

# **Lake Creek Logistics Center**

# AIR QUALITY IMPACT ANALYSIS TOWN OF APPLE VALLEY

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# LIST OF ABBREVIATED TERMS

(1) Reference% Percent

1992 CO Plan 1992 Federal Attainment Plan for Carbon Monoxide

μg/m³ Microgram per Cubic Meter
 AB 2595 California Clean Air Act
 AQIA Air Quality Impact Analysis

AQMIS Air Quality and Meteorological Information System

AQMP Air Quality Management Plan

BAAQMD Bay Area Air Quality Management District

BACM Best Available Control Measures

CAA Federal Clean Air Act

CAAQS California Ambient Air Quality Standards
CalEEMod California Emissions Estimator Model™
CALGreen California Green Building Standards Code
CalEPA California Environmental Protection Agency

CAPCOA California Air Pollution Control Officers Association

CARB California Air Resources Board
CEC California Energy Commission

CEQA California Environmental Quality Act

CO Carbon Monoxide
COHb Carboxyhemoglobin
g/L Grams Per Liter
GHG Greenhouse Gas

HRA Health Risk Assessment

Ibs/day Pounds per Day

MDAB Mojave Desert Air Basin

MDAQMD Mojave Desert Air Quality Management District

MM Mitigation Measure

MWELO Model Water Efficient Landscape Ordinance
NAAQS National Ambient Air Quality Standards

 $\begin{array}{ccc} N_2 & Nitrogen \\ NO & Nitric Oxide \\ N_2O & Nitrous Oxide \\ NO_2 & Nitrogen Dioxide \\ NO_X & Nitrogen Oxides \end{array}$ 



 $\begin{array}{ccc} O_2 & Oxygen \\ O_3 & Ozone \\ Pb & Lead \end{array}$ 

PM<sub>10</sub> Particulate Matter 10 microns in diameter or less PM<sub>2.5</sub> Particulate Matter 2.5 microns in diameter or less

ppm Parts Per Million

Project Lake Creek Logistics Center ROG Reactive Organic Gases

RECLAIM Regional Clean Air Incentives Market

RTP/SCS Regional Transportation Plan/Sustainable Communities

Strategy

SCAG Southern California Association of Governments
SCAQMD South Coast Air Quality Management District

SDAB Southeast Desert Air Basin
SDEB Southeast Desert Air Basin

sf Square Feet

SIP State Implementation Plan

SO<sub>2</sub> Sulfur Dioxide

SO<sub>4</sub> Sulfates

SO<sub>X</sub> Oxides of Sulfur

TAC Toxic Air Contaminant

U.S. EPA United States Environmental Protection Agency

VOC Volatile Organic Compound

VPH Vehicles Per Hour



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## **EXECUTIVE SUMMARY**

#### **ES.1** SUMMARY OF FINDINGS

The results of this Lake Creek Logistics Center Air Quality Impact Analysis (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of less than significant for each potential air quality impact under CEQA. As shown, no mitigation measures (MM) are required.

**TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS** 

| Analonia                        | Report  | Significance Findings   |                                |
|---------------------------------|---------|-------------------------|--------------------------------|
| Analysis                        | Section | Unmitigated             | Mitigated                      |
| Regional Construction Emissions | 3.4     | Less Than Significant   | n/a                            |
| Regional Operational Emissions  | 3.5     | Potentially Significant | Significant and<br>Unavoidable |
| CO "Hot Spot" Analysis          | 3.6     | Less Than Significant   | n/a                            |
| Air Quality Management Plan     | 3.7     | Potentially Significant | Significant and<br>Unavoidable |
| Sensitive Receptors             | 3.8     | Less Than Significant   | n/a                            |
| Odors                           | 3.9     | Less Than Significant   | n/a                            |
| Cumulative Impacts              | 3.10    | Potentially Significant | Significant and<br>Unavoidable |

# ES.2 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES

The Mojave Desert Air Quality Management District (MDAQMD) has implemented various rules and regulations to control air pollution sources within the Mojave Desert Air Basin (MDAB) and to support air quality standards for land use development projects. The following rules that are currently applicable during construction activity for this Project are described below:

#### MDAQMD RULES 203 AND 219

The purpose of Rule 203 is to specify the equipment and processes that would and would not require an MDAQMD air permit. Additionally, per Rule 219, it is anticipated that the Project Applicant would be required to obtain MDAQMD air permits for the emergency fire pumps that would be included in the Project.



#### **MDAQMD RULE 403**

The purpose of this rule is to reduce the amount of particulate matter less than 10 microns (PM<sub>10</sub>) entrained in the ambient air from anthropogenic fugitive dust sources within the MDAQMD by requiring actions to prevent, reduce, or mitigate fugitive dust. The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403 (2).

- Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible
  fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed
  surfaces and actively spread water during visible dusting episodes shall be considered sufficient
  to maintain compliance.
- Take actions sufficient to prevent project-related trackout onto paved surfaces.

#### **MDAQMD RULE 1113**

The purpose of this rule is to limit the quantity of Volatile Organic Compounds (VOC) in architectural coatings. The following measures shall be incorporated into Project plans and specifications as implementation of MDAQMD Rule 1113 (3).

• Only "Low-VOC" paints consistent with MDAQMD Rule 1113 shall be used.

# **ES.3** Project Mitigation Measures (MMs)

#### **ES.3.1** Construction-Source MMs

Emissions associated with construction of the proposed Project would not exceed MDAQMD significance thresholds. Thus, mitigation is not required.

#### **ES.3.2 OPERATIONAL-SOURCE MMS**

Unmitigated Project operational-source VOC,  $NO_X$ , CO, and  $PM_{10}$  emissions would exceed the applicable MDAQMD regional significance thresholds. The predominance of the Project's operational-source emissions are generated by passenger cars and trucks accessing the Project. Neither the Project Applicant nor the Town have regulatory authority to control tailpipe emissions, and no feasible MMs beyond the measures identified herein exist that would reduce Project operational-source VOC,  $NO_X$  and  $PM_{10}$  emissions to levels that are less-than-significant. Project operational-source VOC,  $NO_X$  and  $PM_{10}$  emissions impacts are therefore considered significant and unavoidable.

The following measures (MM AQ-1 through MM AQ-3) are designed to reduce Project operational-source VOC, NO<sub>X</sub>, CO, and PM<sub>10</sub> emissions. Even with application of MM AQ-1 through MM AQ-3, Project operational-source emissions impacts are considered significant and unavoidable.

#### MM AQ-1

The Project Applicant or successor in interest shall implement the following measures:

- The Project's landscape plan shall incorporate drought-tolerant plants and use water-efficient irrigation techniques.
- All appliance fixtures shall be Energy Star-rated.



• All fixtures installed in restrooms and employee break areas shall be U.S. Environmental Protection Agency (EPA) WaterSense certified or equivalent.

#### MM AQ-2

As a condition of certificates of occupancy, 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-3

The Project shall implement the following measures in order to reduce operational off-road equipment, stationary source, and on-road vehicle air pollutant emissions to the extent feasible:

Solar Power. At a minimum, the roofs of the warehouse building shall be designed to provide the structural capacity to accommodate roof-top solar panels. The Project shall be designed to include rooftop solar panels that generate sufficient power to meet at least 10% of the Project's total operational base energy requirements from within the Project's building envelope. The Town of Apple Valley shall verify the size and scope of the solar energy system based upon the analysis of the projected power requirements and generating capacity as well as the available solar panel installation space. In the event sufficient space is not available on the Project site to accommodate the needed number of solar panels to produce the operation's base power use, the Project Applicant or successor in interest shall demonstrate how all available space has been maximized (e.g., roof) for solar energy system use. Areas that provide for truck movement may be excluded from these calculations unless otherwise deemed acceptable by the supplied reports and applicable building standards. The Project Applicant or successor in interest, or as contractually delegated by the Project Applicant or successor in interest, shall install the solar energy system when the Town of Apple Valley has approved building permits and the necessary equipment has arrived. The operation of the system shall commence only when it has received permission to operate from the applicable utility. The solar energy system owner shall be responsible for maintaining the system at not less than 80% of the rated power for 20 years. At the end of the 20-year period, the owners, operators, or tenants shall install a new photovoltaic system meeting the capacity and operational requirements of this measure, or continue to maintain the existing system, for the life of the Project. As the Project's demand for solar power increases, additional solar panels may be added to the Project.



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## 1 INTRODUCTION

This report presents the results of the AQIA, prepared by Urban Crossroads, Inc., for the proposed Lake Creek Logistics Center (Project).

The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the MDAQMD.

#### 1.1 SITE LOCATION

The proposed Project is located within the North Apple Valley Industrial Specific Plan (NAVISP) and bounded by Gustine Street to the north, Central Road to the east, Corwin Road to the south, and the Apple Valley Airport to the west as shown on Exhibit 1-A. The nearest existing sensitive residential use is located approximately 492 feet east of the Project site.

#### 1.2 PROJECT DESCRIPTION

The Project consists of the development of three industrial warehouse and distribution buildings totaling 3,480,736 square feet (sf). For the purposes of the Air Quality Impact Analysis, it is proposed that the Project mix will assume 10 percent (%) general light industrial, 10% high-cube cold storage warehouse use, and 80% high-cube fulfillment center warehousing use. A preliminary site plan for the proposed Project is shown on Exhibit 1-B. The Project is anticipated to have an Opening Year of 2029.

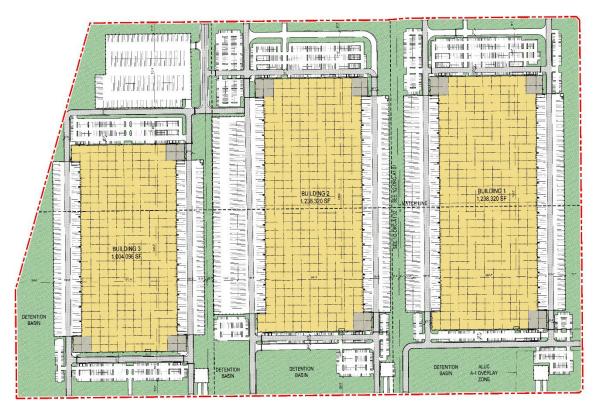


Turtle Mountain 1165 m Bell Mountain 1173 m Fairview Mountain 1305 m Little Bell Mountain 1122 m Catholic Hill 1101 m Happy Trails High © OpenStreetMap (and) contributors, CC-BY-SA **LEGEND:** Site Boundary

**EXHIBIT 1-A: LOCATION MAP** 



**EXHIBIT 1-B: SITE PLAN** 







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# 2 AIR QUALITY SETTING

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

#### 2.1 MOJAVE DESERT AIR BASIN

The Project site is located in the portion of the County of San Bernardino, California, that is part of the MDAB and is under the jurisdiction of the MDAQMD. The air quality assessment for the Project evaluates emissions impacts associated with short-term construction and long-term operation of the 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 MDAQMD, have created guidelines and requirements to conduct air quality analyses. The MDAQMD's current guidelines, included in its *California Environmental Quality Act and Federal Conformity Guidelines* (August 2016), were adhered to in the assessment of air quality impacts for the Project.

#### 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 MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains within the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and Central California valley regions by mountains (highest elevation is approximately 10,000 feet), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser pass lies between the San Bernardino Mountains and the Little San Bernardino Mountains in the Morongo Valley. The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley), whose primary channel is the San Gorgonio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains.

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified



as dry-very hot desert, to indicate that at least three months have maximum average temperatures over 100.4° F.

Snow is common above 5,000 feet in elevation, resulting in moderate snowpack and limited spring runoff. Below 5,000 feet, any precipitation normally occurs as rainfall. Pacific storm fronts normally move into the area from the west, driven by prevailing winds from the west and southwest. During late summer, moist high-pressure systems from the Pacific collide with rising heated air from desert areas, resulting in brief, high-intensity thunderstorms that can cause high winds and localized flash flooding.

#### 2.3 AIR POLLUTANTS

#### 2.3.1 CRITERIA POLLUTANTS

Air quality regulations were first promulgated with the Federal Clean Air Act (CAA) of 1970. Air quality is defined by ambient air concentrations of seven "criteria air pollutants," which are a group of common air pollutants identified by the United States Environmental Protection Agency (U.S. EPA) to be of concern with respect to the health and welfare of the general public. Federal and State governments regulate criteria air pollutants by using ambient standards based on criteria regarding the health and/or environmental effects of each pollutant. The seven "criteria" air pollutants defined by the U.S. EPA are: (1) carbon monoxide (CO); (2) sulfur dioxide (SO<sub>2</sub>); (3) nitrogen dioxide (NO<sub>2</sub>); (4) ozone (O<sub>3</sub>); (5) respirable particulate matter with a diameter of 10 microns or less (PM<sub>10</sub>), (6) fine particulate matter with a diameter of 2.5 microns or less (PM<sub>2.5</sub>), and (7) lead (Pb).

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (4).

**TABLE 2-1: CRITERIA POLLUTANTS** 

| Criteria Pollutant | Description   | Sources  | Health Effects   |
|--------------------|---|--|--|
| СО                 | 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 <sub>3</sub> ), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient | 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 <sub>2</sub> ) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O <sub>2</sub> |



| Criteria Pollutant | Description   | Sources   | Health Effects  |
|--------------------|---|---|---|
|                    | CO concentrations are generally found near congested transportation corridors and intersections.  |   | transport and competing with O <sub>2</sub> to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O <sub>2</sub> 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 <sub>2</sub> deficiency) as seen at high altitudes.  |
| SO <sub>2</sub>    | SO <sub>2</sub> 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 <sub>2</sub> oxidizes in the atmosphere, it forms SO <sub>4</sub> . Collectively, these pollutants are referred to as sulfur oxides (SO <sub>X</sub> ). | Coal or oil burning power plants and industries, refineries, diesel engines | A few minutes of exposure to low levels of SO <sub>2</sub> 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 <sub>2</sub> . In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO <sub>2</sub> .  Animal studies suggest that despite SO <sub>2</sub> 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.  Some population-based studies indicate that the mortality and morbidity effects associated with fine |



| Criteria Pollutant | Description   | Sources  | Health Effects  |
|--------------------|---|--|---|
| NO.                | NO. is a key component of   | Any source that  | particles show a similar association with ambient SO <sub>2</sub> levels. In these studies, efforts to separate the effects of SO <sub>2</sub> 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 <sub>2</sub>    | NO <sub>2</sub> is a key component of nitrogen oxides (NO <sub>x</sub> ), which also includes nitric oxide (NO) and nitrous oxide (N <sub>2</sub> O). NO <sub>x</sub> compounds are primarily produced during combustion processes when nitrogen (N <sub>2</sub> ) reacts with oxygen (O <sub>2</sub> ). Both NO and NO <sub>2</sub> serve as precursors in the formation of O <sub>3</sub> and PM <sub>2.5</sub> , making their monitoring crucial for air quality assessments.  NO <sub>2</sub> , being the more abundant form of NO <sub>x</sub> in the atmosphere, has a relatively short lifespan of one to seven days, which enhances its significance as a major air pollutant. As a criteria air pollutant, NO <sub>2</sub> poses various health risks, including respiratory issues and increased vulnerability to infections. It also absorbs blue light, imparting a brownish-red hue to the atmosphere and contributing to reduced visibility and smog formation.  Given that NO emissions largely convert to NO <sub>2</sub> , the examination of NO <sub>x</sub> emissions becomes essential when assessing potential air quality impacts. The concentrations of NO <sub>2</sub> are closely related to traffic density, often resulting in higher exposure levels for commuters in heavy | 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 <sub>2</sub> 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 <sub>2</sub> 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.  In animals, exposure to levels of NO <sub>2</sub> considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of |



| Criteria Pollutant | Description   | Sources  | Health Effects  |
|--------------------|---|--|---|
|                    | traffic compared to what regional monitoring stations may indicate.   |  | $O_3$ exposure increases when animals are exposed to a combination of $O_3$ and $NO_2$ .  |
| O <sub>3</sub>     | O <sub>3</sub> is a highly reactive and unstable gas that is formed when VOCs and NO <sub>x</sub> , both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O <sub>3</sub> concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. | Formed when ROGs and NO <sub>X</sub> react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides. | Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for O <sub>3</sub> effects. Shortterm exposure (lasting for a few hours) to O <sub>3</sub> 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 <sub>3</sub> levels are associated with increased school absences. In recent years, a correlation between elevated ambient O <sub>3</sub> 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 reside in communities with high O <sub>3</sub> levels.  O <sub>3</sub> exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O <sub>3</sub> may be more toxic than exposure to O <sub>3</sub> alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated |



| Criteria Pollutant | Description  | Sources  | Health Effects   |
|--------------------|--|--|--|
|                    | ·  |  | exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.   |
| Particulate Matter | PM <sub>10</sub> : 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 reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM <sub>10</sub> is considered a criteria air pollutant.  PM <sub>2.5</sub> : A similar air pollutant to PM <sub>10</sub> 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 <sub>4</sub> formed from SO <sub>2</sub> release from power plants and industrial facilities and nitrates that are formed from NO <sub>x</sub> release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM <sub>2.5</sub> is a criteria air pollutant. | Sources of PM <sub>10</sub> include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO <sub>x</sub> , SO <sub>x</sub> , organics). Incomplete combustion of any fuel.  PM <sub>2.5</sub> 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 <sub>x</sub> , SO <sub>x</sub> , organics). | A consistent correlation between elevated ambient fine particulate matter (PM <sub>10</sub> and PM <sub>2.5</sub> ) 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.  Daily fluctuations in PM <sub>2.5</sub> concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter.  The elderly, people with preexisting respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM <sub>10</sub> and PM <sub>2.5</sub> . |



| Criteria Pollutant | Description  | Sources  | Health Effects  |
|--------------------|--|--|---|
| Pb                 | Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal 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.  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 gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers. |

#### 2.3.2 ADDITIONAL POLLUTANTS

The MDAQMD's primary focus is to achieve the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for criteria pollutants. However, it also has a broader mandate to control emissions of air contaminants and safeguard public health. As a result, MDAQMD regulates additional pollutants beyond criteria pollutants, including reactive organic gases (ROGs), VOCs, and odors. Additional pollutants, their typical sources, and health effects are identified below (4).



**TABLE 2-2: ADDITIONAL POLLUTANTS** 

| Pollutant | Description   | Sources   | Health Effects  |
|-----------|---|---|---|
| VOC       | VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air.  VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O <sub>3</sub> 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 <sub>3</sub> , which is a criteria pollutant. The terms VOC and ROG (see below) 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. |
| ROG       | Similar to VOC, ROGs are also precursors in forming O₃ and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO <sub>X</sub> react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O₃, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.  | Sources similar to VOCs.  | Health effects similar to VOCs.   |



| Pollutant | Description  | Sources  | Health Effects   |
|-----------|--|--|--|
| 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 (5). | Odors can come from many sources including animals, human activities, industry, natures, 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. |

#### 2.4 EXISTING AIR QUALITY

Existing air quality is measured at established MDAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. NAAQS and CAAQS currently in effect are shown in Table 2-3 (6).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May 4, 2016, and are presented in Table 2-3. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the Air District meets the standards set by the U.S. EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the U.S. EPA will designate the area as a maintenance area (7).



TABLE 2-3: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

| 1  | 40.00                      | Transfer and American           |  | (C. 200)   |                             | 2   |  |
|--|----------------------------|---------------------------------|--|--|-----------------------------|---|--|
| Pollutant Averag                                   | Averaging                  | California Standards 1          |  | National Standards <sup>2</sup>                            |                             |   |  |
|  | Time                       | Concentration <sup>3</sup>      | Method <sup>4</sup>  | Primary 3,5  | Secondary 3,6               | Method <sup>7</sup>   |  |
| Ozone (O <sub>3</sub> ) <sup>8</sup>               | 1 Hour                     | 0.09 ppm (180 μg/m³)            | Ultraviolet  | -  | Same as                     | Ultraviolet<br>Photometry   |  |
|  | 8 Hour                     | 0.070 ppm (137 µg/m³)           | Photometry   | 0.070 ppm (137 µg/m³)                                      | Primary Standard            |   |  |
| Respirable   | 24 Hour                    | 50 μ <mark>g</mark> /m³         | Gravimetric or   | 150 μg/m <sup>3</sup>                                      | Same as                     | Inertial Separation<br>and Gravimetric<br>Analysis                              |  |
| Particulate<br>Matter (PM10) <sup>9</sup>          | Annual<br>Arithmetic Mean  | 20 μg/m <sup>3</sup>            | Beta Attenuation   | 22 <u>-</u> 48   | Primary Standard            |   |  |
| Fine<br>Particulate                                | 24 Hour                    | 72                              | _  | 35 μg/m³   | Same as<br>Primary Standard | Inertial Separation<br>and Gravimetric<br>Analysis                              |  |
| Matter<br>(PM2.5) <sup>9</sup>                     | Annual<br>Arithmetic Mean  | 12 μg/m³                        | Gravimetric or<br>Beta Attenuation   | 12.0 μg/m <sup>3</sup>                                     | 15 μg/m³                    |   |  |
| Carbon   | 1 Hour                     | 20 ppm (23 mg/m <sup>3</sup> )  | ALE SOLVE STATE OF THE STATE OF | 35 ppm (40 mg/m <sup>3</sup> )                             |                             | Non-Dispersive<br>Infrared Photometry<br>(NDIR)                                 |  |
| Monoxide   | 8 Hour                     | 9.0 ppm (10 mg/m <sup>3</sup> ) | Non-Dispersive<br>Infrared Photometry<br>(NDIR)  | 9 ppm (10 mg/m³)   | ₹                           |   |  |
| (CO)   | 8 Hour<br>(Lake Tahoe)     | 6 ppm (7 mg/m <sup>3</sup> )    | (12,11)  |  | <u>==</u>                   |   |  |
| Nitrogen   | 1 Hour                     | 0.18 ppm (339 μg/m³)            | Gas Phase  | 100 ppb (188 μg/m³)  | <del></del>                 | Gas Phase   |  |
| Dioxide<br>(NO <sub>2</sub> ) <sup>10</sup>        | Annual<br>Arithmetic Mean  | 0.030 ppm (57 μg/m³)            | Chemiluminescence  | 0.053 ppm (100 µg/m³)                                      | Same as<br>Primary Standard | Chemiluminescence   |  |
|  | 1 Hour                     | 0.25 ppm (655 μg/m³)            |  | 75 ppb (196 μg/m³)   | -                           | Ultraviolet<br>Flourescence;<br>Spectrophotometry<br>(Pararosaniline<br>Method) |  |
| Sulfur Dioxide<br>(SO <sub>2</sub> ) <sup>11</sup> | 3 Hour                     | -                               | Ultraviolet  | -  | 0.5 ppm<br>(1300 µg/m³)     |   |  |
|  | 24 Hour                    | 0.04 ppm (105 µg/m³)            | Fluorescence   | 0.14 ppm<br>(for certain areas) <sup>11</sup>              |                             |   |  |
|  | Annual<br>Arithmetic Mean  | 0-1                             |  | 0.030 ppm<br>(for certain areas) <sup>11</sup>             | _                           |   |  |
|  | 30 Day Average             | 1.5 μg/m³                       |  | -  | -                           |   |  |
| Lead <sup>12,13</sup>                              | Calendar Quarter           | -                               | Atomic Absorption  | 1.5 µg/m <sup>3</sup><br>(for certain areas) <sup>12</sup> | Same as                     | High Volume<br>Sampler and Atomi<br>Absorption                                  |  |
|  | Rolling 3-Month<br>Average | -                               |  | 0.15 μg/m <sup>3</sup>                                     | Primary Standard            | •   |  |
| Visibility<br>Reducing<br>Particles <sup>14</sup>  | 8 Hour                     | See footnote 14                 | Beta Attenuation and<br>Transmittance<br>through Filter Tape   | No<br>National   |                             |   |  |
| Sulfates   | 24 Hour                    | 25 μg/m³                        | Ion Chromatography   |  |                             |   |  |
| Hydrogen<br>Sulfide                                | 1 Hour                     | 0.03 ppm (42 µg/m³)             | Ultraviolet<br>Fluorescence  |  |                             |   |  |
| Vinyl<br>Chloride <sup>12</sup>                    | 24 Hour                    | 0.01 ppm (26 µg/m³)             | Gas<br>Chromatography  |  |                             |   |  |

For more information please call ARB-PIO at (916) 322-2990

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#### TABLE 2-3: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

- 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 μg/m³ 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.
- 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.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 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 μg/m³ to 12.0 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 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<sub>2</sub> 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<sub>2</sub> 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 µg/m³ 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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## 2.5 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The U.S. EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O<sub>3</sub>, particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), NO<sub>2</sub>, and SO<sub>2</sub> which are known as criteria pollutants. The MDAQMD monitors levels of various criteria pollutants at 6 permanent monitoring stations throughout the air district (8). On December 28, 2021, California Air Resources Board (CARB) posted the 2023 amendments to the state and national area designations. See Table 2-4 for attainment designations for the MDAB and the Southeast Desert Air Basin (SDAB) (9). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the MDAB and SDAB.

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

| Criteria Pollutant               | State Designation | Federal Designation       |
|----------------------------------|-------------------|---------------------------|
| O <sub>3</sub> – 1-hour standard | Nonattainment     |                           |
| O <sub>3</sub> – 8-hour standard | Nonattainment     | Nonattainment             |
| PM <sub>10</sub>                 | Nonattainment     | Nonattainment             |
| PM <sub>2.5</sub>                | Attainment        | Unclassifiable/Attainment |
| СО                               | Attainment        | Unclassifiable/Attainment |
| NO <sub>2</sub>                  | Attainment        | Unclassifiable/Attainment |
| SO <sub>2</sub>                  | Attainment        | Unclassifiable/Attainment |
| Pb                               | Attainment        | Unclassifiable/Attainment |

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the MDAB and SDAB

## 2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for  $O_3$ , CO (for the 2021 year),  $NO_2$ ,  $PM_{10}$ , and  $PM_{2.5}$  was obtained from the MDAQMD Victorville-Park Avenue, located approximately 9.05 miles southwest of the Project site in Victorville.

The most recent three (3) years of data available is shown on Table 2-5 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O<sub>3</sub>, CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> was obtained using the CARB iADAM: Air Quality and Data Statistics and the Air Quality and Meteorological Information System (AQMIS) (10) (11). Data for SO<sub>2</sub> has been omitted as attainment is regularly met and few monitoring stations measure SO<sub>2</sub> concentrations. It should be noted that the table below is provided for informational purposes.



<sup>&</sup>quot;-" = The national 1-hour O<sub>3</sub> standard was revoked effective June 15, 2005.

