.03 | 0.16 | 0.20 | 0.00 | 2,093 | 2,093 | 0.05 | 0.30 | 2.72 | 2,187 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.04 | 0.03 | 0.63 | 0.31 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | — | 347 | 347 | 0.01 | 0.05 | 0.45 | 362 |
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.04 | 0.03 | 0.63 | 0.31 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | 0.00 | 347 | 347 | 0.01 | 0.05 | 0.45 | 362 |

# 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.31 | 0.23 | 4.52 | 2.31 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | — | 2,861 | 2,861 | 0.07 | 0.41 | 8.60 | 2,994 |
| Total | 0.31 | 0.23 | 4.52 | 2.31 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | — | 2,861 | 2,861 | 0.07 | 0.41 | 8.60 | 2,994 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.29 | 0.21 | 4.82 | 2.38 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | — | 2,866 | 2,866 | 0.07 | 0.41 | 0.22 | 2,991 |
| Total | 0.29 | 0.21 | 4.82 | 2.38 | 0.03 | 0.05 | 0.84 | 0.89 | 0.05 | 0.23 | 0.27 | — | 2,866 | 2,866 | 0.07 | 0.41 | 0.22 | 2,991 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.04 | 0.03 | 0.63 | 0.31 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | — | 347 | 347 | 0.01 | 0.05 | 0.45 | 362 |
| Total | 0.04 | 0.03 | 0.63 | 0.31 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | — | 347 | 347 | 0.01 | 0.05 | 0.45 | 362 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

### 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.3. 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 | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.4. 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

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

## 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 | 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

## 5.9. 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 |
|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 217 | 18.2 | 7.24 | 57,926 | 973 | 81.7 | 32.4 | 259,508 |

## 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 | 0.00 | 0.00 | — |

### 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) |
|---|---|---|---|---|---|
| User Defined Industrial | 0.00 | 204 | 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) |
|---|---|---|
| User Defined Industrial | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| User Defined Industrial | 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 |
|---|---|---|---|---|---|---|---|

## 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 | 20.4 | annual days of extreme heat |
| Extreme Precipitation | 1.60 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 0.00 | 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 | 0 | 0 | 0 | N/A |
| Drought | 0 | 0 | 0 | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 0 | 0 | 0 | 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 | 1 | 1 | 1 | 2 |
| Drought | 1 | 1 | 1 | 2 |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 1 | 1 | 1 | 2 |

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 | 58.2 |
| AQ-PM | 55.3 |
| AQ-DPM | 81.4 |
| Drinking Water | 99.0 |
| Lead Risk Housing | 54.1 |
| Pesticides | 91.0 |
| Toxic Releases | 52.0 |
| Traffic | 73.5 |
| Effect Indicators | — |
| CleanUp Sites | 29.5 |
| Groundwater | 39.4 |

| | |
|---|---|
| Haz Waste Facilities/Generators | 58.8 |
| Impaired Water Bodies | 0.00 |
| Solid Waste | 22.1 |
| Sensitive Population | — |
| Asthma | 91.0 |
| Cardio-vascular | 94.3 |
| Low Birth Weights | 33.0 |
| Socioeconomic Factor Indicators | — |
| Education | 63.9 |
| Housing | 68.1 |
| Linguistic | 55.6 |
| Poverty | 78.1 |
| Unemployment | 76.1 |

## 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 | 28.03798281 |
| Employed | 15.32144232 |
| Median HI | 45.72051841 |
| Education | — |
| Bachelor's or higher | 10.07314256 |
| High school enrollment | 100 |
| Preschool enrollment | 56.79455922 |
| Transportation | — |
| Auto Access | 81.29090209 |
| Active commuting | 58.95034005 |

| | |
|---|---|
| Social | — |
| 2-parent households | 41.93506993 |
| Voting | 53.79186449 |
| Neighborhood | — |
| Alcohol availability | 50.53252919 |
| Park access | 81.35506224 |
| Retail density | 58.05209804 |
| Supermarket access | 69.85756448 |
| Tree canopy | 69.03631464 |
| Housing | — |
| Homeownership | 50.03208007 |
| Housing habitability | 64.35262415 |
| Low-inc homeowner severe housing cost burden | 65.41768254 |
| Low-inc renter severe housing cost burden | 66.40574875 |
| Uncrowded housing | 34.15886052 |
| Health Outcomes | — |
| Insured adults | 53.66354421 |
| Arthritis | 12.5 |
| Asthma ER Admissions | 4.7 |
| High Blood Pressure | 18.2 |
| Cancer (excluding skin) | 27.6 |
| Asthma | 21.6 |
| Coronary Heart Disease | 15.5 |
| Chronic Obstructive Pulmonary Disease | 13.3 |
| Diagnosed Diabetes | 44.3 |
| Life Expectancy at Birth | 16.1 |
| Cognitively Disabled | 29.3 |
| Physically  Disabled | 23.7 |