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

| Dellutent  | Ctondovd                | Year  |       |       |
|--|-------------------------|-------|-------|-------|
| Pollutant  | Standard                | 2021  | 2022  | 2023  |
| 0 <sub>3</sub>   |                         |       |       |       |
| Maximum Federal 1-Hour Concentration (ppm)                                       |                         | 0.112 | 0.100 | 0.097 |
| Maximum Federal 8-Hour Concentration (ppm)                                       |                         | 0.098 | 0.090 | 0.088 |
| Number of Days Exceeding Federal 1-Hour Standard                                 | > 0.09 ppm              | 0     | 0     | 0     |
| Number of Days Exceeding State 1-Hour Standard                                   |                         | 8     | 3     | 2     |
| Number of Days Exceeding Federal 8-Hour Standard                                 | > 0.070 ppm             | 34    | 44    | 32    |
| Number of Days Exceeding State 8-Hour Standard                                   | > 0.075 ppm             | 18    | 23    | 13    |
| СО   | •                       |       |       |       |
| Maximum Federal 1-Hour Concentration   | > 35 ppm                | 1.515 | N/A   | N/A   |
| NO <sub>2</sub>  |                         |       |       |       |
| Maximum Federal 1-Hour Concentration   | > 0.100 ppm             | 0.057 | 0.054 | 0.060 |
| Maximum State 1-Hour Concentration   | > 0.180 ppm             | 0.056 | 0.053 | 0.060 |
| Annual Federal Standard Design Value   |                         | 13    | 13    | 11    |
| Annual State Standard Design Value   |                         | 12    | 12    | 12    |
| 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 <sub>10</sub>   |                         |       |       |       |
| Maximum Federal 24-Hour Concentration (μg/m³)                                    | > 150 μg/m <sup>3</sup> | 591.6 | 372.1 | 160.4 |
| Annual Federal Arithmetic Mean (μg/m³)   |                         | 33.9  | 33.6  | 28.4  |
| Number of Days Exceeding Federal 24-Hour Standard                                | > 150 μg/m <sup>3</sup> | 1     | 2     | 1     |
| PM <sub>2.5</sub>  |                         |       |       |       |
| Maximum Federal 24-Hour Concentration (μg/m³)                                    | > 35 μg/m <sup>3</sup>  | 87.1  | 24.6  | 25.6  |
| Maximum State 24-Hour Concentration (μg/m³)                                      |                         | 87.1  | 24.6  | 25.6  |
| Annual Federal Arithmetic Mean (μg/m³)   | >12 μg/m³               | 10.2  | 8.9   | 7.9   |
| Annual State Arithmetic Mean (μg/m³)   | >12 μg/m <sup>3</sup>   | 10.3  | 9.0   | 7.9   |
| Number of Samples Exceeding Federal 24-Hour Standard                             | > 35 μg/m <sup>3</sup>  | 1     | 0     | 0     |
| Source: California Air Resource Board iADAM: Air Quality Data Statistics and AQI | MIS                     | 1     |       |       |

Source: California Air Resource Board iADAM: Air Quality Data Statistics and AQMIS

ppm = Parts Per Million

μg/m³ – microgram per cubic meter

-- = data not available

#### 2.7 REGULATORY BACKGROUND

#### 2.7.1 FEDERAL REGULATIONS

The U.S. EPA is responsible for setting and enforcing the NAAQS for  $O_3$ , CO,  $NO_X$ ,  $SO_2$ ,  $PM_{10}$ , and Pb (12). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters.



The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The 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 (13). The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (14) (15). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, CO, PM<sub>2.5</sub>, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O<sub>3</sub> and to adopt a NAAQS for PM<sub>2.5</sub>. Table 2-3 (previously presented) provides the NAAQS within the MDAB.

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.

#### 2.7.2 CALIFORNIA REGULATIONS

#### **CARB**

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. 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 MDAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (16) (12).

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

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



- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO<sub>X</sub>, CO and PM<sub>10</sub>. 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 (17). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (18):

#### **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 electric vehicle 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 reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are
  identified for the depositing, storage, and collection of non-hazardous materials for
  recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic
  waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive
  (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed
     0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor 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 project 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).

#### 2.7.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the MDAB. The NAAQS, the Project region within the MDAB is in nonattainment for  $O_3$  (8-hour) and  $PM_{10}$ . For the CAAQS, the Project region within the MDAB is in nonattainment for  $O_3$  (1-hour and 8-hour) and  $PM_{10}$ . In response, the MDAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards (19). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.7.



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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 MDAB 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 Initial Study Checklist in Appendix G of the *State CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

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

The MDAQMD has developed regional significance thresholds for regulated pollutants, shown below in Table 3-1. The MDAQMD's *CEQA* and *Federal Conformity Guidelines* indicate that any projects in the MDAB with daily regional emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact (20).

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

| Pollutant         | Regional Thresholds (lbs/day) |  |
|-------------------|-------------------------------|--|
| СО                | 548 lbs/day                   |  |
| NO <sub>X</sub>   | 137 lbs/day                   |  |
| VOC               | 137 lbs/day                   |  |
| SO <sub>X</sub>   | 137 lbs/day                   |  |
| PM <sub>10</sub>  | 82 lbs/day                    |  |
| PM <sub>2.5</sub> | 65 lbs/day                    |  |

Note: lbs/day - pounds per day



## 3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

#### 3.3.1 CALEEMOD

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including MDAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates, as such the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO<sub>X</sub>, SO<sub>X</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (21). Accordingly, the latest version of CalEEMod has been used for this Project to determine air quality emissions. Output from the model runs are provided in Appendices 3.1 and 3.2.

#### 3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of VOCs,  $NO_X$ , CO,  $SO_X$ ,  $PM_{10}$ , 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. Based on data provided by the Project engineer, it is anticipated that the Project will balance. Therefore, no import or export will be required.

#### **OFF-SITE UTILITY AND INFRASTRUCTURE IMPROVEMENTS**

In addition, to support the Project development, there will be water and sewer infrastructure improvements. The Project proposes 12-inch Ductile Iron Pile connections along Corwin Road and Gustine Street, a 16-inch DIP connection along Central Road through Kensington Street, and an 8-inch pressure-reducing valve. Sewer infrastructure is not currently located immediately adjacent to the site. An approximately one-mile-long sewer line would be installed within the Corwin Road right-of-way westerly to an existing sewer main located at the intersection of Corwin and Ramona Roads. This alignment would require the sewer line to be installed under the Apple Valley Airport runway. The sewer line would be installed using trenchless construction



techniques (jack and bore) so that the runway is not affected. A 10-foot-wide sewer easement, extending westerly from the terminus of Corwin Road, would be dedicated by the County of San Bernardino.

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

#### **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. Worker trips are based on CalEEMod defaults. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

**Worker Trips Vendor Trips Hauling Trips Construction Activity** Per Day Per Day Per Day Site Preparation 28 23 Grading 33 55 0 **Building Construction** 1,462 492 15 0 0 Paving Architectural Coating 292

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

#### 3.4.1 CONSTRUCTION DURATION

For purposes of analysis, construction of the Project is expected to commence in March 2025 and would last through December 2029. The construction schedule utilized in the analysis, shown in Table 3-3, represents a "conservative" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. The duration of

<sup>&</sup>lt;sup>1</sup> As shown in the CalEEMod User's Guide Version 2022, Appendix G "Table G-11. Statewide Average Annual Offoad Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.



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construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (1).

**TABLE 3-3: CONSTRUCTION DURATION** 

| Phase Name            | Start Date | Start Date End Date |       |
|-----------------------|------------|---------------------|-------|
| Site Preparation      | 03/04/2025 | 05/12/2025          | 50    |
| Grading               | 05/13/2025 | 10/27/2025          | 120   |
| Building Construction | 10/28/2025 | 12/17/2029          | 1,080 |
| Paving                | 09/12/2028 | 12/09/2028          | 64    |
| Architectural Coating | 06/08/2027 | 12/17/2029          | 660   |

#### 3.4.2 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-4 is assumed to operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the Town code.

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

| Construction Activity        | Equipment <sup>1</sup>    | Amount | Hours Per Day |
|------------------------------|---------------------------|--------|---------------|
| Cita Duan anatian            | Rubber Tired Dozers       | 5      | 8             |
| Site Preparation             | Crawler Tractors          | 6      | 8             |
|                              | Graders                   | 2      | 8             |
|                              | Excavators                | 3      | 8             |
| Grading                      | Scrapers                  | 3      | 8             |
|                              | Rubber Tired Dozers       | 2      | 8             |
|                              | Crawler Tractors          | 3      | 8             |
|                              | Forklifts                 | 5      | 8             |
|                              | Generator Sets            | 2      | 8             |
| <b>Building Construction</b> | Cranes                    | 2      | 8             |
|                              | Welders                   | 2      | 8             |
|                              | Tractors/Loaders/Backhoes | 5      | 8             |
|                              | Pavers                    | 2      | 8             |
| Paving                       | Paving Equipment          | 2      | 8             |
|                              | Rollers                   | 2      | 8             |
| Architectural Coating        | Air Compressors           | 1      | 8             |

<sup>&</sup>lt;sup>1</sup> In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes during the site preparation and grading phases of Project construction.



#### 3.4.3 Construction Emissions Summary

#### **IMPACTS WITHOUT MITIGATION**

The estimated maximum daily 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 MDAQMD. As such, emissions generated during Project construction are less than significant and mitigation is not required.

TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITHOUT MITIGATION

| Vacu                      |       |                 | Emissions ( | bs/day)         |                  |                   |
|---------------------------|-------|-----------------|-------------|-----------------|------------------|-------------------|
| Year                      | voc   | NO <sub>x</sub> | со          | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
|                           |       | Summer          |             |                 |                  |                   |
| 2025                      | 6.74  | 61.60           | 55.10       | 0.12            | 13.00            | 7.47              |
| 2026                      | 9.74  | 41.40           | 144.00      | 0.17            | 24.30            | 6.56              |
| 2027                      | 37.80 | 41.60           | 158.00      | 0.17            | 28.10            | 7.40              |
| 2028                      | 39.30 | 46.00           | 160.00      | 0.18            | 28.40            | 7.61              |
| 2029                      | 38.80 | 44.60           | 151.00      | 0.18            | 28.40            | 7.55              |
|                           |       | Winter          |             |                 |                  |                   |
| 2025                      | 9.34  | 61.70           | 114.00      | 0.17            | 24.40            | 7.47              |
| 2026                      | 8.88  | 43.00           | 107.00      | 0.17            | 24.30            | 6.56              |
| 2027                      | 36.90 | 43.20           | 117.00      | 0.17            | 28.10            | 7.40              |
| 2028                      | 38.40 | 47.60           | 121.00      | 0.18            | 28.40            | 7.61              |
| 2029                      | 37.20 | 45.40           | 116.00      | 0.18            | 28.40            | 7.55              |
| Maximum Daily Emissions   | 39.30 | 61.60           | 160.00      | 0.18            | 28.40            | 7.61              |
| MDAQMD Regional Threshold | 137   | 137             | 548         | 137             | 82               | 65                |
| 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 will result in emissions of VOCs,  $NO_X$ , CO,  $SO_X$ ,  $PM_{10}$ , and  $PM_{2.5}$ . Operational emissions would be expected from the following primary sources:

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



- On-Site Cargo Handling Equipment Emissions
- TRU Source Emissions

#### 3.5.1 MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from 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 *Lake Creek Logistics Center Traffic Analysis* were utilized in this analysis (22).

#### 3.5.1.1 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 industrial land uses.

This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1<sup>2</sup> & LDT2<sup>3</sup>), 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:

% Vehicle TypeLand UseLDALDT1LDT2MDVMCYGeneral Light IndustrialHigh-Cube Cold Storage Warehouse52.29%4.27%24.05%16.67%2.72%High-Cube Fulfillment Center Warehouse

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

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, MDV, and MCY vehicle types.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the truck trip lengths were taken from the Southern California Association of Governments (SCAG) estimation of average truck trip length in its 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (23), which discloses a 40-mile trip length with an assumption of 100% primary trips.

In order to be consistent with the *Lake Creek Logistics Center Traffic Analysis*, trucks are broken down by truck type. The truck fleet mix is estimated by rationing the trip rates for each truck type based on information provided in the *Lake Creek Logistics Center Traffic Analysis*. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1<sup>4</sup> & LHDT2<sup>5</sup>)/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks (

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<sup>&</sup>lt;sup>2</sup> 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.

 $<sup>^3</sup>$  Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

 $<sup>^4</sup>$  Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

<sup>&</sup>lt;sup>5</sup> Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

Duty Trucks (HHDT)/4+-axle. To account for emissions generated by trucks, the following fleet mix was utilized in this analysis:

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

| Land Hea                               | % Vehicle Type |       |        |        |  |  |
|--|----------------|-------|--------|--------|--|--|
| Land Ose                               | LHDT1          | LHDT2 | MHDT   | HHDT   |  |  |
| General Light Industrial               | 13.90%         | 3.87% | 20.00% | 62.22% |  |  |
| High-Cube Cold Storage Warehouse       | 27.26%         | 7.59% | 11.36% | 53.79% |  |  |
| High-Cube Fulfillment Center Warehouse | 13.04%         | 3.63% | 20.74% | 62.59% |  |  |

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.

#### 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 break and tire wear particulates.

#### 3.5.2 AREA SOURCE EMISSIONS

#### **ARCHITECTURAL COATINGS**

Over a period of time the 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 as 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 which is now effective. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.



#### 3.5.3 ENERGY SOURCE EMISSIONS

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

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance and only natural gas use is considered. Based on information provided by the Project applicant, the site is not expected to utilize natural gas for the building envelope, and therefore would not generate any emissions from direct energy consumption.

#### 3.5.4 STATIONARY SOURCE EMISSIONS

The proposed Project was conservatively assumed to include installation of three 300-horsepower diesel-powered fire pumps at Project buildout (one for each building). The fire pumps 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 diesel-powered emergency fire pumps were calculated using CalEEMod.

#### 3.5.5 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, 264 one-way truck trips have the potential to 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 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.

#### 3.5.6 On-Site Cargo Handling Equipment Emissions

It is common for warehouse buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled



operational equipment includes up to thirteen (13) compressed natural gas cargo handling equipment operating at 4 hours a day<sup>6</sup> for 365 days of the year.

#### 3.5.7 OPERATIONAL EMISSIONS SUMMARY

#### **OPERATIONAL EMISSIONS SUMMARY – WITHOUT MITIGATION**

The estimated operational-source emissions without mitigation are summarized on Table 3-8. Detailed operation model outputs for the Project are presented in Appendix 3.2. As shown on Table 3-8, the Project's daily regional emissions from on-going operations will exceed the MDAQMD significance thresholds for emissions of VOCs,  $NO_X$ , CO, and  $PM_{10}$ .

TABLE 3-8: SUMMARY OF PEAK OPERATIONAL EMISSIONS (WITHOUT MITIGATION)

|                                 | Emissions (lbs/day) |                 |        |                 |                  |                   |  |
|---------------------------------|---------------------|-----------------|--------|-----------------|------------------|-------------------|--|
| Source                          | voc                 | NO <sub>x</sub> | со     | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |  |
|                                 |                     | Summer          |        |                 |                  |                   |  |
| Mobile Source                   | 31.80               | 149.00          | 361.00 | 2.09            | 124.00           | 34.30             |  |
| Area Source                     | 105.00              | 1.27            | 151.00 | 0.01            | 0.27             | 0.20              |  |
| Emergency Fire Pump Source      | 1.48                | 4.13            | 3.77   | 0.01            | 0.22             | 0.22              |  |
| TRU Source                      | 38.58               | 36.58           | 4.68   | 0.00            | 1.28             | 1.18              |  |
| Cargo Handling Equipment Source | 1.53                | 4.88            | 213.78 | 0.00            | 0.38             | 0.35              |  |
| Total Maximum Daily Emissions   | 178.39              | 195.85          | 734.23 | 2.11            | 126.15           | 36.25             |  |
| MDAQMD Regional Threshold       | 137                 | 137             | 548    | 137             | 82               | 65                |  |
| Threshold Exceeded?             | YES                 | YES             | YES    | NO              | YES              | NO                |  |
|                                 |                     | Winter          |        |                 |                  |                   |  |
| Mobile Source                   | 29.30               | 158.00          | 281.00 | 2.01            | 124.00           | 34.30             |  |
| Area Source                     | 79.90               | 0.00            | 0.00   | 0.00            | 0.00             | 0.00              |  |
| Emergency Fire Pump Source      | 1.48                | 4.13            | 3.77   | 0.01            | 0.22             | 0.22              |  |
| TRU Source                      | 38.58               | 36.58           | 4.68   | 0.00            | 1.28             | 1.18              |  |
| Cargo Handling Equipment Source | 1.53                | 4.88            | 213.78 | 0.00            | 0.38             | 0.35              |  |
| Total Maximum Daily Emissions   | 150.79              | 203.58          | 503.23 | 2.02            | 125.88           | 36.05             |  |
| MDAQMD Regional Threshold       | 137                 | 137             | 548    | 137             | 82               | 65                |  |
| Threshold Exceeded?             | YES                 | YES             | YES    | NO              | YES              | NO                |  |

Source: CalEEMod operational-source emissions are presented in Appendix 3.2.

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<sup>&</sup>lt;sup>6</sup> 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.

#### **RECOMMENDED OPERATIONAL MITIGATION MEASURES**

#### MM AQ-1

The Project Applicant or successor in interest shall implement the following measures:

- The Project's landscape plan shall incorporate drought-tolerant plants and use water-efficient irrigation techniques.
- All appliance fixtures shall be Energy Star-rated.
- All fixtures installed in restrooms and employee break areas shall be U.S. Environmental Protection Agency (EPA) WaterSense certified or equivalent.

#### MM AQ-2

As a condition of certificates of occupancy, 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-3

The Project shall implement the following measures in order to reduce operational off-road equipment, stationary source, and on-road vehicle air pollutant emissions to the extent feasible:

Solar Power. At a minimum, the roofs of the warehouse building shall be designed to provide the structural capacity to accommodate roof-top solar panels. The Project shall be designed to include rooftop solar panels that generate sufficient power to meet at least 10% of the Project's total operational base energy requirements from within the Project's building envelope. The Town of Apple Valley shall verify the size and scope of the solar energy system based upon the analysis of the projected power requirements and generating capacity as well as the available solar panel installation space. In the event sufficient space is not available on the Project site to accommodate the needed number of solar panels to produce the operation's base power use, the Project Applicant or successor in interest shall demonstrate how all available space has been maximized (e.g., roof) for solar energy system use. Areas that provide for truck movement may be excluded from these calculations unless otherwise deemed acceptable by the supplied reports and applicable building standards. The Project Applicant or successor in interest, or as contractually delegated by the Project Applicant or successor in interest, shall install the solar energy system when the Town of Apple Valley has approved building permits and the necessary equipment has arrived. The operation of the system shall commence only when it has received permission to operate from the applicable utility. The solar energy system owner shall be responsible for maintaining the system at not less than 80% of the rated power for 20 years. At the end of the 20-year period, the owners, operators, or tenants shall install a new photovoltaic system meeting the capacity and operational requirements of this measure, or continue to maintain the existing system, for the life of the Project. As the Project's demand for solar power increases, additional solar panels may be added to the Project.

#### **OPERATIONAL EMISSIONS SUMMARY – WITH MITIGATION**

The estimated operational-source emissions summarized on Table 3-9 represent the Project's operational emissions after implementation of MM AQ-1 through MM AQ-3. Detailed operation model outputs for the Project are presented in Appendix 3.2. As shown on Table 3-9, the Project's



daily regional emissions will exceed the MDAQMD significance thresholds for emissions of VOCs,  $NO_X$  and  $PM_{10}$ .

TABLE 3-9: SUMMARY OF PEAK OPERATIONAL EMISSIONS (WITH MITIGATION )

| Caura                           | Emissions (lbs/day) |                 |        |                 |                  |                   |  |
|---------------------------------|---------------------|-----------------|--------|-----------------|------------------|-------------------|--|
| Source                          | voc                 | NO <sub>x</sub> | со     | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |  |
|                                 | 9                   | Summer          |        |                 |                  |                   |  |
| Mobile Source                   | 31.80               | 149.00          | 361.00 | 2.09            | 124.00           | 34.30             |  |
| Area Source                     | 105.00              | 1.27            | 151.00 | 0.01            | 0.27             | 0.20              |  |
| Emergency Fire Pump Source      | 1.48                | 4.13            | 3.77   | 0.01            | 0.22             | 0.22              |  |
| TRU Source                      | 38.58               | 36.58           | 4.68   | 0.00            | 1.28             | 1.18              |  |
| Cargo Handling Equipment Source | 0.00                | 0.00            | 0.00   | 0.00            | 0.00             | 0.00              |  |
| Total Maximum Daily Emissions   | 176.86              | 190.98          | 520.45 | 2.11            | 125.77           | 35.90             |  |
| MDAQMD Regional Threshold       | 137                 | 137             | 548    | 137             | 82               | 65                |  |
| Threshold Exceeded?             | YES                 | YES             | NO     | NO              | YES              | NO                |  |
|                                 |                     | Winter          |        |                 |                  |                   |  |
| Mobile Source                   | 29.30               | 158.00          | 281.00 | 2.01            | 124.00           | 34.30             |  |
| Area Source                     | 79.90               | 0.00            | 0.00   | 0.00            | 0.00             | 0.00              |  |
| Emergency Fire Pump Source      | 1.48                | 4.13            | 3.77   | 0.01            | 0.22             | 0.22              |  |
| TRU Source                      | 38.58               | 36.58           | 4.68   | 0.00            | 1.28             | 1.18              |  |
| Cargo Handling Equipment Source | 0.00                | 0.00            | 0.00   | 0.00            | 0.00             | 0.00              |  |
| Total Maximum Daily Emissions   | 149.26              | 198.71          | 289.45 | 2.02            | 125.50           | 35.70             |  |
| MDAQMD Regional Threshold       | 137                 | 137             | 548    | 137             | 82               | 65                |  |
| Threshold Exceeded?             | YES                 | YES             | NO     | NO              | YES              | NO                |  |

Source: CalEEMod operational-source emissions are presented in Appendix 3.2.

#### 3.6 CO "HOT SPOT" ANALYSIS

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

The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment



status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

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

#### **3.7 AQMP**

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB 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 the indicators discussed below:

#### 3.7.1 CONSISTENCY CRITERION NO. 1

#### Local land use plans and/or population projections

The Town of Apple Valley's NAVISP designates four of the five parcels as "Industrial - Specific Plan (I-SP)" and the southeast parcel (APN 0463-373-06) as "General Commercial (C-G)."

The Project will require a Specific Plan Amendment to designate the southeast parcel (APN 0463-373-06) from "General Commercial (C-G) to "Industrial – Specific Plan (I-SP)." The "Industrial – Specific Plan (I-SP)" designation allows for a range of manufacturing and warehousing to offices and retail facilities, which support the employee population within the Specific Plan Area (24). The Project Applicant proposes land uses that are consistent with development anticipated under the site's existing General Plan designation. The Project would therefore conform to local land use plans.

#### 3.7.4 CONSISTENCY CRITERION No. 2

#### All MDAQMD Rules and Regulations

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401 (Visible Emissions), 402 (Nuisance), 403 (Fugitive Dust),



and 1113 (Architectural Coatings). As previously stated in Section ES.2 of this AQIA, the Project would implement MDAQMD Rule 403 and MDAQMD Rule 1113.

#### 3.7.3 Consistency Criterion No. 3

### Demonstrating that the project will not increase the frequency or severity of a violation in the federal or state ambient air quality standards

As substantiated herein, Project construction-source emissions would not exceed applicable MDAQMD significance thresholds. However, operational-source emissions would exceed applicable MDAQMD regional thresholds for emissions of VOCs,  $NO_X$  and  $PM_{10}$ . As such, the Project would have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality for on-going Project operations.

#### **AQMP CONSISTENCY CONCLUSION**

The Project's proposed land use designation for the subject site is consistent with the land use designation discussed in the General Plan. However, the Project would exceed the applicable regional thresholds during operation for emissions of VOCs, NO<sub>X</sub> and PM<sub>10</sub> and would therefore be considered to have a significant impact. The Project is therefore considered to be inconsistent with the AQMP.

#### 3.8 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

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

As per the MDAQMD's *Guidelines*, the following project types located within a specified distance to an existing or planned sensitive receptor land use must be evaluated to determine exposure of substantial pollutant concentrations to sensitive receptors (20):

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

The Project consists of the development of three industrial warehouse and distribution buildings totaling 3,480,736 square feet. 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 on Exhibit 3-A. All distances are measured from the Project sites boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project sites. 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 22672 Earlimart Street, approximately 1,456 feet northeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R1 is placed at the building façade.
- R2: Location R2 represents the existing residence at 22425 Gustine Street, approximately 504 feet east of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R2 is placed at the building façade.
- R3: Location R3 represents the existing residence at 17805 Central Road, approximately 492 feet east of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R3 is placed at the building façade.
- R4: Location R4 represents the existing residence at 22522 Corwin Road Sherman Rd., approximately 1,420 feet east of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R4 is placed at the building façade.
- R5: Location R5 represents the existing residence at 17525 Central Road, approximately 793 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R5 is placed at the building façade.
- R6: Location R6 represents the potential worker receptor located approximately 7,009 feet northwest of the Project site.

Based on Exhibit 3-A, the nearest sensitive receptor is a residence at 17805 Central Road, approximately 492 feet east of the Project site.

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  $\geq$  10 in one million and/or a chronic & acute hazard index that is  $\geq$ 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 *Lake Creek Logistics Center Construction and Operational Health Risk Assessment* (Urban Crossroads, Inc.) indicate that the Project would not result in any potentially significant health risk impacts from exposure to DPM emissions (25).



MENSINGTON ST ALSTAIR ST LASAYETTE RD LAVAMETTEST DAGREHUND AVE BULLERAMEST LIVERMORE ST NAWAYO RD LOS PADRES RD DUNSMUR ST FEBRUANDE AVE AUTADENA ST GARILIMART ST GERRINO AVE CRYCUTE SV GUSTINE RD **CONTINUEST** FOUNDERS RD GRIEGE DO E THEONDEROGA RD FALCHION RD GOUNNITY RD CHIPETA RD

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





#### 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 Town's solid waste regulations. The proposed Project would also be required to comply with MDAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors, and emissions that may lead to odors, associated with the proposed Project construction and operations would be less than significant and no mitigation is required.

#### 3.10 CUMULATIVE IMPACTS

The MDAQMD relies on the SCAQMD guidance for determining cumulative impacts. The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects.

The SCAQMD published a report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (26). In this report the SCAQMD clearly states (Page D-3):

"...the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance



threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

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

Consistent with the above SCAQMD guidance, individual projects that do not generate operational or construction emissions that exceed the MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Conversely, individual project-related construction and operational emissions that exceed MDAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project would exceed the applicable MDAQMD regional threshold for operational-source emissions of VOCs, NO<sub>X</sub> and PM<sub>10</sub>. As such, the Project would result in a cumulatively significant impact for operational activity.