| | |
|---|---|
| Heart Attack ER Admissions | 9.3 |
| Mental Health Not Good | 31.0 |
| Chronic Kidney Disease | 35.4 |
| Obesity | 23.9 |
| Pedestrian Injuries | 74.3 |
| Physical Health Not Good | 32.6 |
| Stroke | 26.0 |
| Health Risk Behaviors | — |
| Binge Drinking | 30.9 |
| Current Smoker | 20.8 |
| No Leisure Time for Physical Activity | 33.2 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |
| Children | 25.4 |
| Elderly | 54.5 |
| English Speaking | 58.9 |
| Foreign-born | 25.7 |
| Outdoor Workers | 31.7 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 37.3 |
| Traffic Density | 74.0 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 73.6 |
| Other Decision Support | — |
| 2016 Voting | 44.3 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 89.0 |
| Healthy Places Index Score for Project Location (b) | 39.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | Yes |
| 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 |
|---|---|
| Land Use | Project site is 14.83 acres. |
| Operations: Vehicle Data | Trip characteristics based on information provided in the Trip Generation. Accounts for truck travel in SMAQMD only. |
| Operations: Fleet Mix | Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks. |
| 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. |
| Operations: Energy Use | — |

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# APPENDIX 3.6:

# CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS – YSAQMD

# 15639 Spreckels Distribution Center Ops YSAQMD Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 15639 Spreckels Distribution Center Ops YSAQMD |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.40 |
| Precipitation (days) | 9.00 |
| Location | 37.79197075484117, -121.1992052878777 |
| County | San Joaquin |
| City | Manteca |
| Air District | San Joaquin Valley APCD |
| Air Basin | San Joaquin Valley |
| TAZ | 2132 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.26 |

## 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 |
|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 289 | User Defined Unit | 0.00 | 0.00 | 0.00 | — | — | Trucks |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 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. | 0.19 | 0.15 | 2.32 | 1.64 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | 0.00 | 577 | 577 | 0.03 | 0.09 | 1.19 | 605 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.18 | 0.13 | 2.46 | 1.73 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | 0.00 | 582 | 582 | 0.03 | 0.09 | 0.03 | 610 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.13 | 0.10 | 1.74 | 1.23 | < 0.005 | 0.01 | 0.08 | 0.09 | 0.01 | 0.02 | 0.03 | 0.00 | 423 | 423 | 0.03 | 0.06 | 0.38 | 444 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.02 | 0.02 | 0.32 | 0.22 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.00 | 70.1 | 70.1 | < 0.005 | 0.01 | 0.06 | 73.5 |

### 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 | 0.19 | 0.15 | 2.32 | 1.64 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | — | 577 | 577 | 0.03 | 0.09 | 1.19 | 605 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.19 | 0.15 | 2.32 | 1.64 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | 0.00 | 577 | 577 | 0.03 | 0.09 | 1.19 | 605 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.18 | 0.13 | 2.46 | 1.73 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | — | 582 | 582 | 0.03 | 0.09 | 0.03 | 610 |
| Area | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.18 | 0.13 | 2.46 | 1.73 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | 0.00 | 582 | 582 | 0.03 | 0.09 | 0.03 | 610 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.13 | 0.10 | 1.74 | 1.23 | < 0.005 | 0.01 | 0.08 | 0.09 | 0.01 | 0.02 | 0.03 | — | 423 | 423 | 0.03 | 0.06 | 0.38 | 444 |
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.13 | 0.10 | 1.74 | 1.23 | < 0.005 | 0.01 | 0.08 | 0.09 | 0.01 | 0.02 | 0.03 | 0.00 | 423 | 423 | 0.03 | 0.06 | 0.38 | 444 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.02 | 0.02 | 0.32 | 0.22 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 70.1 | 70.1 | < 0.005 | 0.01 | 0.06 | 73.5 |
| Area | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.02 | 0.02 | 0.32 | 0.22 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.00 | 70.1 | 70.1 | < 0.005 | 0.01 | 0.06 | 73.5 |

# 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.19 | 0.15 | 2.32 | 1.64 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | — | 577 | 577 | 0.03 | 0.09 | 1.19 | 605 |
| Total | 0.19 | 0.15 | 2.32 | 1.64 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | — | 577 | 577 | 0.03 | 0.09 | 1.19 | 605 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.18 | 0.13 | 2.46 | 1.73 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | — | 582 | 582 | 0.03 | 0.09 | 0.03 | 610 |
| Total | 0.18 | 0.13 | 2.46 | 1.73 | 0.01 | 0.01 | 0.12 | 0.12 | 0.01 | 0.03 | 0.04 | — | 582 | 582 | 0.03 | 0.09 | 0.03 | 610 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.02 | 0.02 | 0.32 | 0.22 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 70.1 | 70.1 | < 0.005 | 0.01 | 0.06 | 73.5 |
| Total | 0.02 | 0.02 | 0.32 | 0.22 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 70.1 | 70.1 | < 0.005 | 0.01 | 0.06 | 73.5 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