#### **CONSTRUCTION IMPACTS**

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

#### **OPERATIONAL IMPACTS**

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project operational-source air pollutant emissions would result in exceedances of MDAQMD thresholds for emissions of VOCs, NO<sub>X</sub> and PM<sub>10</sub>. Therefore, Project operational-source emissions would be considered significant and unavoidable on a project-specific and cumulative basis.



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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 Lake Creek Logistics Center Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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#### **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 Planners 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 – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006



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#### APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS



Appendix C
Maps and Tables of Area Designations for State and National
Ambient Air Quality Standards

# Appendix C Maps and Tables of Area Designations for State and National Ambient Air Quality Standards

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

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

|  |                            | Ambient /                  | Air Quality  | / Standards                                    | 5                           |   |  |
|--|----------------------------|----------------------------|--|--|-----------------------------|---|--|
| Pollutant  | Averaging                  | California S               | tandards ¹   | Na   | tional Standards            | ) <sup>2</sup>                                  |  |
| Pollulani  | Time                       | Concentration <sup>3</sup> | Method 4   | Primary 3,5                                    | Secondary 3.6               | Method 7  |  |
| Ozone (O₃)º                                      | 1 Hour                     | 0.09 ppm (180 μg/m³)       | Ultraviolet Photometry                                       |  | Same as Primary             | Ultraviolet                                     |  |
| 020110 (O3)                                      | 8 Hour                     | 0.070 ppm (137 μg/m³)      | oli aviolot i notorioli y                                    | 0.070 ppm (137 μg/m³)                          | Standard                    | Photometry                                      |  |
| Respirable<br>Particulate                        | 24 Hour                    | 50 μg/m³                   | Gravimetric or Beta  | 150 μg/m³                                      | Same as Primary             | Inertial Separation and Gravimetric             |  |
| Matter (PM10)                                    | Annual Arithmetic<br>Mean  | 20 μg/m³                   | Attenuation  | _  | Standard                    | Analysis  |  |
| Fine<br>Particulate                              | 24 Hour                    | I                          | _  | 35 μg/m³                                       | Same as Primary<br>Standard | Inertial Separation and Gravimetric             |  |
| Matter<br>(PM2.5) <sup>9</sup>                   | Annual Arithmetic<br>Mean  | 12 μg/m³                   | Gravimetric or Beta<br>Attenuation                           | 12.0 μg/m³                                     | 15 μg/m³                    | Analysis  |  |
| Carbon   | 1 Hour                     | 20 ppm (23 mg/m²)          | Non-Dispersive   | 35 ppm (40 mg/m³)                              |                             | Non-Dispersive                                  |  |
| Monoxide<br>(CO)                                 | 8 Hour                     | 9.0 ppm (10 mg/m²)         | Infrared Photometry (NDIR)                                   | notometry 9 ppm (10 mg/m²) —                   |                             | Infrared Photometry (NDIR)                      |  |
| (00)   | 8 Hour (Lake<br>Tahoe)     | 6 ppm (7 mg/m²)            | (1.5.1.4)  | _  | _                           | (1.5.1.4)                                       |  |
| Nitrogen   | 1 Hour                     | 0.18 ppm (339 μg/m²)       | Gas Phase  | 100 ppb (188 µg/m²)                            | _                           | Gas Phase                                       |  |
| Dioxide<br>(NO <sub>2</sub> ) <sup>10</sup>      | Annual Arithmetic<br>Mean  | 0.030 ppm (57 μg/m²)       | Chemiluminescence  | 0.053 ppm (100 μg/m³)                          | Same as Primary<br>Standard | Chemiluminescence                               |  |
|  | 1 Hour                     | 0.25 ppm (655 μg/m²)       |  | 75 ppb (196 μg/m³)                             | _                           |   |  |
| Sulfur Dioxide                                   | 3 Hour                     | _                          | Ultraviolet  | _  | 0.5 ppm (1300<br>µg/m³)     | Ultraviolet Flourescence; Spectrophotometry     |  |
| (SO <sub>2</sub> ) <sup>11</sup>                 | 24 Hour                    | 0.04 ppm (105 μg/m²)       | Fluorescence   | 0.14 ppm<br>(for certain areas) <sup>11</sup>  | ı                           | (Pararosaniline  Method)                        |  |
|  | Annual Arithmetic<br>Mean  | 1                          |  | 0.030 ppm<br>(for certain areas) <sup>11</sup> |                             | a.  |  |
|  | 30 Day Average             | 1.5 μg/m³                  |  | -  | -                           |   |  |
| Lead <sup>12,13</sup>                            | Calendar Quarter           | _                          | Atomic Absorption  | 1.5 µg/m³<br>(for certain areas)¹²             | Same as Primary             | High Volume<br>Sampler and Atomic<br>Absorption |  |
|  | Rolling 3-Month<br>Average | _                          |  | 0.15 μg/m³                                     | Standard                    | 7.556. p.16.                                    |  |
| Visibility<br>Reducing<br>Particles <sup>4</sup> | 8 Hour                     | See footnote 14            | Beta Attenuation and<br>Transmittance<br>through Filter Tape |  | No                          |   |  |
| Sulfates   | 24 Hour                    | 25 μg/m³                   | lon Chromatography   |  | National                    |   |  |
| Hydrogen<br>Sulfide                              | 1 Hour                     | 0.03 ppm (42 μg/m²)        | Ultraviolet<br>Fluorescence                                  |  | Standards                   |   |  |
| Vinyl<br>Chloride <sup>12</sup>                  | 24 Hour                    | 0.01 ppm (26 µg/m²)        | Gas<br>Chromatography  |  |                             |   |  |
| See footnotes                                    | on next page               |                            |  |  |                             |   |  |

- 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 μg/m³ 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.
- 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 μg/m³ to 12.0 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 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<sub>2</sub> 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<sub>2</sub> 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 μg/m³)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                 | А            |
| Nonattainment              | N            |
| Nonattainment-Transitional | NA-T         |
| Unclassified               | U            |

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

Figure 1



C-5

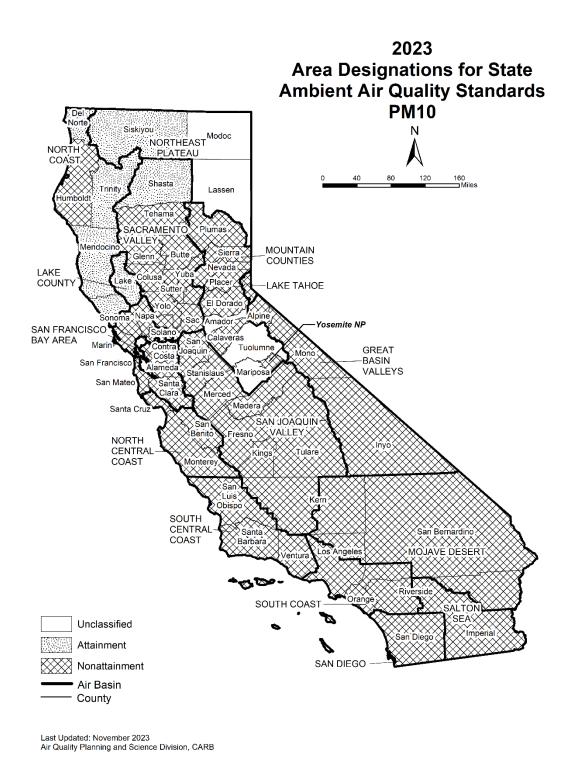
Table 1
California Ambient Air Quality Standards Area Designations for Ozone<sup>1</sup>

| _                             | Τ |      | Τ | Τ. |
|-------------------------------|---|------|---|----|
| Area                          | N | NA-T | U | Α  |
| GREAT BASIN VALLEYS AIR BASIN |   | I    | _ | 1  |
| Alpine County                 |   |      | U |    |
| Inyo County                   | N |      |   |    |
| Mono County                   | N |      |   |    |
| LAKE COUNTY AIR BASIN         |   |      |   | Α  |
| 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 |   |      |   | Α  |
| NORTH COAST AIR BASIN         |   |      |   | Α  |
| NORTHEAST PLATEAU AIR BASIN   |   |      |   | Α  |

| Area                                | N | NA-T | U | Α |
|-------------------------------------|---|------|---|---|
| SACRAMENTO VALLEY AIR BASIN         |   |      |   |   |
| Butte County                        |   | NA-T |   |   |
| Colusa and Glenn Counties           |   |      |   | Α |
| Shasta County                       | Ν |      |   |   |
| 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                | Ν |      |   |   |
| SAN DIEGO AIR BASIN                 | N |      |   |   |
| SAN FRANCISCO BAY AREA AIR<br>BASIN |   | NA-T |   |   |
| SAN JOAQUIN VALLEY AIR BASIN        | Ν |      |   |   |
| SOUTH CENTRAL COAST AIR BASIN       |   |      |   |   |
| San Luis Obispo County              | N |      |   |   |
| Santa Barbara County                |   | NA-T |   |   |
| Ventura County                      | N |      |   |   |
| SOUTH COAST AIR BASIN               | N |      |   |   |

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

Figure 2



C-7

Table 2
California Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM<sub>10</sub>)

| Area                          | N | U | Α |
|-------------------------------|---|---|---|
| GREAT BASIN VALLEYS AIR BASIN | Ν |   |   |
| LAKE COUNTY AIR BASIN         |   |   | Α |
| 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                 | N |   |   |
| Placer County (portion)       | N |   |   |
| Plumas County                 | Ν |   |   |
| Sierra County                 | N |   |   |
| Tuolumne County               |   | U |   |

| Area  | N | U | Α |
|---|---|---|---|
| NORTH CENTRAL COAST AIR BASIN                               | N |   |   |
| NORTH COAST AIR BASIN                                       |   |   |   |
| Del Norte, Mendocino, Sonoma (portion) and Trinity Counties |   |   | Α |
| Remainder of Air Basin                                      | N |   |   |
| NORTHEAST PLATEAU AIR BASIN                                 |   |   |   |
| Siskiyou County   |   |   | Α |
| Remainder of Air Basin                                      |   | U |   |
| SACRAMENTO VALLEY AIR BASIN                                 |   |   |   |
| Shasta County   |   |   | Α |
| Remainder of Air Basin                                      | Ν |   |   |
| SALTON SEA AIR BASIN  | N |   |   |
| SAN DIEGO AIR BASIN   | Ν |   |   |
| SAN FRANCISCO BAY AREA AIR BASIN                            | Ν |   |   |
| SAN JOAQUIN VALLEY AIR BASIN                                | Ν |   |   |
| SOUTH CENTRAL COAST AIR BASIN                               | N |   |   |
| SOUTH COAST AIR BASIN                                       | Ν |   |   |

Figure 3



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

| Area                          | N | U | Α |
|-------------------------------|---|---|---|
| GREAT BASIN VALLEYS AIR BASIN |   |   | Α |
| LAKE COUNTY AIR BASIN         |   |   | Α |
| LAKE TAHOE AIR BASIN          |   |   | Α |
| MOJAVE DESERT AIR BASIN       |   |   | Α |
| MOUNTAIN COUNTIES AIR BASIN   |   |   |   |
| Plumas County                 |   |   |   |
| - Portola Valley <sup>1</sup> | Ν |   |   |
| - Remainder Plumas County     |   | U |   |
| Remainder of Air Basin        |   | U |   |
| NORTH CENTRAL COAST AIR BASIN |   |   | Α |
| NORTH COAST AIR BASIN         |   |   | Α |
| NORTHEAST PLATEAU AIR BASIN   |   |   | Α |
| SACRAMENTO VALLEY AIR BASIN   |   |   |   |
| Butte County                  |   |   | Α |
| Colusa County                 |   |   | Α |
| Glenn County                  |   |   | Α |
| Placer County (portion)       |   |   | Α |
| Sacramento County             |   |   | Α |
| Shasta County                 |   |   | Α |
| Sutter and Yuba Counties      | N |   |   |
| Remainder of Air Basin        |   | U |   |

| Area                             | N | U | Α |
|----------------------------------|---|---|---|
| SALTON SEA AIR BASIN             |   |   |   |
| Imperial County                  |   |   |   |
| - City of Calexico <sup>2</sup>  | Ν |   |   |
| Remainder of Air Basin           |   |   | Α |
| SAN DIEGO AIR BASIN              | Ν |   |   |
| SAN FRANCISCO BAY AREA AIR BASIN | Ν |   |   |
| SAN JOAQUIN VALLEY AIR BASIN     | Ν |   |   |
| SOUTH CENTRAL COAST AIR BASIN    |   |   | Α |
| SOUTH COAST AIR BASIN            | N |   |   |

<sup>&</sup>lt;sup>1</sup> California Code of Regulations, title 17, section 60200(c)

<sup>&</sup>lt;sup>2</sup> California Code of Regulations, title 17, section 60200(a)

Figure 4

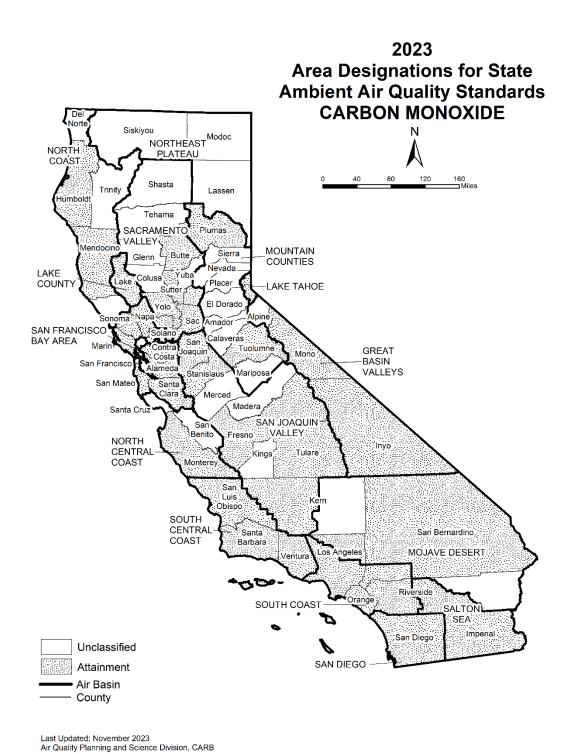


Table 4
California Ambient Air Quality Standards Area Designations for Carbon Monoxide\*

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

<sup>\*</sup> The area designated for carbon monoxide is a county or portion of a county

Figure 5



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

| Area                          | N | U | Α |
|-------------------------------|---|---|---|
| GREAT BASIN VALLEYS AIR BASIN |   |   | Α |
| LAKE COUNTY AIR BASIN         |   |   | Α |
| LAKE TAHOE AIR BASIN          |   |   | Α |
| MOJAVE DESERT AIR BASIN       |   |   | Α |
| MOUNTAIN COUNTIES AIR BASIN   |   |   | Α |
| NORTH CENTRAL COAST AIR BASIN |   |   | Α |
| NORTH COAST AIR BASIN         |   |   | Α |
| NORTHEAST PLATEAU AIR BASIN   |   |   | Α |

| Area  | N | U | Α |
|---|---|---|---|
| SACRAMENTO VALLEY AIR BASIN   |   |   | Α |
| SALTON SEA AIR BASIN  |   |   | Α |
| SAN DIEGO AIR BASIN   |   |   | Α |
| SAN FRANCISCO BAY AREA AIR BASIN  |   |   | Α |
| SAN JOAQUIN VALLEY AIR BASIN  |   |   | Α |
| SOUTH CENTRAL COAST AIR BASIN   |   |   | Α |
| SOUTH COAST AIR BASIN   |   |   |   |
| CA 60 Near-road Portion of San Bernardino,<br>Riverside, and Los Angeles Counties |   |   | Α |
| Remainder of Air Basin  |   |   | A |

Figure 6



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

| Area                          | N | Α |
|-------------------------------|---|---|
| GREAT BASIN VALLEYS AIR BASIN |   | Α |
| LAKE COUNTY AIR BASIN         |   | Α |
| LAKE TAHOE AIR BASIN          |   | Α |
| MOJAVE DESERT AIR BASIN       |   | Α |
| MOUNTAIN COUNTIES AIR BASIN   |   | Α |
| NORTH CENTRAL COAST AIR BASIN |   | Α |
| NORTH COAST AIR BASIN         |   | Α |
| NORTHEAST PLATEAU AIR BASIN   |   | Α |

| Area                             | N | Α |
|----------------------------------|---|---|
| SACRAMENTO VALLEY AIR BASIN      |   | Α |
| SALTON SEA AIR BASIN             |   | Α |
| SAN DIEGO AIR BASIN              |   | Α |
| SAN FRANCISCO BAY AREA AIR BASIN |   | Α |
| SAN JOAQUIN VALLEY AIR BASIN     |   | Α |
| SOUTH CENTRAL COAST AIR BASIN    |   | Α |
| SOUTH COAST AIR BASIN            |   | Α |

<sup>\*</sup> 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 7



Last Updated: November 2023 Air Quality Planning and Science Division, CARB

Table 7
California Ambient Air Quality Standards Area Designations for Sulfates

| Area                          | N | J | Α |
|-------------------------------|---|---|---|
| GREAT BASIN VALLEYS AIR BASIN |   |   | Α |
| LAKE COUNTY AIR BASIN         |   |   | Α |
| LAKE TAHOE AIR BASIN          |   |   | Α |
| MOJAVE DESERT AIR BASIN       |   |   | Α |
| MOUNTAIN COUNTIES AIR BASIN   |   |   | Α |
| NORTH CENTRAL COAST AIR BASIN |   |   | Α |
| NORTH COAST AIR BASIN         |   |   | Α |
| NORTHEAST PLATEAU AIR BASIN   |   |   | Α |

| Area                             | N | U | Α |
|----------------------------------|---|---|---|
| SACRAMENTO VALLEY AIR BASIN      |   |   | Α |
| SALTON SEA AIR BASIN             |   |   | Α |
| SAN DIEGO AIR BASIN              |   |   | Α |
| SAN FRANCISCO BAY AREA AIR BASIN |   |   | Α |
| SAN JOAQUIN VALLEY AIR BASIN     |   |   | Α |
| SOUTH CENTRAL COAST AIR BASIN    |   |   | Α |
| SOUTH COAST AIR BASIN            |   |   | Α |

Figure 8



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

| Area                          | N | U | Α |
|-------------------------------|---|---|---|
| GREAT BASIN VALLEYS AIR BASIN |   |   | Α |
| LAKE COUNTY AIR BASIN         |   |   | Α |
| LAKE TAHOE AIR BASIN          |   |   | Α |
| MOJAVE DESERT AIR BASIN       |   |   | Α |
| MOUNTAIN COUNTIES AIR BASIN   |   |   | Α |
| NORTH CENTRAL COAST AIR BASIN |   |   | Α |
| NORTH COAST AIR BASIN         |   |   | Α |
| NORTHEAST PLATEAU AIR BASIN   |   |   | Α |
| SACRAMENTO VALLEY AIR BASIN   |   |   | Α |

| Area                             | N | 5 | A |
|----------------------------------|---|---|---|
| SALTON SEA AIR BASIN             |   |   | Α |
| SAN DIEGO AIR BASIN              |   |   | Α |
| SAN FRANCISCO BAY AREA AIR BASIN |   |   | Α |
| SAN JOAQUIN VALLEY AIR BASIN     |   |   | Α |
| SOUTH CENTRAL COAST AIR BASIN    |   |   | Α |
| SOUTH COAST AIR BASIN            |   |   | A |

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

Figure 9



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

| Area  | N | NA-T | U | Α |
|---|---|------|---|---|
| GREAT BASIN VALLEYS AIR BASIN               |   |      |   |   |
| Alpine County                               |   |      | U |   |
| Inyo County                                 |   |      |   | Α |
| Mono County                                 |   |      |   | Α |
| LAKE COUNTY AIR BASIN                       |   |      |   | Α |
| 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 <sup>1</sup> | 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 |   |

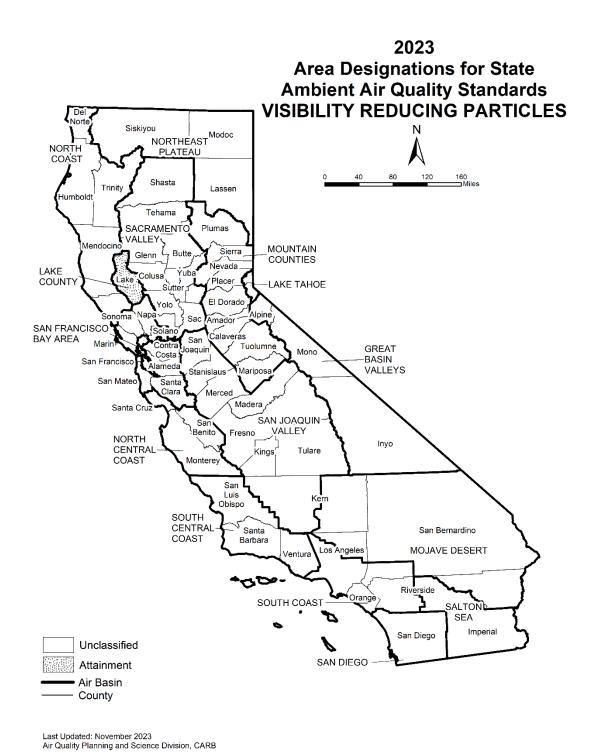
| •                                     |   |      | l |   |
|---------------------------------------|---|------|---|---|
| Area                                  | N | NA-T | U | Α |
| NORTH CENTRAL COAST AIR BASIN         |   |      | U |   |
| NORTH COAST AIR BASIN                 |   | T    |   |   |
| Del Norte County                      |   |      | U |   |
| Humboldt County                       |   |      |   | Α |
| Mendocino County                      |   |      | U |   |
| Sonoma County (portion)               |   |      |   |   |
| - Geyser Geothermal Area <sup>2</sup> |   |      |   | Α |
| - 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                |   |      |   | Α |
| Santa Barbara County                  |   |      |   | Α |
| Ventura County                        |   |      | U |   |
| SOUTH COAST AIR BASIN                 |   |      | U |   |

<sup>\*</sup> The area designated for hydrogen sulfide is a county or portion of a county

<sup>&</sup>lt;sup>1</sup> 52 Federal Register 29384 (August 7, 1987)

<sup>&</sup>lt;sup>2</sup> California Code of Regulations, title 17, section 60200(d)

Figure 10



- --

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

| Area                          | N | NA-T | U | Α |
|-------------------------------|---|------|---|---|
| GREAT BASIN VALLEYS AIR BASIN |   |      | U |   |
| LAKE COUNTY AIR BASIN         |   |      |   | Α |
| 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 |   |

| Area                             | N | NA-T | U | Α |
|----------------------------------|---|------|---|---|
| SACRAMENTO VALLEY AIR BASIN      |   |      | J |   |
| SALTON SEA AIR BASIN             |   |      | J |   |
| SAN DIEGO AIR BASIN              |   |      | С |   |
| SAN FRANCISCO BAY AREA AIR BASIN |   |      | U |   |
| SAN JOAQUIN VALLEY AIR BASIN     |   |      | U |   |
| SOUTH CENTRAL COAST AIR BASIN    |   |      | U |   |
| SOUTH COAST AIR BASIN            |   |      | U |   |

#### **Area Designations for the National Ambient Air Quality Standards**

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

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

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

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

#### **Designation Categories**

Suspended Particulate Matter ( $PM_{10}$ ). 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<sub>2.5</sub>), Carbon Monoxide (CO), and Nitrogen Dioxide (NO<sub>2</sub>). The U.S. EPA uses two categories to designate areas with respect to these standards:

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

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

On December 14, 2012, the U.S. EPA established a new national annual primary PM<sub>2.5</sub> standard of 12.0  $\mu$ g/m³. Area designations were finalized in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0  $\mu$ g/m³ as well as the 24-hour standard of 35  $\mu$ g/m³, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO<sub>2</sub> standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO<sub>2</sub> standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO<sub>2</sub>). 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).

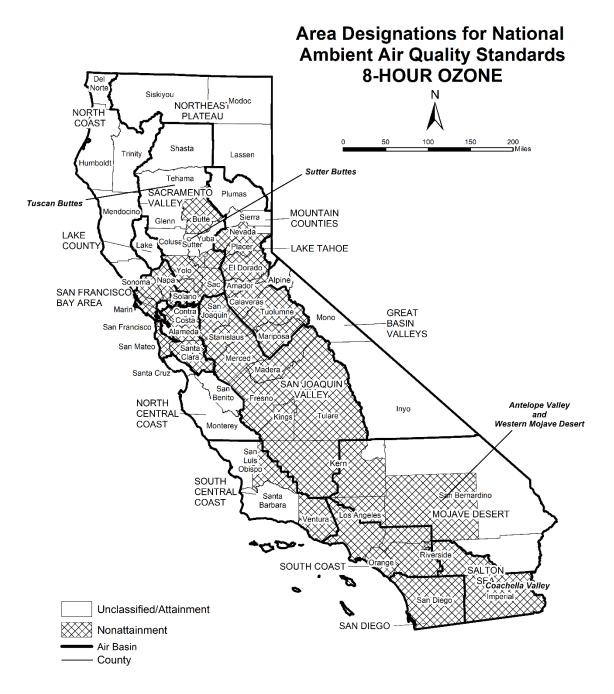
On June 2, 2010, the U.S. EPA established a new primary 1-hour SO<sub>2</sub> standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual average standards. Area designations for the 1-hour SO<sub>2</sub> standard were finalized on December 21, 2017 and are reflected in the area designations map.

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

#### **Designation Areas**

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at: <a href="https://ecfr.io/Title-40/se40.20.81">https://ecfr.io/Title-40/se40.20.81</a> 1305

Figure 11



Last Updated: November 2023 Map reflects the 2015 8-hour ozone standard of 0.070 ppm Air Quality Planning and Science Division, CARB

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

|  |   | 1   |
|--|---|-----|
| Area   | N | U/A |
| 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) <sup>1</sup>          | N |     |
| Mariposa County                                  | N |     |
| Nevada County                                    |   |     |
| - Western Nevada County                          | N |     |
| - Remainder of County                            |   | U/A |
| Placer County (portion) <sup>1</sup>             | 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 <sup>1</sup>               | N |     |
| Shasta County                                    |   | U/A |
| Sutter County                                    |   |     |
| - Sutter Buttes                                  | N |     |
| - Southern portion of Sutter County <sup>1</sup> | N |     |
| - Remainder of Sutter County                     |   | U/A |
| Tehama County                                    |   |     |
| - Tuscan Buttes                                  | N | _   |
| - Remainder of Tehama County                     |   | U/A |
| ·  |   |     |

| Area  | N | U/A |
|---|---|-----|
| SACRAMENTO VALLEY AIR BASIN (cont.)                 |   |     |
| Yolo County <sup>1</sup>                            | 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 <sup>2</sup>          |   |     |
| San Luis Obispo County                              |   |     |
| - Eastern San Luis Obispo County                    | Ν |     |
| - Remainder of County                               |   | U/A |
| Santa Barbara County                                |   | U/A |
| Ventura County                                      |   |     |
| - Area excluding Anacapa and San<br>Nicolas Islands | N |     |
| - Channel Islands <sup>2</sup>                      |   | U/A |
| SOUTH COAST AIR BASIN <sup>2</sup>                  | Ν |     |
| SOUTHEAST DESERT AIR BASIN                          |   |     |
| Kern County (portion)                               | Ν |     |
| - Indian Wells Valley                               |   | U/A |
| Imperial County                                     | Z |     |
| 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 |

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:

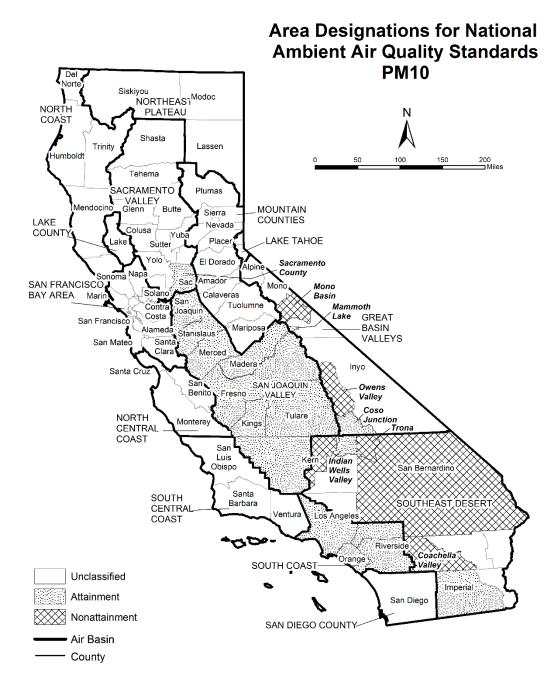
Los Angeles County includes San Clemente and Santa Catalina Islands.

<sup>\*</sup> 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.

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> South Central Coast Air Basin Channel Islands:

Figure 12



Last Updated: November 2023 Air Quality Planning and Science Division

Table 12
National Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM<sub>10</sub>)\*

| Area                           | N | U | Α  |
|--------------------------------|---|---|----|
| GREAT BASIN VALLEYS AIR BASIN  |   |   | 1. |
| Alpine County                  |   | U |    |
| Inyo County                    |   |   |    |
| - Owens Valley Planning Area   | N |   |    |
| - Coso Junction                |   |   | Α  |
| - Remainder of County          |   | U |    |
| Mono County                    |   |   |    |
| - Mammoth Lake Planning Area   |   |   | Α  |
| - 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 <sup>1</sup> |   |   | Α  |
| Remainder of Air Basin         |   | U |    |
| SAN DIEGO COUNTY               |   | U |    |

| Area   | N  | U | Α |
|--|----|---|---|
| SAN FRANCISCO BAY AREA AIR BASIN                     | 14 | U |   |
| SAN JOAQUIN VALLEY AIR BASIN                         |    |   | Α |
| SOUTH CENTRAL COAST AIR BASIN                        |    | U |   |
| SOUTH COAST AIR BASIN                                |    |   | Α |
| SOUTHEAST DESERT AIR BASIN                           |    |   | ı |
| Eastern Kern County                                  |    |   |   |
| - Indian Wells Valley                                |    |   | Α |
| - Portion within San Joaquin Valley<br>Planning Area | N  |   |   |
| - Remainder of County                                |    | U |   |
| Imperial County                                      |    |   |   |
| - Imperial Valley Planning Area <sup>2</sup>         |    |   | Α |
| - 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  |   |   |

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

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<sup>&</sup>lt;sup>1</sup> Air quality in Sacramento County meets the national PM<sub>10</sub> standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.

<sup>&</sup>lt;sup>2</sup> The request for redesignation to attainment for the Imperial Valley Planning Area was approved by U.S. EPA in September 2020, effective October 2020.

Figure 13

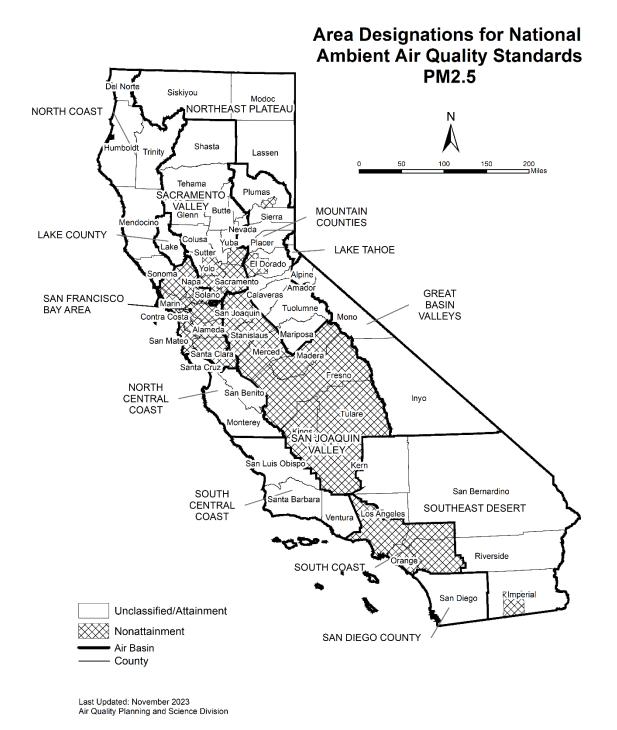


Table 13
National Ambient Air Quality Standards Area Designations for Fine Particulate Matter (PM<sub>2.5</sub>)

| Area                                      | N | U/A |
|---|---|-----|
| 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 <sup>1</sup>        | N |     |
| Remainder of Air Basin                    | · | U/A |

| Area  | N | U/A |
|---|---|-----|
| SAN DIEGO COUNTY                              |   | U/A |
| SAN FRANCISCO BAY AREA AIR BASIN <sup>2</sup> | Ν |     |
| SAN JOAQUIN VALLEY AIR BASIN                  | Ν |     |
| SOUTH CENTRAL COAST AIR BASIN                 |   | U/A |
| SOUTH COAST AIR BASIN <sup>3</sup>            | N |     |
| SOUTHEAST DESERT AIR BASIN                    |   |     |
| Imperial County (portion) <sup>4</sup>        | Ν |     |
| Remainder of Air Basin                        |   | U/A |

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour  $PM_{2.5}$  standard as well as the 1997 and 2012  $PM_{2.5}$  annual standards.

<sup>&</sup>lt;sup>1</sup> 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<sub>2.5</sub> standards. A Determination of Attainment for the 2006 24-hour PM<sub>2.5</sub> standard was made by U.S. EPA in June 2017.

<sup>&</sup>lt;sup>2</sup> Air quality in this area meets the national PM<sub>2.5</sub> standards. A Determination of Attainment for the 2006 24-hour PM<sub>2.5</sub> standard was made by U.S. EPA in June 2017.

<sup>&</sup>lt;sup>3</sup> Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

<sup>&</sup>lt;sup>4</sup> 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<sub>2.5</sub> standards. A Determination of Attainment for the 2006 24-hour PM<sub>2.5</sub> standard was made by U.S. EPA in June 2017.

Figure 14



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

| Area                          | N | U/A |
|-------------------------------|---|-----|
| 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 |

| Area                             | N | 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 |

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 15



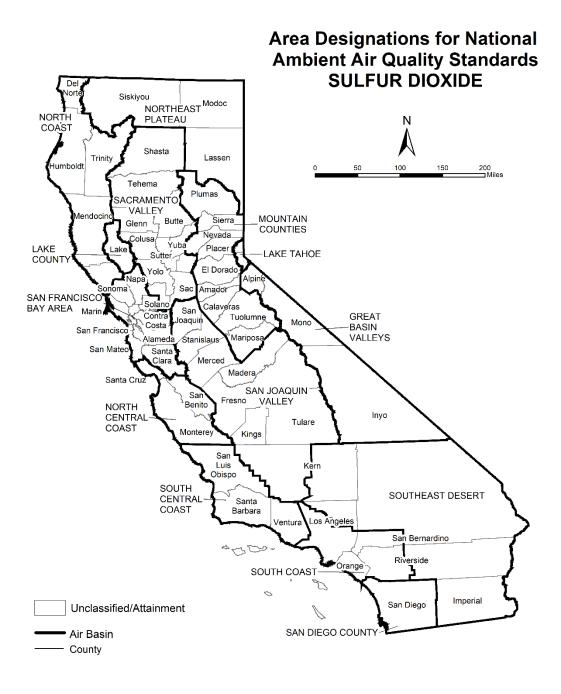
Table 15 National Ambient Air Quality Standards Area Designations for Nitrogen Dioxide\*

| Area                          | N | U/A |
|-------------------------------|---|-----|
| 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 |

| Area                             | N | 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 |

<sup>\*</sup> Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 16



Last Updated: November 2023 Air Quality Planning and Science Division

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

| Area                                       | N | U/A |
|--|---|-----|
| 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 <sup>1</sup> |   | U/A |
| SOUTH COAST AIR BASIN                      |   | U/A |
| SOUTHEAST DESERT AIR BASIN                 |   | U/A |

 $<sup>^{\</sup>star}$  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<sub>2</sub> standard of 75 ppb.

<sup>&</sup>lt;sup>1</sup> South Central Coast Air Basin Channel Islands:

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

Ventura County includes Anacapa and San Nicolas Islands.

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

Figure 17

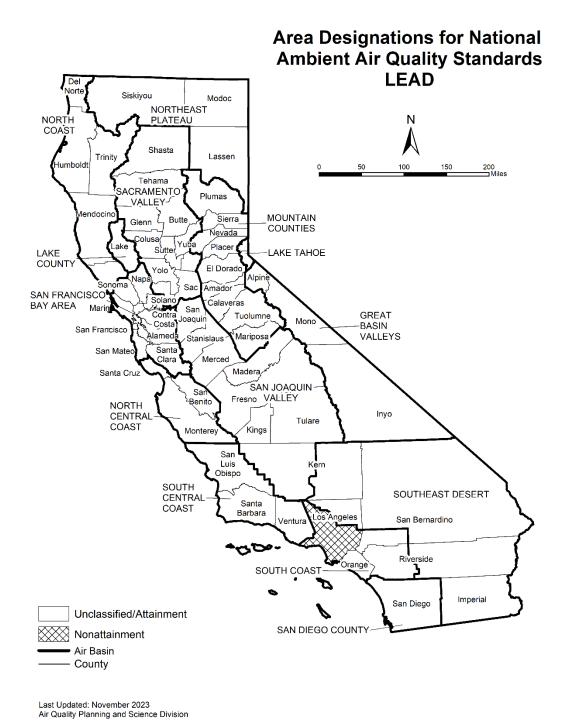


Table 17 National Ambient Air Quality Standards Area Designations for Lead (particulate)

| Area                          | N | U/A |
|-------------------------------|---|-----|
| 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 |

| Area                                      | N | 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) <sup>1</sup> | N |     |
| Remainder of Air Basin                    |   | U/A |
| SOUTHEAST DESERT AIR BASIN                |   | U/A |

<sup>&</sup>lt;sup>1</sup> Portion of County in Air Basin, not including Channel Islands

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#### **APPENDIX 3.1:**

**CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS** 



# Lake Creek Logistics Center (Construction) Detailed Report

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## 1. Basic Project Information

### 1.1. Basic Project Information

| Data Field                  | Value                                      |
|-----------------------------|--|
| Project Name                | Lake Creek Logistics Center (Construction) |
| Construction Start Date     | 3/4/2025                                   |
| Lead Agency                 | _  |
| Land Use Scale              | Project/site                               |
| Analysis Level for Defaults | County                                     |
| Windspeed (m/s)             | 5.00                                       |
| Precipitation (days)        | 12.4                                       |
| Location                    | 34.57509227224038, -117.17721847885088     |
| County                      | San Bernardino-Mojave Desert               |
| City                        | Apple Valley                               |
| Air District                | Mojave Desert AQMD                         |
| Air Basin                   | Mojave Desert                              |
| TAZ                         | 5160                                       |
| EDFZ                        | 10   |
| Electric Utility            | Southern California Edison                 |
| Gas Utility                 | Southwest Gas Corp.                        |
| App Version                 | 2022.1.1.28                                |

### 1.2. Land Use Types

| Land Use Subtype          | Size | Unit     | Lot Acreage | Building Area (sq ft) |      | Special Landscape<br>Area (sq ft) | Population | Description |
|---------------------------|------|----------|-------------|-----------------------|------|-----------------------------------|------------|-------------|
| General Heavy<br>Industry | 348  | 1000sqft | 7.99        | 348,074               | 0.00 | _                                 | _          | _           |

| Refrigerated<br>Warehouse-No Rail   | 348   | 1000sqft | 7.99 | 348,074   | 0.00   | _ | _ | _ |
|-------------------------------------|-------|----------|------|-----------|--------|---|---|---|
| Unrefrigerated<br>Warehouse-No Rail | 2,785 | 1000sqft | 64.5 | 2,784,588 | 24,966 | _ | _ | _ |
| Parking Lot                         | 4,597 | Space    | 31.7 | 0.00      | 0.00   | _ | _ | _ |
| Other Asphalt<br>Surfaces           | 4,911 | 1000sqft | 113  | 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  | СО   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2  | CO2T   | CH4  | N2O  | R    | CO2e   |
|---------------------------|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|--------|--------|------|------|------|--------|
| Daily,<br>Summer<br>(Max) | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _    | _      |
| Unmit.                    | 40.8 | 39.3 | 61.6 | 160  | 0.18 | 3.11  | 27.3  | 28.4  | 2.86   | 6.58   | 7.61   | _    | 45,534 | 45,534 | 1.08 | 2.87 | 111  | 46,503 |
| Daily,<br>Winter<br>(Max) | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _    | _      |
| Unmit.                    | 39.2 | 38.4 | 61.7 | 121  | 0.18 | 3.11  | 27.3  | 28.4  | 2.86   | 6.58   | 7.61   | _    | 42,768 | 42,768 | 1.15 | 2.90 | 3.13 | 43,641 |
| Average<br>Daily<br>(Max) | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _    | _      |
| Unmit.                    | 27.2 | 26.6 | 33.1 | 88.1 | 0.13 | 1.41  | 19.3  | 20.0  | 1.30   | 4.65   | 5.27   | _    | 30,231 | 30,231 | 0.42 | 2.05 | 33.8 | 30,882 |
| Annual<br>(Max)           | -    | _    | _    | _    | _    | _     | -     | -     | _      | _      | _      | _    | -      | _      | _    | _    | _    | _      |
| Unmit.                    | 4.96 | 4.86 | 6.03 | 16.1 | 0.02 | 0.26  | 3.53  | 3.65  | 0.24   | 0.85   | 0.96   | _    | 5,005  | 5,005  | 0.07 | 0.34 | 5.59 | 5,113  |

### 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  | со   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2  | CO2T   | CH4  | N2O  | R    | CO2e   |
|----------------------------|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|--------|--------|------|------|------|--------|
| Daily -<br>Summer<br>(Max) | _    | _    | -    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _    | _      |
| 2025                       | 8.00 | 6.74 | 61.6 | 55.1 | 0.12 | 3.11  | 9.91  | 13.0  | 2.86   | 4.61   | 7.47   | _    | 13,280 | 13,280 | 0.47 | 0.34 | 6.55 | 13,399 |
| 2026                       | 10.9 | 9.74 | 41.4 | 144  | 0.17 | 0.97  | 23.3  | 24.3  | 0.91   | 5.64   | 6.56   | _    | 41,086 | 41,086 | 1.08 | 2.86 | 110  | 42,076 |
| 2027                       | 39.2 | 37.8 | 41.6 | 158  | 0.17 | 0.92  | 27.1  | 28.1  | 0.86   | 6.54   | 7.40   | _    | 44,671 | 44,671 | 0.51 | 2.85 | 111  | 45,645 |
| 2028                       | 40.8 | 39.3 | 46.0 | 160  | 0.18 | 1.10  | 27.3  | 28.4  | 1.03   | 6.58   | 7.61   | _    | 45,534 | 45,534 | 0.57 | 2.87 | 100  | 46,503 |
| 2029                       | 39.6 | 38.8 | 44.6 | 151  | 0.18 | 1.03  | 27.3  | 28.4  | 0.97   | 6.58   | 7.55   | _    | 44,679 | 44,679 | 0.57 | 2.76 | 89.3 | 45,605 |
| Daily -<br>Winter<br>(Max) | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _    | _      |
| 2025                       | 10.6 | 9.34 | 61.7 | 114  | 0.17 | 3.11  | 23.3  | 24.4  | 2.86   | 5.64   | 7.47   | _    | 39,384 | 39,384 | 1.15 | 2.86 | 3.13 | 40,269 |
| 2026                       | 10.1 | 8.88 | 43.0 | 107  | 0.17 | 0.97  | 23.3  | 24.3  | 0.91   | 5.64   | 6.56   | _    | 38,709 | 38,709 | 0.52 | 2.86 | 2.84 | 39,578 |
| 2027                       | 38.4 | 36.9 | 43.2 | 117  | 0.17 | 0.92  | 27.1  | 28.1  | 0.86   | 6.54   | 7.40   | _    | 41,871 | 41,871 | 0.58 | 2.90 | 2.88 | 42,752 |
| 2028                       | 39.2 | 38.4 | 47.6 | 121  | 0.18 | 1.10  | 27.3  | 28.4  | 1.03   | 6.58   | 7.61   | _    | 42,768 | 42,768 | 0.61 | 2.87 | 2.60 | 43,641 |
| 2029                       | 38.8 | 37.2 | 45.4 | 116  | 0.18 | 1.03  | 27.3  | 28.4  | 0.97   | 6.58   | 7.55   | _    | 41,970 | 41,970 | 0.61 | 2.76 | 2.32 | 42,810 |
| Average<br>Daily           | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _    | _      |
| 2025                       | 4.88 | 4.17 | 33.1 | 40.5 | 0.07 | 1.41  | 6.21  | 7.63  | 1.30   | 2.05   | 3.35   | _    | 10,813 | 10,813 | 0.35 | 0.50 | 7.78 | 10,979 |
| 2026                       | 7.27 | 6.42 | 31.0 | 83.2 | 0.12 | 0.69  | 16.5  | 17.2  | 0.65   | 4.00   | 4.65   | _    | 28,032 | 28,032 | 0.39 | 2.05 | 33.8 | 28,685 |
| 2027                       | 18.6 | 17.6 | 30.6 | 85.4 | 0.12 | 0.65  | 18.1  | 18.7  | 0.61   | 4.36   | 4.97   | _    | 29,147 | 29,147 | 0.40 | 2.03 | 32.6 | 29,794 |
| 2028                       | 27.2 | 26.6 | 31.2 | 88.1 | 0.13 | 0.66  | 19.3  | 20.0  | 0.62   | 4.65   | 5.27   | _    | 30,231 | 30,231 | 0.40 | 2.05 | 30.9 | 30,882 |
| 2029                       | 26.7 | 26.1 | 31.7 | 85.2 | 0.13 | 0.71  | 18.6  | 19.3  | 0.66   | 4.49   | 5.15   | _    | 29,248 | 29,248 | 0.42 | 1.90 | 26.5 | 29,850 |
| Annual                     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _    | _      |
| 2025                       | 0.89 | 0.76 | 6.03 | 7.38 | 0.01 | 0.26  | 1.13  | 1.39  | 0.24   | 0.37   | 0.61   | _    | 1,790  | 1,790  | 0.06 | 0.08 | 1.29 | 1,818  |
| 2026                       | 1.33 | 1.17 | 5.67 | 15.2 | 0.02 | 0.13  | 3.02  | 3.14  | 0.12   | 0.73   | 0.85   | _    | 4,641  | 4,641  | 0.07 | 0.34 | 5.59 | 4,749  |
| 2027                       | 3.39 | 3.21 | 5.58 | 15.6 | 0.02 | 0.12  | 3.30  | 3.41  | 0.11   | 0.80   | 0.91   | _    | 4,826  | 4,826  | 0.07 | 0.34 | 5.41 | 4,933  |

| 2028 | 4.96 | 4.86 | 5.70 | 16.1 | 0.02 | 0.12 | 3.53 | 3.65 | 0.11 | 0.85 | 0.96 | _ | 5,005 | 5,005 | 0.07 | 0.34 | 5.12 | 5,113 |
|------|------|------|------|------|------|------|------|------|------|------|------|---|-------|-------|------|------|------|-------|
| 2029 | 4.88 | 4.77 | 5.78 | 15.6 | 0.02 | 0.13 | 3.40 | 3.53 | 0.12 | 0.82 | 0.94 | _ | 4,842 | 4,842 | 0.07 | 0.31 | 4.38 | 4,942 |

### 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  | со   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R    | CO2e  |
|-------------------------------------|--------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|------|-------|
| Onsite                              | _      | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Daily,<br>Summer<br>(Max)           | _      | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent       | 7.80   | 6.56 | 60.7 | 52.4 | 0.08 | 3.10  | _     | 3.10  | 2.85   | _      | 2.85   | _    | 8,981 | 8,981 | 0.36 | 0.07 | _    | 9,012 |
| Dust<br>From<br>Material<br>Movemer | _<br>t | _    | _    | _    | _    | _     | 9.35  | 9.35  | _      | 4.47   | 4.47   | _    | _     | _     | _    | _    | _    | _     |
| Onsite<br>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,<br>Winter<br>(Max)           | _      | _    | _    | _    |      | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent       | 7.80   | 6.56 | 60.7 | 52.4 | 0.08 | 3.10  | _     | 3.10  | 2.85   | _      | 2.85   | _    | 8,981 | 8,981 | 0.36 | 0.07 | _    | 9,012 |
| Dust<br>From<br>Material<br>Movemer | _<br>t | _    | _    | _    | _    | _     | 9.35  | 9.35  | _      | 4.47   | 4.47   | _    | _     | _     | _    | _    | _    | _     |
| Onsite<br>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<br>d<br>Equipm<br>ent       | 1.07   | 0.90 | 8.32 | 7.18 | 0.01    | 0.42 | _    | 0.42 | 0.39 | _    | 0.39 | _ | 1,230 | 1,230 | 0.05    | 0.01    | _    | 1,235 |
| Dust<br>From<br>Material<br>Movemer | <br>nt | _    | _    | -    | _       | _    | 1.28 | 1.28 | _    | 0.61 | 0.61 | _ | _     | _     | _       | _       | _    | _     |
| Onsite<br>truck                     | 0.00   | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  | 0.00  | 0.00    | 0.00    | 0.00 | 0.00  |
| Annual                              | _      | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent       | 0.20   | 0.16 | 1.52 | 1.31 | < 0.005 | 0.08 | -    | 0.08 | 0.07 | _    | 0.07 | _ | 204   | 204   | 0.01    | < 0.005 | _    | 204   |
| Dust<br>From<br>Material<br>Movemer | <br>nt | _    | _    | _    | _       | _    | 0.23 | 0.23 | _    | 0.11 | 0.11 | _ | _     | _     | _       | _       | _    | _     |
| Onsite<br>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,<br>Summer<br>(Max)           | _      | _    | _    | -    | _       | _    | -    | -    | -    | -    | _    | _ | _     | _     | _       | _       | _    | _     |
| Worker                              | 0.17   | 0.15 | 0.14 | 2.33 | 0.00    | 0.00 | 0.37 | 0.37 | 0.00 | 0.09 | 0.09 | _ | 408   | 408   | 0.02    | 0.01    | 1.49 | 414   |
| Vendor                              | 0.03   | 0.03 | 0.74 | 0.33 | 0.01    | 0.01 | 0.20 | 0.21 | 0.01 | 0.05 | 0.06 | _ | 733   | 733   | < 0.005 | 0.10    | 2.00 | 764   |
| 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,<br>Winter<br>(Max)           | _      | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Worker                              | 0.14   | 0.13 | 0.15 | 1.56 | 0.00    | 0.00 | 0.37 | 0.37 | 0.00 | 0.09 | 0.09 | _ | 362   | 362   | 0.02    | 0.01    | 0.04 | 366   |
| Vendor                              | 0.03   | 0.03 | 0.79 | 0.33 | 0.01    | 0.01 | 0.20 | 0.21 | 0.01 | 0.05 | 0.06 | _ | 733   | 733   | < 0.005 | 0.10    | 0.05 | 763   |

| 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<br>Daily | _       | _       | _       | _    | _        | _       | _       | _    | _       | _       | _       | _ | _    | _    | _       | _       | _    | _    |
| Worker           | 0.02    | 0.02    | 0.02    | 0.24 | 0.00     | 0.00    | 0.05    | 0.05 | 0.00    | 0.01    | 0.01    | _ | 51.0 | 51.0 | < 0.005 | < 0.005 | 0.09 | 51.7 |
| Vendor           | < 0.005 | < 0.005 | 0.11    | 0.04 | < 0.005  | < 0.005 | 0.03    | 0.03 | < 0.005 | 0.01    | 0.01    | _ | 100  | 100  | < 0.005 | 0.01    | 0.12 | 105  |
| 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           | _       | _       | _       | _    | <u> </u> | _       | _       | _    | _       | _       | _       | _ | _    | _    | _       | _       | _    | _    |
| Worker           | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00     | 0.00    | 0.01    | 0.01 | 0.00    | < 0.005 | < 0.005 | _ | 8.44 | 8.44 | < 0.005 | < 0.005 | 0.01 | 8.56 |
| Vendor           | < 0.005 | < 0.005 | 0.02    | 0.01 | < 0.005  | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | _ | 16.6 | 16.6 | < 0.005 | < 0.005 | 0.02 | 17.3 |
| 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

| Location                            | TOG  | ROG  | NOx  | СО   | SO2  | PM10E  | PM10D  | PM10T    | PM2.5F    | PM2.5D   | PM2.5T    | BCO2 | NBCO2  | CO2T   | CH4  | N2O  | R    | CO2e   |
|-------------------------------------|------|------|------|------|------|--------|--------|----------|-----------|----------|-----------|------|--------|--------|------|------|------|--------|
|                                     | 100  | ROO  | ITOX |      | 002  | TWITOL | TWITOD | T WITO I | 1 1012.02 | 1 W.Z.OD | 1 1012.01 | DOOL | NDOOZ  | 0021   | 0111 | 1120 | 11   | 0020   |
| Onsite                              | _    | _    | _    | _    | _    | _      | _      | _        | _         | _        | _         | _    | _      | _      | _    | _    | _    | _      |
| Daily,<br>Summer<br>(Max)           | _    | _    | _    | _    | _    | _      | _      | _        | _         | _        | _         | _    | _      | _      | _    | _    | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent       | 7.15 | 6.01 | 55.0 | 49.7 | 0.10 | 2.56   | _      | 2.56     | 2.36      | _        | 2.36      | _    | 11,046 | 11,046 | 0.45 | 0.09 | _    | 11,084 |
| Dust<br>From<br>Material<br>Movemer | —    | _    | _    | _    | _    | _      | 4.92   | 4.92     | _         | 1.91     | 1.91      | _    | _      | _      | _    | _    | _    | _      |
| 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,<br>Winter<br>(Max)           | _    | _    | _    | _    | _    | _      | _      | _        | _         | _        | _         | _    | _      | _      | _    | _    | _    | _      |