### 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.3. 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 | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.00 | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.4. 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

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

## 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 | 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

## 5.9. 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 |
|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 217 | 18.2 | 7.24 | 57,926 | 135 | 11.3 | 4.49 | 35,914 |

## 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 | 0.00 | 0.00 | — |

### 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) |
|---|---|---|---|---|---|
| User Defined Industrial | 0.00 | 204 | 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) |
|---|---|---|
| User Defined Industrial | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| User Defined Industrial | 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 |
|---|---|---|---|---|---|---|---|

## 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 | 20.4 | annual days of extreme heat |
| Extreme Precipitation | 1.60 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 0.00 | 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 | 0 | 0 | 0 | N/A |
| Drought | 0 | 0 | 0 | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 0 | 0 | 0 | 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 | 1 | 1 | 1 | 2 |
| Drought | 1 | 1 | 1 | 2 |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | 1 | 1 | 1 | 2 |

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 | 58.2 |
| AQ-PM | 55.3 |
| AQ-DPM | 81.4 |
| Drinking Water | 99.0 |
| Lead Risk Housing | 54.1 |
| Pesticides | 91.0 |
| Toxic Releases | 52.0 |
| Traffic | 73.5 |
| Effect Indicators | — |
| CleanUp Sites | 29.5 |
| Groundwater | 39.4 |

| | |
|---|---|
| Haz Waste Facilities/Generators | 58.8 |
| Impaired Water Bodies | 0.00 |
| Solid Waste | 22.1 |
| Sensitive Population | — |
| Asthma | 91.0 |
| Cardio-vascular | 94.3 |
| Low Birth Weights | 33.0 |
| Socioeconomic Factor Indicators | — |
| Education | 63.9 |
| Housing | 68.1 |
| Linguistic | 55.6 |
| Poverty | 78.1 |
| Unemployment | 76.1 |

## 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 | 28.03798281 |
| Employed | 15.32144232 |
| Median HI | 45.72051841 |
| Education | — |
| Bachelor's or higher | 10.07314256 |
| High school enrollment | 100 |
| Preschool enrollment | 56.79455922 |
| Transportation | — |
| Auto Access | 81.29090209 |
| Active commuting | 58.95034005 |

| | |
|---|---|
| Social | — |
| 2-parent households | 41.93506993 |
| Voting | 53.79186449 |
| Neighborhood | — |
| Alcohol availability | 50.53252919 |
| Park access | 81.35506224 |
| Retail density | 58.05209804 |
| Supermarket access | 69.85756448 |
| Tree canopy | 69.03631464 |
| Housing | — |
| Homeownership | 50.03208007 |
| Housing habitability | 64.35262415 |
| Low-inc homeowner severe housing cost burden | 65.41768254 |
| Low-inc renter severe housing cost burden | 66.40574875 |
| Uncrowded housing | 34.15886052 |
| Health Outcomes | — |
| Insured adults | 53.66354421 |
| Arthritis | 12.5 |
| Asthma ER Admissions | 4.7 |
| High Blood Pressure | 18.2 |
| Cancer (excluding skin) | 27.6 |
| Asthma | 21.6 |
| Coronary Heart Disease | 15.5 |
| Chronic Obstructive Pulmonary Disease | 13.3 |
| Diagnosed Diabetes | 44.3 |
| Life Expectancy at Birth | 16.1 |
| Cognitively Disabled | 29.3 |
| Physically  Disabled | 23.7 |

| | |
|---|---|
| Heart Attack ER Admissions | 9.3 |
| Mental Health Not Good | 31.0 |
| Chronic Kidney Disease | 35.4 |
| Obesity | 23.9 |
| Pedestrian Injuries | 74.3 |
| Physical Health Not Good | 32.6 |
| Stroke | 26.0 |
| Health Risk Behaviors | — |
| Binge Drinking | 30.9 |
| Current Smoker | 20.8 |
| No Leisure Time for Physical Activity | 33.2 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |
| Children | 25.4 |
| Elderly | 54.5 |
| English Speaking | 58.9 |
| Foreign-born | 25.7 |
| Outdoor Workers | 31.7 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 37.3 |
| Traffic Density | 74.0 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 73.6 |
| Other Decision Support | — |
| 2016 Voting | 44.3 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 89.0 |
| Healthy Places Index Score for Project Location (b) | 39.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | Yes |
| 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 |
|---|---|
| Land Use | Project site is 14.83 acres. |
| Operations: Vehicle Data | Trip characteristics based on information provided in the Trip Generation. Accounts for truck travel in YSAQMD only. |
| Operations: Fleet Mix | Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks. |
| 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. |
| Operations: Energy Use | — |

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