| Off-Roa                             | 7 15 | 6.01 | 55.0 | 49.7 | 0.10 | 2.56 | _    | 2.56 | 2.36 | _    | 2.36 |   | 11,046 | 11,046 | 0.45 | 0.09    | _    | 11,084 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|---|--------|--------|------|---------|------|--------|
| d<br>Equipm                         | 7.13 | 0.01 | 33.0 | 73.1 | 0.10 | 2.50 |      | 2.00 | 2.50 |      | 2.00 |   | 11,040 | 11,040 | 0.40 | 0.03    |      | 11,004 |
| Dust<br>From<br>Material<br>Movemer | —    | _    | _    | _    | _    | _    | 4.92 | 4.92 | _    | 1.91 | 1.91 | _ | _      | _      | _    | _       | _    | _      |
| Onsite<br>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<br>Daily                    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent       | 2.35 | 1.98 | 18.1 | 16.4 | 0.03 | 0.84 | _    | 0.84 | 0.77 | _    | 0.77 | _ | 3,632  | 3,632  | 0.15 | 0.03    | _    | 3,644  |
| Dust<br>From<br>Material<br>Movemer | —    | _    | -    | _    |      | -    | 1.62 | 1.62 | _    | 0.63 | 0.63 | _ | _      | _      | _    | _       | _    | -      |
| Onsite<br>truck                     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00 | 0.00    | 0.00 | 0.00   |
| Annual                              | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent       | 0.43 | 0.36 | 3.30 | 2.98 | 0.01 | 0.15 | _    | 0.15 | 0.14 | _    | 0.14 | _ | 601    | 601    | 0.02 | < 0.005 | _    | 603    |
| Dust<br>From<br>Material<br>Movemer | —    | _    | -    | _    |      | -    | 0.30 | 0.30 | _    | 0.11 | 0.11 | _ | _      | _      | _    | _       | _    | _      |
| Onsite<br>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,<br>Summer<br>(Max)           | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | -      |
| Worker                              | 0.20 | 0.18 | 0.16 | 2.74 | 0.00 | 0.00 | 0.43 | 0.43 | 0.00 | 0.10 | 0.10 | _ | 481    | 481    | 0.02 | 0.02    | 1.76 | 488    |

| Vendor                    | 0.07    | 0.07    | 1.78 | 0.78 | 0.01    | 0.02    | 0.47 | 0.50 | 0.02    | 0.13 | 0.15 |   | 1,752 | 1,752 | < 0.005 | 0.23    | 4.79 | 1,827 |
|---------------------------|---------|---------|------|------|---------|---------|------|------|---------|------|------|---|-------|-------|---------|---------|------|-------|
| 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,<br>Winter<br>(Max) | _       | _       | _    | _    | _       | _       | _    | _    | _       | _    | -    | - | _     | -     | _       | _       | _    | _     |
| Worker                    | 0.16    | 0.15    | 0.17 | 1.84 | 0.00    | 0.00    | 0.43 | 0.43 | 0.00    | 0.10 | 0.10 | _ | 426   | 426   | 0.02    | 0.02    | 0.05 | 432   |
| Vendor                    | 0.07    | 0.06    | 1.88 | 0.79 | 0.01    | 0.02    | 0.47 | 0.50 | 0.02    | 0.13 | 0.15 | _ | 1,754 | 1,754 | < 0.005 | 0.23    | 0.12 | 1,824 |
| 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<br>Daily          | _       | _       | _    | _    | _       | _       | _    | _    | _       | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Worker                    | 0.05    | 0.05    | 0.06 | 0.68 | 0.00    | 0.00    | 0.14 | 0.14 | 0.00    | 0.03 | 0.03 | _ | 144   | 144   | 0.01    | 0.01    | 0.25 | 146   |
| Vendor                    | 0.02    | 0.02    | 0.62 | 0.26 | < 0.005 | 0.01    | 0.15 | 0.16 | 0.01    | 0.04 | 0.05 | _ | 576   | 576   | < 0.005 | 0.08    | 0.68 | 600   |
| Hauling                   | 0.00    | 0.00    | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | _ | 0.00  | 0.00  | 0.00    | 0.00    | 0.00 | 0.00  |
| Annual                    | _       | _       | _    | _    | _       | _       | _    | _    | _       | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Worker                    | 0.01    | 0.01    | 0.01 | 0.12 | 0.00    | 0.00    | 0.03 | 0.03 | 0.00    | 0.01 | 0.01 | _ | 23.9  | 23.9  | < 0.005 | < 0.005 | 0.04 | 24.2  |
| Vendor                    | < 0.005 | < 0.005 | 0.11 | 0.05 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | _ | 95.4  | 95.4  | < 0.005 | 0.01    | 0.11 | 99.3  |
| 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

| Location                      | TOG  | ROG  | NOx  | со   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R | CO2e  |
|-------------------------------|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|---|-------|
| Onsite                        | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _ | _     |
| Daily,<br>Summer<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _ | _     |
| Daily,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _ | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 2.68 | 2.24 | 20.8 | 25.3 | 0.05 | 0.85  | _     | 0.85  | 0.78   | _      | 0.78   | _    | 4,818 | 4,818 | 0.20 | 0.04 | _ | 4,834 |

| Onsite<br>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<br>Daily              | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _      | -      | _       | _       | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent | 0.34 | 0.29 | 2.64 | 3.22 | 0.01    | 0.11 | _    | 0.11 | 0.10 | _    | 0.10 | _ | 613    | 613    | 0.02    | < 0.005 | _    | 615    |
| Onsite<br>truck               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00    | 0.00    | 0.00 | 0.00   |
| Annual                        | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _      | _      | _       | _       | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent | 0.06 | 0.05 | 0.48 | 0.59 | < 0.005 | 0.02 | _    | 0.02 | 0.02 |      | 0.02 | _ | 101    | 101    | < 0.005 | < 0.005 | _    | 102    |
| Onsite<br>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,<br>Summer<br>(Max)     | _    | _    | _    | _    | _       | -    | -    | -    | -    | _    | _    | - | _      | _      | _       | _       | _    | _      |
| Daily,<br>Winter<br>(Max)     | _    | _    | _    | -    | _       | -    | -    | _    | -    | _    | _    | - | -      | _      | _       | -       | _    | _      |
| Worker                        | 7.30 | 6.54 | 7.75 | 81.5 | 0.00    | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 | _ | 18,877 | 18,877 | 0.92    | 0.73    | 2.02 | 19,118 |
| Vendor                        | 0.60 | 0.56 | 16.8 | 7.09 | 0.12    | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 15,689 | 15,689 | 0.03    | 2.10    | 1.11 | 16,317 |
| 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<br>Daily              | _    | _    | -    | _    | _       | _    | _    | _    | _    | _    | -    | _ | _      | _      | _       | _       | _    | _      |
| Worker                        | 0.94 | 0.84 | 1.07 | 11.6 | 0.00    | 0.00 | 2.41 | 2.41 | 0.00 | 0.56 | 0.56 | _ | 2,472  | 2,472  | 0.12    | 0.09    | 4.28 | 2,507  |
| Vendor                        | 0.08 | 0.08 | 2.14 | 0.89 | 0.02    | 0.03 | 0.53 | 0.56 | 0.03 | 0.15 | 0.18 | _ | 1,994  | 1,994  | < 0.005 | 0.27    | 2.35 | 2,076  |
| 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                        | 0.17 | 0.15 | 0.19 | 2.12 | 0.00    | 0.00 | 0.44 | 0.44 | 0.00 | 0.10 | 0.10 | _ | 409    | 409    | 0.02    | 0.02    | 0.71 | 415    |

| Vendor  | 0.01 | 0.01 | 0.39 | 0.16 | < 0.005 | 0.01 | 0.10 | 0.10 | 0.01 | 0.03 | 0.03 | _ | 330  | 330  | < 0.005 | 0.04 | 0.39 | 344  |
|---------|------|------|------|------|---------|------|------|------|------|------|------|---|------|------|---------|------|------|------|
| 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. Building Construction (2026) - Unmitigated

| Location                      | TOG  | ROG  | NOx  | СО   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R    | CO2e  |
|-------------------------------|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|------|-------|
| Onsite                        | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Daily,<br>Summer<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 2.56 | 2.14 | 19.6 | 25.2 | 0.05 | 0.75  | _     | 0.75  | 0.69   | _      | 0.69   | _    | 4,817 | 4,817 | 0.20 | 0.04 | _    | 4,833 |
| Onsite<br>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,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 2.56 | 2.14 | 19.6 | 25.2 | 0.05 | 0.75  | _     | 0.75  | 0.69   | _      | 0.69   | _    | 4,817 | 4,817 | 0.20 | 0.04 | -    | 4,833 |
| Onsite<br>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<br>Daily              | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 1.83 | 1.53 | 14.0 | 18.0 | 0.03 | 0.54  | _     | 0.54  | 0.49   | _      | 0.49   | _    | 3,441 | 3,441 | 0.14 | 0.03 | _    | 3,452 |
| Onsite<br>truck               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 0.00   | 0.00   | 0.00   | _    | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  |
| Annual                        | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |

| Off-Roa<br>Equipme        | 0.33<br>nt | 0.28 | 2.56 | 3.28 | 0.01 | 0.10 | _    | 0.10 | 0.09 | _    | 0.09 | _ | 570    | 570    | 0.02    | < 0.005 | _    | 572    |
|---------------------------|------------|------|------|------|------|------|------|------|------|------|------|---|--------|--------|---------|---------|------|--------|
| Onsite<br>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,<br>Summer<br>(Max) | _          | -    | _    | -    | -    | -    | _    | _    | _    | _    | -    | _ |        | _      | _       | _       | _    | _      |
| Worker                    | 7.72       | 6.99 | 6.43 | 113  | 0.00 | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 | _ | 20,903 | 20,903 | 0.85    | 0.73    | 70.8 | 21,211 |
| Vendor                    | 0.67       | 0.61 | 15.3 | 6.46 | 0.12 | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 15,366 | 15,366 | 0.03    | 2.10    | 38.8 | 16,032 |
| 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,<br>Winter<br>(Max) | _          | -    | -    | -    | -    | -    | -    | _    | _    | _    | -    | _ | _      | _      | _       | _       | _    | _      |
| Worker                    | 6.95       | 6.19 | 7.09 | 75.1 | 0.00 | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 | _ | 18,508 | 18,508 | 0.29    | 0.73    | 1.83 | 18,734 |
| Vendor                    | 0.60       | 0.56 | 16.3 | 6.69 | 0.12 | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 15,383 | 15,383 | 0.03    | 2.10    | 1.01 | 16,011 |
| 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<br>Daily          | -          | _    | -    | -    | -    | _    | _    | _    | _    | -    | _    | - | _      | -      | -       | _       | _    | _      |
| Worker                    | 5.01       | 4.49 | 5.49 | 60.5 | 0.00 | 0.00 | 13.5 | 13.5 | 0.00 | 3.17 | 3.17 | _ | 13,610 | 13,610 | 0.23    | 0.52    | 21.8 | 13,792 |
| Vendor                    | 0.44       | 0.41 | 11.5 | 4.72 | 0.09 | 0.16 | 2.99 | 3.14 | 0.16 | 0.83 | 0.98 | _ | 10,981 | 10,981 | 0.02    | 1.50    | 12.0 | 11,441 |
| 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                    | 0.91       | 0.82 | 1.00 | 11.0 | 0.00 | 0.00 | 2.47 | 2.47 | 0.00 | 0.58 | 0.58 | _ | 2,253  | 2,253  | 0.04    | 0.09    | 3.61 | 2,283  |
| Vendor                    | 0.08       | 0.07 | 2.10 | 0.86 | 0.02 | 0.03 | 0.55 | 0.57 | 0.03 | 0.15 | 0.18 | _ | 1,818  | 1,818  | < 0.005 | 0.25    | 1.98 | 1,894  |
| Hauling                   | 0.00       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00    | 0.00    | 0.00 | 0.00   |

## 3.9. Building Construction (2027) - Unmitigated

| Location | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|----------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Onsite   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

| Daily,<br>Summer<br>(Max)     | _    |      |      | _    | _    |      |      | _    |      | _    | _    | _ |       |       | _    | _       | _    | _     |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|---|-------|-------|------|---------|------|-------|
| Off-Roa<br>d<br>Equipm<br>ent | 2.46 | 2.06 | 18.7 | 25.1 | 0.05 | 0.67 | _    | 0.67 | 0.62 | _    | 0.62 | _ | 4,817 | 4,817 | 0.20 | 0.04    | _    | 4,833 |
| Onsite<br>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,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _     | _     | _    | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 2.46 | 2.06 | 18.7 | 25.1 | 0.05 | 0.67 | _    | 0.67 | 0.62 | -    | 0.62 | _ | 4,817 | 4,817 | 0.20 | 0.04    | _    | 4,833 |
| Onsite<br>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<br>Daily              | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _     | _     | _    | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 1.76 | 1.47 | 13.4 | 18.0 | 0.03 | 0.48 | _    | 0.48 | 0.44 | -    | 0.44 | _ | 3,440 | 3,440 | 0.14 | 0.03    | _    | 3,452 |
| Onsite<br>truck               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  | 0.00  | 0.00 | 0.00    | 0.00 | 0.00  |
| Annual                        | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _     | _     | _    | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 0.32 | 0.27 | 2.44 | 3.28 | 0.01 | 0.09 | _    | 0.09 | 0.08 | _    | 0.08 | _ | 570   | 570   | 0.02 | < 0.005 | _    | 572   |
| Onsite<br>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,<br>Summer<br>(Max)     | _    | _    | _    | -    | _    | _    | _    | _    | _    | -    | _    | - | _     | _     | _    | _       | _    | _     |

| Worker                    | 7.33 | 6.64 | 5.77 | 104  | 0.00 | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 | _ | 20,543 | 20,543 | 0.23    | 0.69 | 64.0 | 20,819 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|---|--------|--------|---------|------|------|--------|
| Vendor                    | 0.66 | 0.48 | 14.8 | 6.18 | 0.12 | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 15,030 | 15,030 | 0.03    | 1.98 | 34.6 | 15,655 |
| 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,<br>Winter<br>(Max) | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _       | _    | _    | _      |
| Worker                    | 6.69 | 5.96 | 6.43 | 70.0 | 0.00 | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 | _ | 18,195 | 18,195 | 0.29    | 0.73 | 1.65 | 18,420 |
| Vendor                    | 0.59 | 0.43 | 15.7 | 6.42 | 0.12 | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 15,047 | 15,047 | 0.03    | 1.99 | 0.90 | 15,642 |
| 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<br>Daily          | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _       | _    | _    | _      |
| Worker                    | 4.78 | 4.26 | 5.02 | 55.9 | 0.00 | 0.00 | 13.5 | 13.5 | 0.00 | 3.17 | 3.17 | _ | 13,378 | 13,378 | 0.21    | 0.52 | 19.7 | 13,558 |
| Vendor                    | 0.44 | 0.32 | 11.2 | 4.52 | 0.09 | 0.16 | 2.99 | 3.14 | 0.16 | 0.83 | 0.98 | _ | 10,741 | 10,741 | 0.02    | 1.42 | 10.7 | 11,176 |
| 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                    | 0.87 | 0.78 | 0.92 | 10.2 | 0.00 | 0.00 | 2.47 | 2.47 | 0.00 | 0.58 | 0.58 | _ | 2,215  | 2,215  | 0.03    | 0.09 | 3.27 | 2,245  |
| Vendor                    | 0.08 | 0.06 | 2.04 | 0.83 | 0.02 | 0.03 | 0.55 | 0.57 | 0.03 | 0.15 | 0.18 | _ | 1,778  | 1,778  | < 0.005 | 0.24 | 1.77 | 1,850  |
| Hauling                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00    | 0.00 | 0.00 | 0.00   |
|                           |      |      |      |      |      |      |      |      |      |      |      |   |        |        |         |      |      |        |

## 3.11. Building Construction (2028) - Unmitigated

|                               |      |      |      |      |      |       |       |       |        | <i></i> |        |      |       |       |      |      |   |       |
|-------------------------------|------|------|------|------|------|-------|-------|-------|--------|---------|--------|------|-------|-------|------|------|---|-------|
| Location                      | TOG  | ROG  | NOx  | со   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D  | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R | CO2e  |
| Onsite                        | _    | _    | _    | _    | _    | _     | _     | _     | _      | _       | _      | _    | _     | _     | _    | _    | _ | _     |
| Daily,<br>Summer<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _       | _      | _    | _     | _     | _    | _    | _ | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 2.37 | 1.98 | 17.8 | 25.1 | 0.05 | 0.60  | _     | 0.60  | 0.55   | _       | 0.55   | _    | 4,818 | 4,818 | 0.20 | 0.04 | _ | 4,834 |

| 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,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent | 2.37 | 1.98 | 17.8 | 25.1 | 0.05 | 0.60 | _    | 0.60 | 0.55 | _    | 0.55 | _ | 4,818  | 4,818  | 0.20 | 0.04    | _    | 4,834  |
| Onsite<br>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<br>Daily              | _    | _    | -    | _    | _    | _    | _    | -    | _    | -    | _    | _ | _      | _      | -    | -       | _    | -      |
| Off-Roa<br>d<br>Equipm<br>ent | 1.70 | 1.42 | 12.7 | 18.0 | 0.03 | 0.43 | _    | 0.43 | 0.40 | _    | 0.40 | _ | 3,451  | 3,451  | 0.14 | 0.03    | _    | 3,462  |
| Onsite<br>truck               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00 | 0.00    | 0.00 | 0.00   |
| Annual                        | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent | 0.31 | 0.26 | 2.32 | 3.28 | 0.01 | 0.08 | _    | 0.08 | 0.07 | _    | 0.07 | _ | 571    | 571    | 0.02 | < 0.005 | _    | 573    |
| 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,<br>Summer<br>(Max)     | _    | _    | _    | -    | -    | _    | _    | _    | _    | _    | -    | - | _      | _      | _    | _       | _    | _      |
| Worker                        | 7.11 | 6.41 | 5.11 | 97.0 | 0.00 | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 | _ | 20,153 | 20,153 | 0.23 | 0.69    | 57.6 | 20,423 |
| Vendor                        | 0.63 | 0.47 | 14.3 | 5.92 | 0.12 | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 14,642 | 14,642 | 0.03 | 1.98    | 30.7 | 15,263 |
| 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,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | _      |

| Worker           | 5.83 | 5.70 | 5.77 | 65.0 | 0.00 | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 |   | 17,854 | 17,854 | 0.26    | 0.69 | 1.49 | 18,068 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|---|--------|--------|---------|------|------|--------|
| Vendor           | 0.58 | 0.43 | 15.2 | 6.02 | 0.12 | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 14,659 | 14,659 | 0.03    | 1.98 | 0.80 | 15,250 |
| 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<br>Daily | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _       | _    | _    | _      |
| Worker           | 4.22 | 4.13 | 4.58 | 52.0 | 0.00 | 0.00 | 13.6 | 13.6 | 0.00 | 3.18 | 3.18 | _ | 13,163 | 13,163 | 0.18    | 0.50 | 17.8 | 13,333 |
| Vendor           | 0.44 | 0.32 | 10.8 | 4.25 | 0.09 | 0.16 | 2.99 | 3.15 | 0.16 | 0.83 | 0.99 | _ | 10,492 | 10,492 | 0.02    | 1.42 | 9.47 | 10,925 |
| 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           | 0.77 | 0.75 | 0.84 | 9.50 | 0.00 | 0.00 | 2.48 | 2.48 | 0.00 | 0.58 | 0.58 | _ | 2,179  | 2,179  | 0.03    | 0.08 | 2.95 | 2,207  |
| Vendor           | 0.08 | 0.06 | 1.97 | 0.78 | 0.02 | 0.03 | 0.55 | 0.58 | 0.03 | 0.15 | 0.18 | _ | 1,737  | 1,737  | < 0.005 | 0.23 | 1.57 | 1,809  |
| Hauling          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00    | 0.00 | 0.00 | 0.00   |

## 3.13. Building Construction (2029) - Unmitigated

| Location                      | TOG  | ROG  | NOx  | со   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R    | CO2e  |
|-------------------------------|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|------|-------|
| Onsite                        | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Daily,<br>Summer<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 2.31 | 1.93 | 17.1 | 25.0 | 0.05 | 0.55  | _     | 0.55  | 0.51   | _      | 0.51   | _    | 4,816 | 4,816 | 0.20 | 0.04 | _    | 4,833 |
| 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,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |

| Off-Roa<br>d<br>Equipm<br>ent | 2.31 | 1.93 | 17.1 | 25.0 | 0.05 | 0.55 | _    | 0.55 | 0.51 | _    | 0.51 | _ | 4,816  | 4,816  | 0.20 | 0.04    | _    | 4,833  |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|---|--------|--------|------|---------|------|--------|
| Onsite<br>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<br>Daily              | -    | -    | _    | _    | _    | _    | _    | -    | _    | _    | -    | - | _      | -      | -    | _       | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent | 1.59 | 1.33 | 11.7 | 17.2 | 0.03 | 0.38 | _    | 0.38 | 0.35 | _    | 0.35 | _ | 3,308  | 3,308  | 0.13 | 0.03    | _    | 3,320  |
| Onsite<br>truck               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00   | 0.00   | 0.00 | 0.00    | 0.00 | 0.00   |
| Annual                        | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | _      |
| Off-Roa<br>d<br>Equipm<br>ent | 0.29 | 0.24 | 2.14 | 3.14 | 0.01 | 0.07 | -    | 0.07 | 0.06 | _    | 0.06 | - | 548    | 548    | 0.02 | < 0.005 | -    | 550    |
| Onsite<br>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,<br>Summer<br>(Max)     | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | _      |
| Worker                        | 6.16 | 6.06 | 5.08 | 90.4 | 0.00 | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 | _ | 19,787 | 19,787 | 0.23 | 0.69    | 51.6 | 20,051 |
| Vendor                        | 0.63 | 0.47 | 13.8 | 5.64 | 0.12 | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 14,233 | 14,233 | 0.03 | 1.87    | 26.9 | 14,817 |
| 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,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _    | _       | _    | -      |
| Worker                        | 5.54 | 4.82 | 5.11 | 60.6 | 0.00 | 0.00 | 19.1 | 19.1 | 0.00 | 4.48 | 4.48 | _ | 17,534 | 17,534 | 0.26 | 0.69    | 1.34 | 17,748 |
| Vendor                        | 0.57 | 0.41 | 14.7 | 5.86 | 0.12 | 0.22 | 4.21 | 4.43 | 0.22 | 1.16 | 1.38 | _ | 14,250 | 14,250 | 0.03 | 1.87    | 0.70 | 14,808 |
| 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<br>Daily | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _      | _      | _       | _    | _    | _      |
|------------------|------|------|------|------|------|------|------|------|------|------|------|---|--------|--------|---------|------|------|--------|
| Worker           | 3.85 | 3.76 | 3.94 | 46.5 | 0.00 | 0.00 | 13.0 | 13.0 | 0.00 | 3.05 | 3.05 | _ | 12,396 | 12,396 | 0.18    | 0.48 | 15.3 | 12,557 |
| Vendor           | 0.41 | 0.30 | 10.0 | 3.96 | 0.08 | 0.15 | 2.87 | 3.02 | 0.15 | 0.79 | 0.95 | _ | 9,781  | 9,781  | 0.02    | 1.28 | 7.98 | 10,172 |
| 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           | 0.70 | 0.69 | 0.72 | 8.48 | 0.00 | 0.00 | 2.38 | 2.38 | 0.00 | 0.56 | 0.56 | _ | 2,052  | 2,052  | 0.03    | 0.08 | 2.53 | 2,079  |
| Vendor           | 0.07 | 0.05 | 1.83 | 0.72 | 0.02 | 0.03 | 0.52 | 0.55 | 0.03 | 0.14 | 0.17 | _ | 1,619  | 1,619  | < 0.005 | 0.21 | 1.32 | 1,684  |
| Hauling          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00    | 0.00 | 0.00 | 0.00   |

## 3.15. Paving (2028) - Unmitigated

|                               |      |      |      |      |      |       |       |       |        | <b>,</b> |        | /    |       |       |      |      | _    |       |
|-------------------------------|------|------|------|------|------|-------|-------|-------|--------|----------|--------|------|-------|-------|------|------|------|-------|
| Location                      | TOG  | ROG  | NOx  | со   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D   | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R    | CO2e  |
| Onsite                        | _    | _    | _    | _    | _    | _     | _     | _     | _      | _        | _      | _    | _     | _     | _    | _    | _    | _     |
| Daily,<br>Summer<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _        | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 0.82 | 0.69 | 6.63 | 9.91 | 0.01 | 0.26  | _     | 0.26  | 0.24   | _        | 0.24   | _    | 1,511 | 1,511 | 0.06 | 0.01 | _    | 1,516 |
| Paving                        | 1.15 | 1.15 | _    | _    | _    | _     | _     | _     | _      | _        | _      | _    | _     | _     | _    | _    | _    | _     |
| Onsite<br>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,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _        | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 0.82 | 0.69 | 6.63 | 9.91 | 0.01 | 0.26  | _     | 0.26  | 0.24   | _        | 0.24   | _    | 1,511 | 1,511 | 0.06 | 0.01 | _    | 1,516 |
| Paving                        | 1.15 | 1.15 | _    | _    | _    | _     | _     | _     | _      | _        | _      | _    | _     | _     | _    | _    | _    | _     |

| Onsite<br>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<br>Daily              | _    | _    | _    | _    | _       | _    | _    | _    | _    | -    | _    | _ | _    | _    | _       | _       | _    | _    |
| Off-Roa<br>d<br>Equipm<br>ent | 0.18 | 0.15 | 1.44 | 2.15 | < 0.005 | 0.06 | _    | 0.06 | 0.05 | _    | 0.05 | _ | 328  | 328  | 0.01    | < 0.005 | _    | 329  |
| Paving                        | 0.25 | 0.25 | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _    | _    | _       | _       | _    | _    |
| Onsite<br>truck               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00 |
| Annual                        | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _    | _    | _       | _       | _    | _    |
| Off-Roa<br>d<br>Equipm<br>ent | 0.03 | 0.03 | 0.26 | 0.39 | < 0.005 | 0.01 | _    | 0.01 | 0.01 | _    | 0.01 | _ | 54.3 | 54.3 | < 0.005 | < 0.005 | _    | 54.5 |
| Paving                        | 0.05 | 0.05 | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _    | _    | _       | _       | _    | _    |
| Onsite<br>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,<br>Summer<br>(Max)     | _    | _    | -    | -    | _       | -    | _    | _    | _    | _    | -    | - | _    | -    | -       | -       | _    | _    |
| Worker                        | 0.07 | 0.07 | 0.05 | 1.00 | 0.00    | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | _ | 207  | 207  | < 0.005 | 0.01    | 0.59 | 210  |
| 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 |
| Daily,<br>Winter<br>(Max)     | _    | _    | -    | -    | _       | -    | _    | _    | _    | _    | _    | - | _    | -    | _       | -       | _    | _    |
| Worker                        | 0.06 | 0.06 | 0.06 | 0.67 | 0.00    | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | _ | 183  | 183  | < 0.005 | 0.01    | 0.02 | 185  |
| 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<br>Daily              | _    | -    | _    | _    | _       | _    | _    | _    | -    | -    | _    | _ | _    | _    | _       | _       | _    | _    |

| Worker  | 0.01    | 0.01    | 0.01    | 0.16 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01    | 0.01    | _ | 41.0 | 41.0 | < 0.005 | < 0.005 | 0.06 | 41.5 |
|---------|---------|---------|---------|------|------|------|------|------|------|---------|---------|---|------|------|---------|---------|------|------|
| 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 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | _ | 6.78 | 6.78 | < 0.005 | < 0.005 | 0.01 | 6.87 |
| Vendor  | 0.00    | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00    | _ | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00 |
| Hauling | 0.00    | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00    | _ | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00 |

## 3.17. Paving (2029) - Unmitigated

|                               |      |      |      |      |      |       |       |       |        |        |        | 2000 |       | 000=  | 0111 |      |      | 000   |
|-------------------------------|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|------|-------|
| Location                      | TOG  | ROG  | NOx  | со   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R    | CO2e  |
| Onsite                        | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      |        | _    | _     | _     | _    | _    |      | _     |
| Daily,<br>Summer<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 0.80 | 0.67 | 6.46 | 9.92 | 0.01 | 0.24  | _     | 0.24  | 0.22   | _      | 0.22   | _    | 1,511 | 1,511 | 0.06 | 0.01 | _    | 1,516 |
| Paving                        | 1.15 | 1.15 | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| 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,<br>Winter<br>(Max)     | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 0.80 | 0.67 | 6.46 | 9.92 | 0.01 | 0.24  | _     | 0.24  | 0.22   | _      | 0.22   | _    | 1,511 | 1,511 | 0.06 | 0.01 | _    | 1,516 |
| Paving                        | 1.15 | 1.15 | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _    |       |
| 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<br>Off-Roa<br>d         | 0.55 | 0.46 | 4.44 | 6.81 | 0.01    | 0.16 | _    | 0.16 | 0.15 | _    | 0.15 | _ | 1,038 | 1,038 | 0.04    | 0.01    | _    | 1,041 |
| Equipm<br>ent                 |      |      |      |      |         |      |      |      |      |      |      |   |       |       |         |         |      |       |
| Paving                        | 0.79 | 0.79 | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Onsite<br>truck               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  | 0.00  | 0.00    | 0.00    | 0.00 | 0.00  |
| Annual                        | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent | 0.10 | 0.08 | 0.81 | 1.24 | < 0.005 | 0.03 | _    | 0.03 | 0.03 | _    | 0.03 | _ | 172   | 172   | 0.01    | < 0.005 | _    | 172   |
| Paving                        | 0.14 | 0.14 | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Onsite<br>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,<br>Summer<br>(Max)     | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | - | _     | _     | _       | _       | -    | -     |
| Worker                        | 0.06 | 0.06 | 0.05 | 0.93 | 0.00    | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | _ | 203   | 203   | < 0.005 | 0.01    | 0.53 | 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  |
| Daily,<br>Winter<br>(Max)     | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Worker                        | 0.06 | 0.05 | 0.05 | 0.62 | 0.00    | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | _ | 180   | 180   | < 0.005 | 0.01    | 0.01 | 182   |
| 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<br>Daily              | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _ | _     | _     | _       | _       | _    | _     |
| Worker                        | 0.04 | 0.04 | 0.04 | 0.48 | 0.00    | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | _ | 127   | 127   | < 0.005 | < 0.005 | 0.16 | 129   |
| 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  | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | _ | 21.1 | 21.1 | < 0.005 | < 0.005 | 0.03 | 21.3 |
| Vendor  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00 |

## 3.19. Architectural Coating (2027) - Unmitigated

| Location                          | TOG  | ROG  | NOx  | со   | SO2     | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | всо2 | NBCO2 | CO2T | CH4  | N2O     | R    | CO2e |
|-----------------------------------|------|------|------|------|---------|-------|-------|-------|--------|--------|--------|------|-------|------|------|---------|------|------|
| Onsite                            | _    | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |
| Daily,<br>Summer<br>(Max)         |      | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.18 | 0.15 | 1.11 | 1.50 | < 0.005 | 0.03  | _     | 0.03  | 0.02   | _      | 0.02   | _    | 178   | 178  | 0.01 | < 0.005 | _    | 179  |
| Architect<br>ural<br>Coating<br>s | 27.1 | 27.1 | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |
| 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,<br>Winter<br>(Max)         |      | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.18 | 0.15 | 1.11 | 1.50 | < 0.005 | 0.03  | _     | 0.03  | 0.02   | _      | 0.02   | _    | 178   | 178  | 0.01 | < 0.005 | _    | 179  |
| Architect<br>ural<br>Coating<br>s | 27.1 | 27.1 | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |

| Onsite<br>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<br>Daily                  | _    | _    | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.07 | 0.06 | 0.45 | 0.61 | < 0.005 | 0.01    | _    | 0.01    | 0.01    | _    | 0.01    | _ | 72.1  | 72.1  | < 0.005 | < 0.005 | _    | 72.4  |
| Architect<br>ural<br>Coating<br>s | 11.0 | 11.0 | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Onsite<br>truck                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00    | 0.00    | 0.00 | 0.00    | _ | 0.00  | 0.00  | 0.00    | 0.00    | 0.00 | 0.00  |
| Annual                            | _    | _    | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.01 | 0.01 | 0.08 | 0.11 | < 0.005 | < 0.005 | _    | < 0.005 | < 0.005 | _    | < 0.005 | _ | 11.9  | 11.9  | < 0.005 | < 0.005 | _    | 12.0  |
| Architect<br>ural<br>Coating<br>s | 2.00 | 2.00 | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Onsite<br>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,<br>Summer<br>(Max)         | _    | _    | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Worker                            | 1.46 | 1.33 | 1.15 | 20.8 | 0.00    | 0.00    | 3.82 | 3.82    | 0.00    | 0.89 | 0.89    | _ | 4,103 | 4,103 | 0.05    | 0.14    | 12.8 | 4,158 |
| 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  |
| Daily,<br>Winter<br>(Max)         | _    | _    | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Worker                            | 1.34 | 1.19 | 1.28 | 14.0 | 0.00    | 0.00    | 3.82 | 3.82    | 0.00    | 0.89 | 0.89    | _ | 3,634 | 3,634 | 0.06    | 0.14    | 0.33 | 3,679 |

| 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<br>Daily | _    | -    | _    | _    | _    | _    | _    | _    | -    | _    | _    | _ | _     | _     | _       | _    | _    | _     |
| Worker           | 0.54 | 0.48 | 0.57 | 6.34 | 0.00 | 0.00 | 1.53 | 1.53 | 0.00 | 0.36 | 0.36 | _ | 1,515 | 1,515 | 0.02    | 0.06 | 2.24 | 1,536 |
| 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           | 0.10 | 0.09 | 0.10 | 1.16 | 0.00 | 0.00 | 0.28 | 0.28 | 0.00 | 0.07 | 0.07 | _ | 251   | 251   | < 0.005 | 0.01 | 0.37 | 254   |
| Vendor           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  | 0.00  | 0.00    | 0.00 | 0.00 | 0.00  |
| Hauling          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  | 0.00  | 0.00    | 0.00 | 0.00 | 0.00  |

## 3.21. Architectural Coating (2028) - Unmitigated

| Location                          | TOG  | ROG  | NOx  | со   | SO2     | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4  | N2O     | R    | CO2e |
|-----------------------------------|------|------|------|------|---------|-------|-------|-------|--------|--------|--------|------|-------|------|------|---------|------|------|
| Onsite                            | _    | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |
| Daily,<br>Summer<br>(Max)         | _    | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.17 | 0.14 | 1.08 | 1.49 | < 0.005 | 0.02  | _     | 0.02  | 0.02   | _      | 0.02   | _    | 178   | 178  | 0.01 | < 0.005 | _    | 179  |
| Architect<br>ural<br>Coating<br>s | 27.1 | 27.1 | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |
| 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,<br>Winter<br>(Max)         | _    | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _    | _    |

| Off-Roa<br>Equipmer               |      | 0.14 | 1.08 | 1.49 | < 0.005 | 0.02    | _    | 0.02    | 0.02    | _    | 0.02    | _ | 178   | 178   | 0.01    | < 0.005 | _    | 179   |
|-----------------------------------|------|------|------|------|---------|---------|------|---------|---------|------|---------|---|-------|-------|---------|---------|------|-------|
| Architect<br>ural<br>Coating<br>s | 27.1 | 27.1 | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | -     | _     | _       | _       | _    | _     |
| Onsite<br>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<br>Daily                  | _    | _    | _    | _    | _       | -       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.12 | 0.10 | 0.77 | 1.07 | < 0.005 | 0.01    | _    | 0.01    | 0.01    | _    | 0.01    | _ | 128   | 128   | 0.01    | < 0.005 | _    | 128   |
| Architect<br>ural<br>Coating<br>s | 19.4 | 19.4 | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | -     | _     | -       | _       | _    | _     |
| Onsite<br>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                            | _    | _    | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | Ī-    | _       | _       | _    | _     |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.02 | 0.02 | 0.14 | 0.19 | < 0.005 | < 0.005 | _    | < 0.005 | < 0.005 | _    | < 0.005 | _ | 21.1  | 21.1  | < 0.005 | < 0.005 | _    | 21.2  |
| Architect<br>ural<br>Coating      | 3.54 | 3.54 | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Onsite<br>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,<br>Summer<br>(Max)         | _    | _    | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _     | _     | _       | _       | _    | _     |
| Worker                            | 1.42 | 1.28 | 1.02 | 19.4 | 0.00    | 0.00    | 3.82 | 3.82    | 0.00    | 0.89 | 0.89    | _ | 4,025 | 4,025 | 0.05    | 0.14    | 11.5 | 4,079 |
| 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  |

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| 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,<br>Winter<br>(Max) | _    | -    | -    | -    | -    | _    | _    | _    | _    | _    | -    | _ | _     | _     | _    | _    | -    | _     |
| Worker                    | 1.17 | 1.14 | 1.15 | 13.0 | 0.00 | 0.00 | 3.82 | 3.82 | 0.00 | 0.89 | 0.89 | _ | 3,566 | 3,566 | 0.05 | 0.14 | 0.30 | 3,609 |
| 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<br>Daily          | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _     | _     | _    | _    | _    | _     |
| Worker                    | 0.84 | 0.83 | 0.92 | 10.4 | 0.00 | 0.00 | 2.71 | 2.71 | 0.00 | 0.64 | 0.64 | _ | 2,629 | 2,629 | 0.04 | 0.10 | 3.56 | 2,663 |
| 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                    | 0.15 | 0.15 | 0.17 | 1.90 | 0.00 | 0.00 | 0.49 | 0.49 | 0.00 | 0.12 | 0.12 | _ | 435   | 435   | 0.01 | 0.02 | 0.59 | 441   |
| Vendor                    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  |
| Hauling                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  |

## 3.23. Architectural Coating (2029) - Unmitigated

| Location                          | TOG  | ROG  | NOx  | СО   | SO2     | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4  | N2O     | R | CO2e |
|-----------------------------------|------|------|------|------|---------|-------|-------|-------|--------|--------|--------|------|-------|------|------|---------|---|------|
| Onsite                            | _    | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _ | _    |
| Daily,<br>Summer<br>(Max)         | _    | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       |   | _    |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.17 | 0.14 | 1.06 | 1.48 | < 0.005 | 0.02  | _     | 0.02  | 0.02   | _      | 0.02   | _    | 178   | 178  | 0.01 | < 0.005 | _ | 179  |
| Architect<br>ural<br>Coating<br>s | 27.1 | 27.1 | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _       | _ | _    |

| Onsite<br>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,<br>Winter<br>(Max)         | _    | _    | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _    | _    | -       | _       | _    | _    |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.17 | 0.14 | 1.06 | 1.48 | < 0.005 | 0.02    | _    | 0.02    | 0.02    | _    | 0.02    | _ | 178  | 178  | 0.01    | < 0.005 | _    | 179  |
| Architect<br>ural<br>Coating<br>s | 27.1 | 27.1 | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _    | _    | -       | _       | _    | _    |
| Onsite<br>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<br>Daily                  | _    | -    | _    | _    | _       | -       | _    | _       | _       | _    | -       | - | _    | _    | _       | _       | -    | -    |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.11 | 0.09 | 0.73 | 1.02 | < 0.005 | 0.01    | _    | 0.01    | 0.01    | _    | 0.01    | _ | 122  | 122  | < 0.005 | < 0.005 | _    | 123  |
| Architect<br>ural<br>Coating<br>s | 18.6 | 18.6 | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _    | _    | _       | _       | _    | _    |
| Onsite<br>truck                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00    | 0.00    | 0.00 | 0.00    | - | 0.00 | 0.00 | 0.00    | 0.00    | 0.00 | 0.00 |
| Annual                            | _    | _    | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _    | _    | _       | _       | _    | _    |
| Off-Roa<br>d<br>Equipm<br>ent     | 0.02 | 0.02 | 0.13 | 0.19 | < 0.005 | < 0.005 | _    | < 0.005 | < 0.005 | _    | < 0.005 | _ | 20.2 | 20.2 | < 0.005 | < 0.005 | _    | 20.3 |
| Architect<br>ural<br>Coating<br>s | 3.40 | 3.40 | _    | _    | _       | _       | _    | _       | _       | _    | _       | _ | _    | _    | _       | _       | _    | _    |
| Onsite<br>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,<br>Summer<br>(Max) | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _     | _     | _    | _    | _    | _     |
| Worker                    | 1.23 | 1.21 | 1.01 | 18.0 | 0.00 | 0.00 | 3.82 | 3.82 | 0.00 | 0.89 | 0.89 | _ | 3,952 | 3,952 | 0.05 | 0.14 | 10.3 | 4,005 |
| 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  |
| Daily,<br>Winter<br>(Max) | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _     | _     | _    | _    | _    | _     |
| Worker                    | 1.11 | 0.96 | 1.02 | 12.1 | 0.00 | 0.00 | 3.82 | 3.82 | 0.00 | 0.89 | 0.89 | _ | 3,502 | 3,502 | 0.05 | 0.14 | 0.27 | 3,545 |
| 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<br>Daily          | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _     | _     | _    | _    | _    | _     |
| Worker                    | 0.77 | 0.75 | 0.79 | 9.28 | 0.00 | 0.00 | 2.60 | 2.60 | 0.00 | 0.61 | 0.61 | _ | 2,476 | 2,476 | 0.04 | 0.10 | 3.05 | 2,508 |
| 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                    | 0.14 | 0.14 | 0.14 | 1.69 | 0.00 | 0.00 | 0.47 | 0.47 | 0.00 | 0.11 | 0.11 | _ | 410   | 410   | 0.01 | 0.02 | 0.51 | 415   |
| 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

| Vegetati | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|----------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| on       |     |     |     |    |     |       |       |       |        |        |        |      |       |      |     |     |   |      |

| Daily,<br>Summer<br>(Max) | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total                     | _ | _ | _ | _ | _ |   | _ | _ | _ | _ | _ |   | _ | _ |   | _ | _ | _ |
| Daily,<br>Winter<br>(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<br>Use               | TOG | ROG | NOx | со | SO2 | PM10E | PM10D |   | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|---|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _ | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _ | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _ | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _ | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Annual                    | _   | _   | _   | _  | _   | _     | _     | _ | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _ | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

|         |     | , , , | .,  | <b>J</b> , | J   | , ,   |       | (     | ,      | <i>J</i> , . |        | /    |       |      |     |     |   |      |
|---------|-----|-------|-----|------------|-----|-------|-------|-------|--------|--------------|--------|------|-------|------|-----|-----|---|------|
| Species | TOG | ROG   | NOx | со         | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D       | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
| Daily,  | _   | _     | _   | _          | _   | _     | _     | _     | _      | _            | _      | _    | _     | _    | _   | _   | _ | _    |
| Summer  |     |       |     |            |     |       |       |       |        |              |        |      |       |      |     |     |   |      |
| (Max)   |     |       |     |            |     |       |       |       |        |              |        |      |       |      |     |     |   |      |

| Avoided                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Sequest ered              | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Remove<br>d               | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| _                         | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Daily,<br>Winter<br>(Max) | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Avoided                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Sequest ered              | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Remove<br>d               | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| _                         | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Annual                    | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Avoided                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Sequest ered              | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Remove<br>d               | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| 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      | 3/4/2025   | 5/12/2025  | 5.00          | 50.0                | _                 |
| Grading               | Grading               | 5/13/2025  | 10/27/2025 | 5.00          | 120                 | _                 |
| Building Construction | Building Construction | 10/28/2025 | 12/17/2029 | 5.00          | 1,080               | _                 |
| Paving                | Paving                | 9/12/2028  | 12/17/2029 | 5.00          | 330                 | _                 |
| Architectural Coating | Architectural Coating | 6/8/2027   | 12/17/2029 | 5.00          | 660                 | _                 |

## 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      | Rubber Tired Dozers        | Diesel    | Average     | 5.00           | 8.00          | 367        | 0.40        |
| Site Preparation      | Crawler Tractors           | Diesel    | Average     | 6.00           | 8.00          | 87.0       | 0.43        |
| Grading               | Graders                    | Diesel    | Average     | 2.00           | 8.00          | 148        | 0.41        |
| Grading               | Excavators                 | Diesel    | Average     | 3.00           | 8.00          | 36.0       | 0.38        |
| Grading               | Scrapers                   | Diesel    | Average     | 3.00           | 8.00          | 423        | 0.48        |
| Grading               | Rubber Tired Dozers        | Diesel    | Average     | 2.00           | 8.00          | 367        | 0.40        |
| Grading               | Crawler Tractors           | Diesel    | Average     | 3.00           | 8.00          | 87.0       | 0.43        |
| Building Construction | Forklifts                  | Diesel    | Average     | 5.00           | 8.00          | 82.0       | 0.20        |
| Building Construction | Generator Sets             | Diesel    | Average     | 2.00           | 8.00          | 14.0       | 0.74        |
| Building Construction | Cranes                     | Diesel    | Average     | 2.00           | 8.00          | 367        | 0.29        |
| Building Construction | Welders                    | Diesel    | Average     | 2.00           | 8.00          | 46.0       | 0.45        |
| Building Construction | Tractors/Loaders/Back hoes | Diesel    | Average     | 5.00           | 8.00          | 84.0       | 0.37        |
| 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       | 28.0                  | 18.5           | LDA,LDT1,LDT2 |
| Site Preparation      | Vendor       | 23.0                  | 10.2           | HHDT,MHDT     |
| Site Preparation      | Hauling      | 0.00                  | 20.0           | HHDT          |
| Site Preparation      | Onsite truck | _                     | _              | HHDT          |
| Grading               | _            | _                     | _              | _             |
| Grading               | Worker       | 33.0                  | 18.5           | LDA,LDT1,LDT2 |
| Grading               | Vendor       | 55.0                  | 10.2           | HHDT,MHDT     |
| Grading               | Hauling      | 0.00                  | 20.0           | HHDT          |
| Grading               | Onsite truck | _                     | _              | HHDT          |
| Building Construction | _            | _                     | _              | _             |
| Building Construction | Worker       | 1,462                 | 18.5           | LDA,LDT1,LDT2 |
| Building Construction | Vendor       | 492                   | 10.2           | HHDT,MHDT     |
| Building Construction | Hauling      | 0.00                  | 20.0           | HHDT          |
| Building Construction | Onsite truck | _                     | _              | HHDT          |
| Paving                | _            | _                     | _              | _             |
| Paving                | Worker       | 15.0                  | 18.5           | LDA,LDT1,LDT2 |
| Paving                | Vendor       | _                     | 10.2           | HHDT,MHDT     |
| Paving                | Hauling      | 0.00                  | 20.0           | HHDT          |
| Paving                | Onsite truck | _                     | _              | HHDT          |

| Architectural Coating | _            | _    | _    | _             |
|-----------------------|--------------|------|------|---------------|
| Architectural Coating | Worker       | 292  | 18.5 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor       | _    | 10.2 | HHDT,MHDT     |
| Architectural Coating | Hauling      | 0.00 | 20.0 | HHDT          |
| Architectural Coating | Onsite truck | _    | _    | HHDT          |

#### 5.4. Vehicles

#### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

### 5.5. Architectural Coatings

| Phase Name            | Residential Interior Area<br>Coated (sq ft) | Residential Exterior Area<br>Coated (sq ft) | Non-Residential Interior Area<br>Coated (sq ft) | Non-Residential Exterior Area<br>Coated (sq ft) | Parking Area Coated (sq ft) |
|-----------------------|---|---|---|---|-----------------------------|
| Architectural Coating | 0.00  | 0.00  | 5,221,104                                       | 1,740,368                                       | 377,465                     |

### 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 | _                      | _                      | 275                  | 0.00                          | _                   |
| Grading          | _                      | _                      | 780                  | 0.00                          | _                   |
| Paving           | 0.00                   | 0.00                   | 0.00                 | 0.00                          | 144                 |

### 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 |
|----------------------------------|--------------------|-----------|
| General Heavy Industry           | 0.00               | 0%        |
| Refrigerated Warehouse-No Rail   | 0.00               | 0%        |
| Unrefrigerated Warehouse-No Rail | 0.00               | 0%        |
| Parking Lot                      | 31.7               | 100%      |
| Other Asphalt Surfaces           | 113                | 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         | 532 | 0.03 | < 0.005 |
| 2026 | 0.00         | 532 | 0.03 | < 0.005 |
| 2027 | 0.00         | 532 | 0.03 | < 0.005 |
| 2028 | 0.00         | 532 | 0.03 | < 0.005 |
| 2029 | 0.00         | 532 | 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 |
|--------------------------|----------------------|---------------|-------------|
| 3                        | -3                   |               |             |

#### 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 | 34.9                        | annual days of extreme heat                |
| Extreme Precipitation        | 1.05                        | annual days with precipitation above 20 mm |
| Sea Level Rise               | _                           | meters of inundation depth                 |
| Wildfire                     | 0.99                        | 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 | N/A            | N/A               | N/A                     | N/A                 |

| Extreme Precipitation   | N/A | N/A | N/A | N/A |
|-------------------------|-----|-----|-----|-----|
| Sea Level Rise          | N/A | N/A | N/A | N/A |
| Wildfire                | N/A | N/A | N/A | N/A |
| Flooding                | N/A | N/A | N/A | N/A |
| Drought                 | N/A | N/A | N/A | N/A |
| Snowpack Reduction      | N/A | N/A | N/A | N/A |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

#### 6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores 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.

| The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher |                                 |
|--|---------------------------------|
| Indicator  | Result for Project Census Tract |
| Exposure Indicators  | _                               |
| AQ-Ozone   | 80.0                            |
| AQ-PM  | 7.52                            |
| AQ-DPM   | 21.9                            |
| Drinking Water   | 34.9                            |
| Lead Risk Housing  | 27.7                            |
| Pesticides   | 0.00                            |
| Toxic Releases   | 37.1                            |
| Traffic  | 59.7                            |
| Effect Indicators  | _                               |
| CleanUp Sites  | 52.1                            |
| Groundwater  | 44.8                            |
| Haz Waste Facilities/Generators  | 16.6                            |
| Impaired Water Bodies  | 51.2                            |
| Solid Waste  | 84.7                            |
| Sensitive Population   | _                               |
| Asthma   | 88.0                            |
| Cardio-vascular  | 89.5                            |
| Low Birth Weights  | 91.9                            |
| Socioeconomic Factor Indicators  | _                               |
| Education  | 26.9                            |
| Housing  | 11.6                            |
| Linguistic   | _                               |

| Poverty      | 52.5 |
|--------------|------|
| Unemployment | 90.6 |

## 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          | 44.97626075                     |
| Employed               | 30.46323624                     |
| Median HI              | 35.0442705                      |
| Education              | _                               |
| Bachelor's or higher   | 42.93596818                     |
| High school enrollment | 100                             |
| Preschool enrollment   | 39.79212113                     |
| Transportation         | _                               |
| Auto Access            | 85.40998332                     |
| Active commuting       | 24.00872578                     |
| Social                 | _                               |
| 2-parent households    | 51.18696266                     |
| Voting                 | 75.34967278                     |
| Neighborhood           | _                               |
| Alcohol availability   | 88.37418196                     |
| Park access            | 16.65597331                     |
| Retail density         | 8.469138971                     |
| Supermarket access     | 2.399589375                     |
| Tree canopy            | 0.71859361                      |
| Housing                | _                               |
| Homeownership          | 62.60746824                     |

| Housing habitability                         | 64.39112024 |
|--|-------------|
| Low-inc homeowner severe housing cost burden | 17.8108559  |
| Low-inc renter severe housing cost burden    | 77.19748492 |
|  |             |
| Uncrowded housing                            | 68.66418581 |
| Health Outcomes                              | _           |
| Insured adults                               | 64.22430386 |
| Arthritis                                    | 4.4         |
| Asthma ER Admissions                         | 7.6         |
| High Blood Pressure                          | 8.9         |
| Cancer (excluding skin)                      | 9.1         |
| Asthma                                       | 30.0        |
| Coronary Heart Disease                       | 6.8         |
| Chronic Obstructive Pulmonary Disease        | 13.3        |
| Diagnosed Diabetes                           | 35.6        |
| Life Expectancy at Birth                     | 34.2        |
| Cognitively Disabled                         | 41.3        |
| Physically Disabled                          | 11.3        |
| Heart Attack ER Admissions                   | 2.7         |
| Mental Health Not Good                       | 48.5        |
| Chronic Kidney Disease                       | 20.1        |
| Obesity                                      | 46.5        |
| Pedestrian Injuries                          | 48.3        |
| Physical Health Not Good                     | 39.9        |
| Stroke                                       | 15.1        |
| Health Risk Behaviors                        | _           |
| Binge Drinking                               | 57.0        |
| Current Smoker                               | 46.7        |
| No Leisure Time for Physical Activity        | 58.0        |
|  |             |

| Climate Change Exposures         | _    |
|----------------------------------|------|
| Wildfire Risk                    | 0.0  |
| SLR Inundation Area              | 0.0  |
| Children                         | 58.1 |
| Elderly                          | 16.8 |
| English Speaking                 | 81.5 |
| Foreign-born                     | 11.0 |
| Outdoor Workers                  | 47.0 |
| Climate Change Adaptive Capacity | _    |
| Impervious Surface Cover         | 90.2 |
| Traffic Density                  | 37.9 |
| Traffic Access                   | 23.0 |
| Other Indices                    |      |
| Hardship                         | 32.7 |
| Other Decision Support           | _    |
| 2016 Voting                      | 75.3 |
|                                  |      |

#### 7.3. Overall Health & Equity Scores

| Metric  | Result for Project Census Tract |
|---|---------------------------------|
| CalEnviroScreen 4.0 Score for Project Location (a)                                  | 65.0                            |
| Healthy Places Index Score for Project Location (b)                                 | 46.0                            |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535)           | No                              |
| Project Located in a Low-Income Community (Assembly Bill 1550)                      | No                              |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No                              |

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

### 7.4. Health & Equity Measures

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.

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                          | Total Project area is 224.90 acres   |
| Construction: Construction Phases | Construction schedule adjusted based on the 2029 Opening Year  |
| Construction: Off-Road Equipment  | Construction equipment adjusted based on changes made to the schedule  |
| Construction: Trips and VMT       | Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction |

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### **APPENDIX 3.2:**

**CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS** 



# Lake Creek Logistics Center (Operations - Unmitigated) Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field                  | Value  |
|-----------------------------|--|
| Project Name                | Lake Creek Logistics Center (Operations - Unmitigated) |
| Operational Year            | 2029   |
| Lead Agency                 | _  |
| Land Use Scale              | Project/site   |
| Analysis Level for Defaults | County   |
| Windspeed (m/s)             | 5.00   |
| Precipitation (days)        | 12.4   |
| Location                    | 34.57509227224038, -117.17721847885088                 |
| County                      | San Bernardino-Mojave Desert                           |
| City                        | Apple Valley   |
| Air District                | Mojave Desert AQMD                                     |
| Air Basin                   | Mojave Desert  |
| TAZ                         | 5160   |
| EDFZ                        | 10   |
| Electric Utility            | Southern California Edison                             |
| Gas Utility                 | Southwest Gas Corp.                                    |
| App Version                 | 2022.1.1.29  |

# 1.2. Land Use Types

| Land Use Subtype          | Size | Unit     | Lot Acreage | Building Area (sq ft) | Landscape Area (sq<br>ft) | Special Landscape<br>Area (sq ft) | Population | Description                    |
|---------------------------|------|----------|-------------|-----------------------|---------------------------|-----------------------------------|------------|--------------------------------|
| General Heavy<br>Industry | 348  | 1000sqft | 7.99        | 348,074               | 0.00                      | _                                 | _          | General Light<br>Industrial PC |

| User Defined<br>Industrial          | 348   | User Defined Unit | 0.00 | 0.00      | 0.00   | _ | _ | General Light<br>Industrial Trucks |
|-------------------------------------|-------|-------------------|------|-----------|--------|---|---|------------------------------------|
| Refrigerated<br>Warehouse-No Rail   | 348   | 1000sqft          | 7.99 | 348,074   | 0.00   | _ | _ | High Cube Cold PO                  |
| User Defined<br>Industrial          | 348   | User Defined Unit | 0.00 | 0.00      | 0.00   | _ | _ | High Cube Cold<br>Trucks           |
| Unrefrigerated<br>Warehouse-No Rail | 2,785 | 1000sqft          | 64.5 | 2,784,588 | 24,966 | _ | _ | High Cube<br>Fulfillment PC        |
| User Defined<br>Industrial          | 2,785 | User Defined Unit | 0.00 | 0.00      | 0.00   | _ | _ | High Cube<br>Fulfillment Trucks    |
| Parking Lot                         | 4,597 | Space             | 31.7 | 0.00      | 0.00   | _ | _ | _                                  |
| Other Asphalt<br>Surfaces           | 4,911 | 1000sqft          | 113  | 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

| Un/Mit.                   | TOG | ROG | NOx | со  | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2  | NBCO2   | СО2Т    | CH4 | N2O  | R     | CO2e    |
|---------------------------|-----|-----|-----|-----|------|-------|-------|-------|--------|--------|--------|-------|---------|---------|-----|------|-------|---------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _   | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _   | _    | _     | _       |
| Unmit.                    | 144 | 138 | 154 | 516 | 2.10 | 3.68  | 121   | 125   | 3.47   | 31.2   | 34.7   | 3,362 | 246,095 | 249,457 | 345 | 26.0 | 9,887 | 275,720 |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _   | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _   | _    | _     | _       |
| Unmit.                    | 114 | 111 | 162 | 285 | 2.02 | 3.42  | 121   | 124   | 3.27   | 31.2   | 34.5   | 3,362 | 237,619 | 240,981 | 345 | 26.1 | 9,380 | 266,778 |
| Average<br>Daily<br>(Max) | _   | _   | _   | _   | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _   | _    | _     | _       |

| Unmit.          | 117  | 114  | 118  | 297  | 1.49 | 2.50 | 87.8 | 90.3 | 2.36 | 22.7 | 25.0 | 3,362 | 182,460 | 185,822 | 345  | 20.2 | 9,531 | 209,999 |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|-------|---------|---------|------|------|-------|---------|
| Annual<br>(Max) | _    |      | _    | _    | _    | _    | _    | _    | _    | _    | _    | _     | _       | _       | _    |      | _     | _       |
| Unmit.          | 21.4 | 20.8 | 21.5 | 54.1 | 0.27 | 0.46 | 16.0 | 16.5 | 0.43 | 4.14 | 4.57 | 557   | 30,208  | 30,765  | 57.1 | 3.35 | 1,578 | 34,768  |

## 2.5. Operations Emissions by Sector, Unmitigated

|                           |      |      |      | aan, to | ,    |       |       |       |        |        | j      | ,     |         |         |      |      |       |        |
|---------------------------|------|------|------|---------|------|-------|-------|-------|--------|--------|--------|-------|---------|---------|------|------|-------|--------|
| Sector                    | TOG  | ROG  | NOx  | со      | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2  | NBCO2   | CO2T    | CH4  | N2O  | R     | CO2e   |
| Daily,<br>Summer<br>(Max) | _    | _    | _    | _       | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _    | _    | _     | _      |
| Mobile                    | 35.1 | 31.8 | 149  | 361     | 2.09 | 3.20  | 121   | 124   | 3.05   | 31.2   | 34.3   | _     | 216,596 | 216,596 | 2.68 | 21.9 | 521   | 223,70 |
| Area                      | 107  | 105  | 1.27 | 151     | 0.01 | 0.27  | _     | 0.27  | 0.20   | _      | 0.20   | _     | 623     | 623     | 0.03 | 0.01 | _     | 625    |
| Energy                    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00  | _     | 0.00  | 0.00   | _      | 0.00   | _     | 23,723  | 23,723  | 2.26 | 0.27 | _     | 23,861 |
| Water                     | _    | _    | -    | _       | _    | _     | _     | _     | _      | _      | _      | 1,542 | 4,398   | 5,941   | 159  | 3.81 | _     | 11,040 |
| Waste                     | _    | _    | _    | _       | _    | _     | _     | _     | _      | _      | _      | 1,820 | 0.00    | 1,820   | 182  | 0.00 | _     | 6,366  |
| Refrig.                   | _    | _    | _    | _       | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _    | _    | 9,367 | 9,367  |
| Stationa<br>ry            | 1.62 | 1.48 | 4.13 | 3.77    | 0.01 | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00  | 756     | 756     | 0.03 | 0.01 | 0.00  | 758    |
| Total                     | 144  | 138  | 154  | 516     | 2.10 | 3.68  | 121   | 125   | 3.47   | 31.2   | 34.7   | 3,362 | 246,095 | 249,457 | 345  | 26.0 | 9,887 | 275,72 |
| Daily,<br>Winter<br>(Max) | _    | _    | _    | _       | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _    | _    | _     | _      |
| Mobile                    | 32.5 | 29.3 | 158  | 281     | 2.01 | 3.20  | 121   | 124   | 3.05   | 31.2   | 34.3   | _     | 208,742 | 208,742 | 2.76 | 22.0 | 13.5  | 215,38 |
| Area                      | 79.9 | 79.9 | _    | _       | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _    | _    | _     | _      |
| Energy                    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00  | _     | 0.00  | 0.00   | _      | 0.00   | _     | 23,723  | 23,723  | 2.26 | 0.27 | _     | 23,861 |
| Water                     | _    | _    | _    | _       | _    | _     | _     | _     | _      | _      | _      | 1,542 | 4,398   | 5,941   | 159  | 3.81 | _     | 11,040 |
| Waste                     | _    | _    | _    | _       | _    | _     | _     | _     | _      | _      | _      | 1,820 | 0.00    | 1,820   | 182  | 0.00 | _     | 6,366  |
| Refrig.                   | _    | _    | _    | _       | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _    | _    | 9,367 | 9,367  |
| Stationa<br>ry            | 1.62 | 1.48 | 4.13 | 3.77    | 0.01 | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00  | 756     | 756     | 0.03 | 0.01 | 0.00  | 758    |

| Total            | 114  | 111  | 162  | 285  | 2.02    | 3.42 | 121  | 124  | 3.27 | 31.2 | 34.5 | 3,362 | 237,619 | 240,981 | 345     | 26.1    | 9,380 | 266,778 |
|------------------|------|------|------|------|---------|------|------|------|------|------|------|-------|---------|---------|---------|---------|-------|---------|
| Average<br>Daily | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | _     | _       |
| Mobile           | 23.9 | 21.5 | 117  | 221  | 1.48    | 2.34 | 87.8 | 90.2 | 2.23 | 22.7 | 24.9 | _     | 153,928 | 153,928 | 2.04    | 16.1    | 164   | 158,953 |
| Area             | 93.2 | 92.1 | 0.63 | 74.7 | < 0.005 | 0.13 | _    | 0.13 | 0.10 | _    | 0.10 | _     | 307     | 307     | 0.01    | < 0.005 | _     | 308     |
| Energy           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | _    | 0.00 | _     | 23,723  | 23,723  | 2.26    | 0.27    | _     | 23,861  |
| Water            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,542 | 4,398   | 5,941   | 159     | 3.81    | _     | 11,040  |
| Waste            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,820 | 0.00    | 1,820   | 182     | 0.00    | _     | 6,366   |
| Refrig.          | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | 9,367 | 9,367   |
| Stationa<br>ry   | 0.22 | 0.20 | 0.57 | 0.52 | < 0.005 | 0.03 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 | 0.00  | 104     | 104     | < 0.005 | < 0.005 | 0.00  | 104     |
| Total            | 117  | 114  | 118  | 297  | 1.49    | 2.50 | 87.8 | 90.3 | 2.36 | 22.7 | 25.0 | 3,362 | 182,460 | 185,822 | 345     | 20.2    | 9,531 | 209,999 |
| Annual           | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | _     | _       |
| Mobile           | 4.37 | 3.93 | 21.3 | 40.4 | 0.27    | 0.43 | 16.0 | 16.5 | 0.41 | 4.14 | 4.54 | _     | 25,485  | 25,485  | 0.34    | 2.67    | 27.2  | 26,316  |
| Area             | 17.0 | 16.8 | 0.11 | 13.6 | < 0.005 | 0.02 | _    | 0.02 | 0.02 | _    | 0.02 | _     | 50.8    | 50.8    | < 0.005 | < 0.005 | _     | 51.0    |
| Energy           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | _    | 0.00 | _     | 3,928   | 3,928   | 0.37    | 0.05    | _     | 3,950   |
| Water            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 255   | 728     | 984     | 26.3    | 0.63    | _     | 1,828   |
| Waste            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 301   | 0.00    | 301     | 30.1    | 0.00    | _     | 1,054   |
| Refrig.          | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    |       | _       | _       | _       | _       | 1,551 | 1,551   |
| Stationa<br>ry   | 0.04 | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00  | 17.1    | 17.1    | < 0.005 | < 0.005 | 0.00  | 17.2    |
| Total            | 21.4 | 20.8 | 21.5 | 54.1 | 0.27    | 0.46 | 16.0 | 16.5 | 0.43 | 4.14 | 4.57 | 557   | 30,208  | 30,765  | 57.1    | 3.35    | 1,578 | 34,768  |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

| Land<br>Use                                    | TOG  | ROG  | NOx  | СО   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2   | CO2T    | CH4  | N2O  | R    | CO2e    |
|--|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|---------|---------|------|------|------|---------|
| Daily,<br>Summer<br>(Max)                      | _    | -    | _    | -    | -    | -     | -     | -     | -      | _      | _      | -    | _       | _       | _    | _    | -    | _       |
| General<br>Heavy<br>Industry                   | 7.12 | 6.53 | 3.45 | 74.8 | 0.17 | 0.06  | 16.6  | 16.7  | 0.06   | 4.19   | 4.25   | _    | 16,844  | 16,844  | 0.54 | 0.37 | 40.1 | 17,008  |
| User<br>Defined<br>Industrial                  | 4.26 | 3.56 | 134  | 37.6 | 1.37 | 2.93  | 49.0  | 51.9  | 2.81   | 13.1   | 15.9   | _    | 143,691 | 143,691 | 0.34 | 20.3 | 347  | 150,087 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 2.12 | 1.94 | 1.03 | 22.2 | 0.05 | 0.02  | 4.95  | 4.96  | 0.02   | 1.25   | 1.26   | _    | 5,007   | 5,007   | 0.16 | 0.11 | 11.9 | 5,056   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 21.6 | 19.8 | 10.5 | 227  | 0.50 | 0.19  | 50.4  | 50.6  | 0.17   | 12.7   | 12.9   | _    | 51,054  | 51,054  | 1.64 | 1.13 | 122  | 51,552  |
| Parking<br>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    |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 0.00   | 0.00   | 0.00   | _    | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    |
| Total  | 35.1 | 31.8 | 149  | 361  | 2.09 | 3.20  | 121   | 124   | 3.05   | 31.2   | 34.3   | _    | 216,596 | 216,596 | 2.68 | 21.9 | 521  | 223,703 |
| Daily,<br>Winter<br>(Max)                      | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _       | _       | _    | _    | _    | _       |
| General<br>Heavy<br>Industry                   | 6.57 | 5.98 | 3.83 | 56.3 | 0.15 | 0.06  | 16.6  | 16.7  | 0.06   | 4.19   | 4.25   | _    | 15,017  | 15,017  | 0.56 | 0.40 | 1.04 | 15,150  |
| User<br>Defined<br>Industrial                  | 4.07 | 3.40 | 141  | 37.8 | 1.37 | 2.93  | 49.0  | 51.9  | 2.81   | 13.1   | 15.9   | _    | 143,747 | 143,747 | 0.33 | 20.3 | 9.01 | 149,811 |

| Refriger                                       | 1.95 | 1.78 | 1.14 | 16.7 | 0.04 | 0.02    | 4.95 | 4.96 | 0.02    | 1.25 | 1.26 | _ | 4,464   | 4,464   | 0.17 | 0.12 | 0.31 | 4,504   |
|--|------|------|------|------|------|---------|------|------|---------|------|------|---|---------|---------|------|------|------|---------|
| ated<br>Wareho<br>Rail                         |      |      |      |      |      |         |      |      |         |      |      |   |         |         |      |      |      |         |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 19.9 | 18.1 | 11.6 | 171  | 0.45 | 0.19    | 50.4 | 50.6 | 0.17    | 12.7 | 12.9 | _ | 45,515  | 45,515  | 1.70 | 1.21 | 3.15 | 45,921  |
| Parking<br>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    |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | _ | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    |
| Total  | 32.5 | 29.3 | 158  | 281  | 2.01 | 3.20    | 121  | 124  | 3.05    | 31.2 | 34.3 | _ | 208,742 | 208,742 | 2.76 | 22.0 | 13.5 | 215,386 |
| Annual   | _    | _    | _    | _    | _    | _       | _    | _    | _       | _    | _    | _ | _       | _       | _    | _    | _    | _       |
| General<br>Heavy<br>Industry                   | 0.88 | 0.80 | 0.53 | 8.18 | 0.02 | 0.01    | 2.20 | 2.21 | 0.01    | 0.55 | 0.56 | _ | 1,868   | 1,868   | 0.07 | 0.05 | 2.10 | 1,887   |
| User<br>Defined<br>Industrial                  | 0.55 | 0.46 | 19.0 | 5.00 | 0.18 | 0.39    | 6.50 | 6.89 | 0.37    | 1.74 | 2.11 | _ | 17,398  | 17,398  | 0.04 | 2.46 | 18.1 | 18,149  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.26 | 0.24 | 0.16 | 2.43 | 0.01 | < 0.005 | 0.65 | 0.66 | < 0.005 | 0.16 | 0.17 | _ | 555     | 555     | 0.02 | 0.01 | 0.62 | 561     |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 2.67 | 2.43 | 1.62 | 24.8 | 0.06 | 0.02    | 6.67 | 6.70 | 0.02    | 1.68 | 1.70 | _ | 5,663   | 5,663   | 0.21 | 0.15 | 6.35 | 5,719   |
| Parking<br>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    |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | _ | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    |
| Total  | 4.37 | 3.93 | 21.3 | 40.4 | 0.27 | 0.43    | 16.0 | 16.5 | 0.41    | 4.14 | 4.54 | _ | 25,485  | 25,485  | 0.34 | 2.67 | 27.2 | 26,316  |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

| Land<br>Use                                    | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2  | CO2T   | CH4  | N2O  | R | CO2e   |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|--------|--------|------|------|---|--------|
| Daily,<br>Summer<br>(Max)                      | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _ | _      |
| General<br>Heavy<br>Industry                   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 3,149  | 3,149  | 0.30 | 0.04 | _ | 3,167  |
| User<br>Defined<br>Industrial                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 7,229  | 7,229  | 0.69 | 0.08 | _ | 7,271  |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 12,199 | 12,199 | 1.16 | 0.14 | _ | 12,270 |
| Parking<br>Lot                                 | _   | _   | _   | _  | _   | -     | _     | _     | _      | _      | _      | _    | 1,147  | 1,147  | 0.11 | 0.01 | _ | 1,153  |
| Other<br>Asphalt<br>Surfaces                   | _   | _   | _   | _  | -   | _     | _     | _     | _      | _      | _      | _    | 0.00   | 0.00   | 0.00 | 0.00 | - | 0.00   |
| Total  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 23,723 | 23,723 | 2.26 | 0.27 | _ | 23,861 |
| Daily,<br>Winter<br>(Max)                      | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _      | _      | _    | _    | _ | _      |

| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ |   | _ |   | _ |   | _ | 3,149  | 3,149  | 0.30 | 0.04 | _ | 3,167  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|--------|--------|------|------|---|--------|
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |   | _ | 7,229  | 7,229  | 0.69 | 0.08 | _ | 7,271  |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 12,199 | 12,199 | 1.16 | 0.14 | _ | 12,270 |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,147  | 1,147  | 0.11 | 0.01 | _ | 1,153  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 23,723 | 23,723 | 2.26 | 0.27 | _ | 23,861 |
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _      | _      | _    | _    | _ | _      |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 521    | 521    | 0.05 | 0.01 | _ | 524    |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |   | _ | 1,197  | 1,197  | 0.11 | 0.01 | _ | 1,204  |

| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 2,020 | 2,020 | 0.19 | 0.02    | _ | 2,031 |
|--|---|---|---|---|---|---|---|---|---|---|---|---|-------|-------|------|---------|---|-------|
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | - | _ | _ | _ | _ | _ | _ | 190   | 190   | 0.02 | < 0.005 | _ | 191   |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00 | 0.00    | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 3,928 | 3,928 | 0.37 | 0.05    | _ | 3,950 |

## 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

| Land<br>Use                                    | TOG  | ROG  | NOx  | СО   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | СО2Т | CH4  | N2O  | R | CO2e |
|--|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|---|------|
| Daily,<br>Summer<br>(Max)                      | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| General<br>Heavy<br>Industry                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | _     | 0.00  | 0.00   | _      | 0.00   | _    | 0.00  | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| User<br>Defined<br>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 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | _     | 0.00  | 0.00   | _      | 0.00   | _    | 0.00  | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |

| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
|--|------|------|------|------|------|------|---|------|------|---|------|---|------|------|------|------|---|------|
| Total  | 0.00 | 0.00 | 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,<br>Winter<br>(Max)                      | _    | _    | _    | _    | -    | -    | _ | _    | _    | _ |      | _ | _    | -    | -    | -    | _ | _    |
| General<br>Heavy<br>Industry                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| User<br>Defined<br>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 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Total  | 0.00 | 0.00 | 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   | _    | _    | _    | _    | _    | _    | _ | _    | _    | _ | _    | _ | _    | _    | _    | _    | _ | _    |
| General<br>Heavy<br>Industry                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| User<br>Defined<br>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 |

| Refriger<br>ated                               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
|--|------|------|------|------|------|------|---|------|------|---|------|---|------|------|------|------|---|------|
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Total  | 0.00 | 0.00 | 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

| Source                            | TOG  | ROG  | NOx  | со  | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4  | N2O  | R | CO2e |
|-----------------------------------|------|------|------|-----|------|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|---|------|
| Daily,<br>Summer<br>(Max)         | _    | _    | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Consum<br>er<br>Product<br>s      | 75.0 | 75.0 | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Architect<br>ural<br>Coating<br>s | 4.90 | 4.90 |      | _   | _    | _     | _     | _     | _      | _      |        | _    | _     | _    | _    | _    |   | _    |
| Landsca<br>pe<br>Equipm<br>ent    | 26.9 | 24.9 | 1.27 | 151 | 0.01 | 0.27  |       | 0.27  | 0.20   | _      | 0.20   | _    | 623   | 623  | 0.03 | 0.01 | _ | 625  |
| Total                             | 107  | 105  | 1.27 | 151 | 0.01 | 0.27  | _     | 0.27  | 0.20   | _      | 0.20   | _    | 623   | 623  | 0.03 | 0.01 | _ | 625  |

| Daily,<br>Winter<br>(Max)         | _    | _    | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
|-----------------------------------|------|------|------|------|---------|------|---|------|------|---|------|---|------|------|---------|---------|---|------|
| Consum<br>er<br>Product<br>s      | 75.0 | 75.0 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Architect<br>ural<br>Coating<br>s | 4.90 | 4.90 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Total                             | 79.9 | 79.9 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Annual                            | _    | _    | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Consum<br>er<br>Product<br>s      | 13.7 | 13.7 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Architect<br>ural<br>Coating<br>s | 0.89 | 0.89 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Landsca<br>pe<br>Equipm<br>ent    | 2.43 | 2.24 | 0.11 | 13.6 | < 0.005 | 0.02 | _ | 0.02 | 0.02 | _ | 0.02 | _ | 50.8 | 50.8 | < 0.005 | < 0.005 | _ | 51.0 |
| Total                             | 17.0 | 16.8 | 0.11 | 13.6 | < 0.005 | 0.02 | _ | 0.02 | 0.02 | _ | 0.02 | _ | 50.8 | 50.8 | < 0.005 | < 0.005 | _ | 51.0 |

## 4.4. Water Emissions by Land Use

## 4.4.1. Unmitigated

|        |     |     | .,  | <b>J</b> / |     |       |       |       |        | <i>J</i> . |        |      |       |      |     |     |   |      |
|--------|-----|-----|-----|------------|-----|-------|-------|-------|--------|------------|--------|------|-------|------|-----|-----|---|------|
| Land   | TOG | ROG | NOx | со         | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D     | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
| Use    |     |     |     |            |     |       |       |       |        |            |        |      |       |      |     |     |   |      |
| Daily, | _   | _   | _   | _          | _   | _     | _     | _     | _      | _          | _      | _    | _     | _    | _   | _   | _ | _    |
| Summer |     |     |     |            |     |       |       |       |        |            |        |      |       |      |     |     |   |      |
| (Max)  |     |     |     |            |     |       |       |       |        |            |        |      |       |      |     |     |   |      |

| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 154   | 440   | 594   | 15.9 | 0.38 | _ | 1,104  |
|--|---|---|---|---|---|---|---|---|---|---|---|-------|-------|-------|------|------|---|--------|
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 154   | 440   | 594   | 15.9 | 0.38 | _ | 1,104  |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,234 | 3,519 | 4,753 | 127  | 3.05 | _ | 8,832  |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,542 | 4,398 | 5,941 | 159  | 3.81 | _ | 11,040 |
| Daily,<br>Winter<br>(Max)                      | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     | _     | _    | _    | _ | _      |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 154   | 440   | 594   | 15.9 | 0.38 | _ | 1,104  |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   |   | _ | _ | _ | _ | _ | _ |   |   | _ |   | 154   | 440   | 594   | 15.9 | 0.38 | _ | 1,104  |

| Unrefrig<br>erated<br>Wareho<br>Rail           | _ | _ | _ | _ | _ | _ | _ |   |   | _ | _ | 1,234 | 3,519 | 4,753 | 127  | 3.05 | _ | 8,832  |
|--|---|---|---|---|---|---|---|---|---|---|---|-------|-------|-------|------|------|---|--------|
| Parking<br>Lot                                 | _ | - | - | - | - | _ | _ | _ | - | - | - | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | - | 0.00   |
| Other<br>Asphalt<br>Surfaces                   | _ | - | _ | _ | _ | _ | - | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,542 | 4,398 | 5,941 | 159  | 3.81 | _ | 11,040 |
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     | _     | _    | _    | _ | _      |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 25.5  | 72.8  | 98.3  | 2.63 | 0.06 | _ | 183    |
| User<br>Defined<br>Industrial                  | _ | - | _ | - | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 25.5  | 72.8  | 98.3  | 2.63 | 0.06 | _ | 183    |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 204   | 583   | 787   | 21.0 | 0.50 | _ | 1,462  |
| Parking<br>Lot                                 | _ | _ | - | _ | _ | - | - | _ | _ | - | - | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | - | 0.00   |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | - | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 255   | 728   | 984   | 26.3 | 0.63 | _ | 1,828  |

# 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

| Land<br>Use                                    | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2  | NBCO2 | CO2T  | CH4  | N2O  | R | CO2e  |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|-------|-------|-------|------|------|---|-------|
| Daily,<br>Summer<br>(Max)                      | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _     | _     | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _   | _   | -   | _  | _   | _     | _     | _     | _      | _      | _      | 233   | 0.00  | 233   | 23.2 | 0.00 | _ | 814   |
| User<br>Defined<br>Industrial                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 176   | 0.00  | 176   | 17.6 | 0.00 | _ | 617   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 1,411 | 0.00  | 1,411 | 141  | 0.00 | _ | 4,935 |
| Parking<br>Lot                                 | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Total  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 1,820 | 0.00  | 1,820 | 182  | 0.00 | _ | 6,366 |
| Daily,<br>Winter<br>(Max)                      | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _     | _     | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 233   | 0.00  | 233   | 23.2 | 0.00 | _ | 814   |

| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
|--|---|---|---|---|---|---|---|---|---|---|---|-------|------|-------|------|------|---|-------|
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 176   | 0.00 | 176   | 17.6 | 0.00 | _ | 617   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,411 | 0.00 | 1,411 | 141  | 0.00 | _ | 4,935 |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,820 | 0.00 | 1,820 | 182  | 0.00 | _ | 6,366 |
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _    | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 38.5  | 0.00 | 38.5  | 3.85 | 0.00 | _ | 135   |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 29.2  | 0.00 | 29.2  | 2.92 | 0.00 | _ | 102   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 234   | 0.00 | 234   | 23.3 | 0.00 | _ | 817   |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |

| Other<br>Asphalt<br>Surfaces | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|------|------|------|------|------|---|-------|
| Total                        | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 301  | 0.00 | 301  | 30.1 | 0.00 | _ | 1,054 |

## 4.6. Refrigerant Emissions by Land Use

## 4.6.1. Unmitigated

|  |     | _   |     |    |     |       |       |       |        | J.     |        |      |       |      |     | _   |       | _     |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|-------|-------|
| Land<br>Use                                  | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R     | CO2e  |
| Daily,<br>Summer<br>(Max)                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _     | _     |
| General<br>Heavy<br>Industry                 | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 90.6  | 90.6  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _   |     | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 9,276 | 9,276 |
| Total  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 9,367 | 9,367 |
| Daily,<br>Winter<br>(Max)                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _     | _     |
| General<br>Heavy<br>Industry                 | _   | _   | -   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 90.6  | 90.6  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 9,276 | 9,276 |
| Total  | _   | _   | _   | _  | -   | -     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 9,367 | 9,367 |

| Annual                                       | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|-------|
| General<br>Heavy<br>Industry                 | _ | _ | _ | _ | _ | _ | _ |   | _ | _ | _ | _ | _ | _ | _ | _ | 15.0  | 15.0  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,536 | 1,536 |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,551 | 1,551 |

### 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)

|                           |     |     |     |    |     |       |       |       |        | <u></u> |        |      |       |      |     |     |   |      |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|---------|--------|------|-------|------|-----|-----|---|------|
| Equipm<br>ent<br>Type     | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D  | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _       | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _       | _      | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _       | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _       | _      | _    | _     | _    | _   | _   | _ | _    |
| Annual                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _       | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _       | _      | _    | _     | _    | _   | _   | _ | _    |

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

| Equipm<br>Type                 | TOG  | ROG  | NOx  | СО   | SO2     | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4     | N2O     | R    | CO2e |
|--------------------------------|------|------|------|------|---------|-------|-------|-------|--------|--------|--------|------|-------|------|---------|---------|------|------|
| Daily,<br>Summer<br>(Max)      | _    | _    | _    | _    | _       | -     | -     | _     | _      | _      | _      | _    | _     | _    | _       | -       | -    | -    |
| Emerge<br>ncy<br>Generat<br>or | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00 | 756   | 756  | 0.03    | 0.01    | 0.00 | 758  |
| Total                          | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00 | 756   | 756  | 0.03    | 0.01    | 0.00 | 758  |
| Daily,<br>Winter<br>(Max)      | _    | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _       | _       | _    | -    |
| Emerge<br>ncy<br>Generat<br>or | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00 | 756   | 756  | 0.03    | 0.01    | 0.00 | 758  |
| Total                          | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00 | 756   | 756  | 0.03    | 0.01    | 0.00 | 758  |
| Annual                         | _    | _    | _    | _    | _       | _     | _     | _     | _      | _      | _      | _    | _     | _    | _       | _       | _    | _    |
| Emerge<br>ncy<br>Generat<br>or | 0.04 | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01  | 0.00  | 0.01  | 0.01   | 0.00   | 0.01   | 0.00 | 17.1  | 17.1 | < 0.005 | < 0.005 | 0.00 | 17.2 |
| Total                          | 0.04 | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01  | 0.00  | 0.01  | 0.01   | 0.00   | 0.01   | 0.00 | 17.1  | 17.1 | < 0.005 | < 0.005 | 0.00 | 17.2 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

| Equipm<br>ent<br>Type     | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

| Total                     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily,<br>Winter<br>(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)

| Vegetati<br>on            |   |   | NOx | СО |   |   | PM10D | PM10T |   | PM2.5D |   |   | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|---|---|-----|----|---|---|-------|-------|---|--------|---|---|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _ | _ | _   | _  | _ | _ | _     | _     | _ | _      | _ | _ | _     | _    | _   | _   | _ | _    |
| Total                     | _ | _ | _   | _  | _ | _ | _     | _     | _ | _      | _ | _ | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _ | _ | _   | _  | _ | _ | _     | _     | _ | _      | _ | _ | _     | _    | _   | _   | _ | _    |
| Total                     | _ | _ | _   | _  | _ | _ | _     | _     | _ | _      | _ | _ | _     | _    | _   | _   | _ | _    |
| Annual                    | _ | _ | _   | _  | _ | _ | _     | _     | _ | _      | _ | _ | _     | _    | _   | _   | _ | _    |
| Total                     | _ | _ | _   | _  | _ | _ | _     | _     | _ | _      | _ | _ | _     | _    | _   | _   | _ | _    |

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

| Land<br>Use               | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

| Total                     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily,<br>Winter<br>(Max) | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Total                     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Annual                    | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Total                     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

|                           |     | (,  |     | · j, | ,   | ,     |       | (,    |        | ··· <b>J</b> , ·····, | (      |      |       |      |     |     |   |      |
|---------------------------|-----|-----|-----|------|-----|-------|-------|-------|--------|-----------------------|--------|------|-------|------|-----|-----|---|------|
| Species                   | TOG | ROG | NOx | СО   | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D                | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Avoided                   | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Sequest ered              | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Remove<br>d               | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| _                         | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Avoided                   | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Sequest ered              | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _    | _   | _     | _     | _     | _      | _                     | _      | _    | _     | _    | _   | _   | _ | _    |

| Remove       | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Subtotal     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| _            | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Annual       | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Avoided      | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Sequest ered | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Remove<br>d  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| 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   |
|-------------------------------------|---------------|----------------|--------------|------------|-------------|--------------|------------|------------|
| General Heavy<br>Industry           | 1,608         | 136            | 54.4         | 429,158    | 24,008      | 2,031        | 812        | 6,407,471  |
| User Defined<br>Industrial          | 90.0          | 7.62           | 3.06         | 24,025     | 3,600       | 305          | 123        | 960,984    |
| Refrigerated<br>Warehouse-No Rail   | 478           | 40.4           | 16.2         | 127,577    | 7,137       | 604          | 242        | 1,904,769  |
| User Defined<br>Industrial          | 264           | 22.3           | 8.95         | 70,464     | 10,561      | 894          | 358        | 2,818,556  |
| Unrefrigerated<br>Warehouse-No Rail | 4,874         | 412            | 165          | 1,300,785  | 72,768      | 6,157        | 2,461      | 19,421,177 |

| User Defined<br>Industrial | 1,056 | 89.4 | 35.6 | 281,812 | 42,237 | 3,575 | 1,426 | 11,272,466 |
|----------------------------|-------|------|------|---------|--------|-------|-------|------------|
| Parking Lot                | 0.00  | 0.00 | 0.00 | 0.00    | 0.00   | 0.00  | 0.00  | 0.00       |
| Other Asphalt<br>Surfaces  | 0.00  | 0.00 | 0.00 | 0.00    | 0.00   | 0.00  | 0.00  | 0.00       |

## 5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area<br>Coated (sq ft) | Parking Area Coated (sq ft) |
|--|--|--|---|-----------------------------|
| 0  | 0.00                                     | 5,221,104                                    | 1,740,368                                       | 377,465                     |

### 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) |
|-------------------------|----------------------|-----|--------|--------|-----------------------|
| General Heavy Industry  | 3,319,833            | 346 | 0.0330 | 0.0040 | 0.00                  |
| User Defined Industrial | 0.00                 | 346 | 0.0330 | 0.0040 | 0.00                  |

| Refrigerated Warehouse-No<br>Rail   | 7,621,233  | 346 | 0.0330 | 0.0040 | 0.00 |
|-------------------------------------|------------|-----|--------|--------|------|
| User Defined Industrial             | 0.00       | 346 | 0.0330 | 0.0040 | 0.00 |
| Unrefrigerated Warehouse-No<br>Rail | 12,861,185 | 346 | 0.0330 | 0.0040 | 0.00 |
| User Defined Industrial             | 0.00       | 346 | 0.0330 | 0.0040 | 0.00 |
| Parking Lot                         | 1,208,863  | 346 | 0.0330 | 0.0040 | 0.00 |
| Other Asphalt Surfaces              | 0.00       | 346 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

## 5.12.1. Unmitigated

| Land Use                         | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|----------------------------------|-------------------------|--------------------------|
| General Heavy Industry           | 80,492,113              | 0.00                     |
| User Defined Industrial          | 0.00                    | 0.00                     |
| Refrigerated Warehouse-No Rail   | 80,492,113              | 0.00                     |
| User Defined Industrial          | 0.00                    | 0.00                     |
| Unrefrigerated Warehouse-No Rail | 643,935,975             | 552,711                  |
| User Defined Industrial          | 0.00                    | 0.00                     |
| Parking Lot                      | 0.00                    | 0.00                     |
| Other Asphalt Surfaces           | 0.00                    | 0.00                     |

## 5.13. Operational Waste Generation

## 5.13.1. Unmitigated

| Land Use                       | Waste (ton/year) | Cogeneration (kWh/year) |
|--------------------------------|------------------|-------------------------|
| General Heavy Industry         | 432              | _                       |
| User Defined Industrial        | 0.00             | _                       |
| Refrigerated Warehouse-No Rail | 327              | _                       |

| User Defined Industrial          | 0.00  | _ |
|----------------------------------|-------|---|
| Unrefrigerated Warehouse-No Rail | 2,618 | _ |
| User Defined Industrial          | 0.00  | _ |
| Parking Lot                      | 0.00  | _ |
| Other Asphalt Surfaces           | 0.00  | _ |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type                     | Equipment Type                      | Refrigerant | GWP   | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|-----------------------------------|-------------------------------------|-------------|-------|---------------|----------------------|-------------------|----------------|
| General Heavy<br>Industry         | Other commercial A/C and heat pumps | R-410A      | 2,088 | 0.30          | 4.00                 | 4.00              | 18.0           |
| Refrigerated<br>Warehouse-No Rail | Cold storage                        | R-404A      | 3,922 | 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 |
|---------------------|-----------|----------------|---------------|----------------|------------|-------------|
| Emergency Generator | Diesel    | 1.00           | 1.00          | 50.0           | 300        | 0.73        |
| Emergency Generator | Diesel    | 1.00           | 1.00          | 50.0           | 300        | 0.73        |
| Emergency Generator | Diesel    | 1.00           | 1.00          | 50.0           | 300        | 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 | 34.9                        | annual days of extreme heat                |
| Extreme Precipitation        | 1.05                        | annual days with precipitation above 20 mm |
| Sea Level Rise               | _                           | meters of inundation depth                 |
| Wildfire                     | 0.99                        | annual hectares burned                     |

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.

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

#### 6.2. Initial Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

### 6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores 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.

|                     | F                               |
|---------------------|---------------------------------|
| Indicator           | Result for Project Census Tract |
| Exposure Indicators | _                               |
| AQ-Ozone            | 80.0                            |
| AQ-PM               | 7.52                            |
| AQ-DPM              | 21.9                            |
| Drinking Water      | 34.9                            |
| Lead Risk Housing   | 27.7                            |

| Pesticides                      | 0.00 |
|---------------------------------|------|
| Toxic Releases                  | 37.1 |
| Traffic                         | 59.7 |
| Effect Indicators               | _    |
| CleanUp Sites                   | 52.1 |
| Groundwater                     | 44.8 |
| Haz Waste Facilities/Generators | 16.6 |
| Impaired Water Bodies           | 51.2 |
| Solid Waste                     | 84.7 |
| Sensitive Population            | _    |
| Asthma                          | 88.0 |
| Cardio-vascular                 | 89.5 |
| Low Birth Weights               | 91.9 |
| Socioeconomic Factor Indicators | _    |
| Education                       | 26.9 |
| Housing                         | 11.6 |
| Linguistic                      | _    |
| Poverty                         | 52.5 |
| Unemployment                    | 90.6 |

## 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 | 44.97626075                     |
| Employed      | 30.46323624                     |
| Median HI     | 35.0442705                      |
| Education     | _                               |

| Pachalaria ar highar                         | 42.93596818 |
|--|-------------|
| Bachelor's or higher                         |             |
| High school enrollment                       | 100         |
| Preschool enrollment                         | 39.79212113 |
| Transportation                               | _           |
| Auto Access                                  | 85.40998332 |
| Active commuting                             | 24.00872578 |
| Social                                       | _           |
| 2-parent households                          | 51.18696266 |
| Voting                                       | 75.34967278 |
| Neighborhood                                 | _           |
| Alcohol availability                         | 88.37418196 |
| Park access                                  | 16.65597331 |
| Retail density                               | 8.469138971 |
| Supermarket access                           | 2.399589375 |
| Tree canopy                                  | 0.71859361  |
| Housing                                      | _           |
| Homeownership                                | 62.60746824 |
| Housing habitability                         | 64.39112024 |
| Low-inc homeowner severe housing cost burden | 17.8108559  |
| Low-inc renter severe housing cost burden    | 77.19748492 |
| Uncrowded housing                            | 68.66418581 |
| Health Outcomes                              | _           |
| Insured adults                               | 64.22430386 |
| Arthritis                                    | 4.4         |
| Asthma ER Admissions                         | 7.6         |
| High Blood Pressure                          | 8.9         |
| Cancer (excluding skin)                      | 9.1         |
| Asthma                                       | 30.0        |
|  |             |

| Coronary Heart Disease                | 6.8  |
|---------------------------------------|------|
| Chronic Obstructive Pulmonary Disease | 13.3 |
| Diagnosed Diabetes                    | 35.6 |
| Life Expectancy at Birth              | 34.2 |
| Cognitively Disabled                  | 41.3 |
| Physically Disabled                   | 11.3 |
| Heart Attack ER Admissions            | 2.7  |
| Mental Health Not Good                | 48.5 |
| Chronic Kidney Disease                | 20.1 |
| Obesity                               | 46.5 |
| Pedestrian Injuries                   | 48.3 |
| Physical Health Not Good              | 39.9 |
| Stroke                                | 15.1 |
| Health Risk Behaviors                 | _    |
| Binge Drinking                        | 57.0 |
| Current Smoker                        | 46.7 |
| No Leisure Time for Physical Activity | 58.0 |
| Climate Change Exposures              | _    |
| Wildfire Risk                         | 0.0  |
| SLR Inundation Area                   | 0.0  |
| Children                              | 58.1 |
| Elderly                               | 16.8 |
| English Speaking                      | 81.5 |
| Foreign-born                          | 11.0 |
| Outdoor Workers                       | 47.0 |
| Climate Change Adaptive Capacity      |      |
| Impervious Surface Cover              | 90.2 |
| Traffic Density                       | 37.9 |

| Traffic Access         | 23.0 |
|------------------------|------|
| Other Indices          | _    |
| Hardship               | 32.7 |
| Other Decision Support | _    |
| 2016 Voting            | 75.3 |

#### 7.3. Overall Health & Equity Scores

| Metric  | Result for Project Census Tract |
|---|---------------------------------|
| CalEnviroScreen 4.0 Score for Project Location (a)                                  | 65.0                            |
| Healthy Places Index Score for Project Location (b)                                 | 46.0                            |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535)           | No                              |
| Project Located in a Low-Income Community (Assembly Bill 1550)                      | No                              |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No                              |

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

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

### 7.4. Health & Equity Measures

No Health & Equity Measures selected.

#### 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

### 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

| Screen                            | Justification   |
|-----------------------------------|---|
| Land Use                          | Total Project area is 224.90 acres                                    |
| Construction: Construction Phases | Construction schedule adjusted based on the 2029 Opening Year         |
| Construction: Off-Road Equipment  | Construction equipment adjusted based on changes made to the schedule |

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| Construction: Trips and VMT | Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction   |
|-----------------------------|--|
| Operations: Vehicle Data    | Trip characteristics based on information provided in the Traffic analysis   |
| Operations: Fleet Mix       | Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, & MCY). Truck Mix based on information in the Traffic analysis |
| Operations: Energy Use      | No natural gas for building envelope   |

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- 5.15.1. Unmitigated
- 5.15.2. Mitigated
- 5.16. Stationary Sources
  - 5.16.1. Emergency Generators and Fire Pumps
  - 5.16.2. Process Boilers
- 5.17. User Defined
- 5.18. Vegetation
  - 5.18.1. Land Use Change
    - 5.18.1.1. Unmitigated
    - 5.18.1.2. Mitigated
  - 5.18.1. Biomass Cover Type
    - 5.18.1.1. Unmitigated
    - 5.18.1.2. Mitigated
  - 5.18.2. Sequestration
    - 5.18.2.1. Unmitigated
    - 5.18.2.2. Mitigated
- 6. Climate Risk Detailed Report
  - 6.1. Climate Risk Summary

- 6.2. Initial Climate Risk Scores
- 6.3. Adjusted Climate Risk Scores
- 6.4. Climate Risk Reduction Measures
- 7. Health and Equity Details
  - 7.1. CalEnviroScreen 4.0 Scores
  - 7.2. Healthy Places Index Scores
  - 7.3. Overall Health & Equity Scores
  - 7.4. Health & Equity Measures
  - 7.5. Evaluation Scorecard
  - 7.6. Health & Equity Custom Measures
- 8. User Changes to Default Data

# 1. Basic Project Information

# 1.1. Basic Project Information

| Data Field                  | Value  |
|-----------------------------|--|
| Project Name                | Lake Creek Logistics Center (Operations - Mitigated) |
| Operational Year            | 2029   |
| Lead Agency                 | _  |
| Land Use Scale              | Project/site   |
| Analysis Level for Defaults | County   |
| Windspeed (m/s)             | 5.00   |
| Precipitation (days)        | 12.4   |
| Location                    | 34.57509227224038, -117.17721847885088               |
| County                      | San Bernardino-Mojave Desert                         |
| City                        | Apple Valley   |
| Air District                | Mojave Desert AQMD                                   |
| Air Basin                   | Mojave Desert  |
| TAZ                         | 5160   |
| EDFZ                        | 10   |
| Electric Utility            | Southern California Edison                           |
| Gas Utility                 | Southwest Gas Corp.                                  |
| App Version                 | 2022.1.1.29  |

# 1.2. Land Use Types

| Land Use Subtype          | Size | Unit     | Lot Acreage | Building Area (sq ft) | Landscape Area (sq<br>ft) | Special Landscape<br>Area (sq ft) | Population | Description                    |
|---------------------------|------|----------|-------------|-----------------------|---------------------------|-----------------------------------|------------|--------------------------------|
| General Heavy<br>Industry | 348  | 1000sqft | 7.99        | 348,074               | 0.00                      | _                                 | _          | General Light<br>Industrial PC |

| User Defined<br>Industrial          | 348   | User Defined Unit | 0.00 | 0.00      | 0.00   | _ | _ | General Light<br>Industrial Trucks |
|-------------------------------------|-------|-------------------|------|-----------|--------|---|---|------------------------------------|
| Refrigerated<br>Warehouse-No Rail   | 348   | 1000sqft          | 7.99 | 348,074   | 0.00   | _ | _ | High Cube Cold PO                  |
| User Defined<br>Industrial          | 348   | User Defined Unit | 0.00 | 0.00      | 0.00   | _ | _ | High Cube Cold<br>Trucks           |
| Unrefrigerated<br>Warehouse-No Rail | 2,785 | 1000sqft          | 64.5 | 2,784,588 | 24,966 | _ | _ | High Cube<br>Fulfillment PC        |
| User Defined<br>Industrial          | 2,785 | User Defined Unit | 0.00 | 0.00      | 0.00   | _ | _ | High Cube<br>Fulfillment Trucks    |
| Parking Lot                         | 4,597 | Space             | 31.7 | 0.00      | 0.00   | _ | _ | _                                  |
| Other Asphalt<br>Surfaces           | 4,911 | 1000sqft          | 113  | 0.00      | 0.00   | _ | _ | _                                  |

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

| Sector | #      | Measure Title  |
|--------|--------|--|
| Energy | E-2    | Require Energy Efficient Appliances                    |
| Energy | E-10-B | Establish Onsite Renewable Energy Systems: Solar Power |
| Water  | W-4    | Require Low-Flow Water Fixtures                        |
| Water  | W-5    | Design Water-Efficient Landscapes                      |

# 2. Emissions Summary

# 2.4. Operations Emissions Compared Against Thresholds

|                           |     |     |     | ,   |      |       |       |       |        | _,     |        |       |         |         |     |      |       |         |
|---------------------------|-----|-----|-----|-----|------|-------|-------|-------|--------|--------|--------|-------|---------|---------|-----|------|-------|---------|
| Un/Mit.                   | тос | ROG | NOx | со  | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2  | NBCO2   | CO2T    | CH4 | N2O  | R     | CO2e    |
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _   | _    | _     | _     | _     | _      | _      | _      | _     | _       | _       | _   | _    | _     | _       |
| Unmit.                    | 144 | 138 | 154 | 516 | 2.10 | 3.68  | 121   | 125   | 3.47   | 31.2   | 34.7   | 3,362 | 246,894 | 250,256 | 346 | 26.0 | 9,887 | 276,523 |

| Mit.                      | 144  | 138  | 154  | 516  | 2.10 | 3.68 | 121  | 125  | 3.47 | 31.2 | 34.7 | 3,210 | 240,880 | 244,090 | 329  | 25.5 | 9,887 | 269,822 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|---------|---------|------|------|-------|---------|
| %<br>Reduced              | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | 5%    | 2%      | 2%      | 5%   | 2%   | _     | 2%      |
| Daily,<br>Winter<br>(Max) | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _     | _       | _       | _    | _    | _     | _       |
| Unmit.                    | 114  | 111  | 162  | 285  | 2.02 | 3.42 | 121  | 124  | 3.27 | 31.2 | 34.5 | 3,362 | 238,417 | 241,779 | 346  | 26.1 | 9,380 | 267,581 |
| Mit.                      | 114  | 111  | 162  | 285  | 2.02 | 3.42 | 121  | 124  | 3.27 | 31.2 | 34.5 | 3,210 | 232,403 | 235,613 | 329  | 25.7 | 9,380 | 260,880 |
| %<br>Reduced              | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | 5%    | 3%      | 3%      | 5%   | 2%   | _     | 3%      |
| Average<br>Daily<br>(Max) | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _     | _       | _       | _    | _    | _     | _       |
| Unmit.                    | 117  | 114  | 118  | 297  | 1.49 | 2.50 | 87.8 | 90.3 | 2.36 | 22.7 | 25.0 | 3,362 | 183,258 | 186,620 | 345  | 20.2 | 9,531 | 210,802 |
| Mit.                      | 117  | 114  | 118  | 297  | 1.49 | 2.50 | 87.8 | 90.3 | 2.36 | 22.7 | 25.0 | 3,210 | 177,244 | 180,455 | 329  | 19.8 | 9,531 | 204,101 |
| %<br>Reduced              | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | 5%    | 3%      | 3%      | 5%   | 2%   | _     | 3%      |
| Annual<br>(Max)           | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _     | _       | _       | _    | _    | _     | _       |
| Unmit.                    | 21.4 | 20.8 | 21.5 | 54.1 | 0.27 | 0.46 | 16.0 | 16.5 | 0.43 | 4.14 | 4.57 | 557   | 30,341  | 30,897  | 57.1 | 3.35 | 1,578 | 34,901  |
| Mit.                      | 21.4 | 20.8 | 21.5 | 54.1 | 0.27 | 0.46 | 16.0 | 16.5 | 0.43 | 4.14 | 4.57 | 531   | 29,345  | 29,876  | 54.4 | 3.28 | 1,578 | 33,791  |
| %<br>Reduced              | _    | _    | _    | -    | _    | _    | _    | _    | _    | _    | _    | 5%    | 3%      | 3%      | 5%   | 2%   | _     | 3%      |

# 2.5. Operations Emissions by Sector, Unmitigated

| Sector                    | TOG  | ROG  | NOx  | со  | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2   | CO2T    | CH4  | N2O  | R   | CO2e    |
|---------------------------|------|------|------|-----|------|-------|-------|-------|--------|--------|--------|------|---------|---------|------|------|-----|---------|
| Daily,<br>Summer<br>(Max) | _    | _    | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _       | _       | _    | _    | _   | _       |
| Mobile                    | 35.1 | 31.8 | 149  | 361 | 2.09 | 3.20  | 121   | 124   | 3.05   | 31.2   | 34.3   | _    | 216,596 | 216,596 | 2.68 | 21.9 | 521 | 223,703 |
| Area                      | 107  | 105  | 1.27 | 151 | 0.01 | 0.27  | _     | 0.27  | 0.20   | _      | 0.20   | _    | 623     | 623     | 0.03 | 0.01 | _   | 625     |

| Energy                    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | _    | 0.00 | _     | 24,521  | 24,521  | 2.34    | 0.28    | _     | 24,664  |
|---------------------------|------|------|------|------|---------|------|------|------|------|------|------|-------|---------|---------|---------|---------|-------|---------|
| Water                     | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,542 | 4,398   | 5,941   | 159     | 3.81    | _     | 11,040  |
| Waste                     | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,820 | 0.00    | 1,820   | 182     | 0.00    | _     | 6,366   |
| Refrig.                   | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | 9,367 | 9,367   |
| Stationa<br>ry            | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00  | 756     | 756     | 0.03    | 0.01    | 0.00  | 758     |
| Total                     | 144  | 138  | 154  | 516  | 2.10    | 3.68 | 121  | 125  | 3.47 | 31.2 | 34.7 | 3,362 | 246,894 | 250,256 | 346     | 26.0    | 9,887 | 276,523 |
| Daily,<br>Winter<br>(Max) | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | _     | _       |
| Mobile                    | 32.5 | 29.3 | 158  | 281  | 2.01    | 3.20 | 121  | 124  | 3.05 | 31.2 | 34.3 | _     | 208,742 | 208,742 | 2.76    | 22.0    | 13.5  | 215,386 |
| Area                      | 79.9 | 79.9 | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | _     | _       |
| Energy                    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | _    | 0.00 | _     | 24,521  | 24,521  | 2.34    | 0.28    | _     | 24,664  |
| Water                     | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,542 | 4,398   | 5,941   | 159     | 3.81    | _     | 11,040  |
| Waste                     | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,820 | 0.00    | 1,820   | 182     | 0.00    | _     | 6,366   |
| Refrig.                   | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | 9,367 | 9,367   |
| Stationa<br>ry            | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00  | 756     | 756     | 0.03    | 0.01    | 0.00  | 758     |
| Total                     | 114  | 111  | 162  | 285  | 2.02    | 3.42 | 121  | 124  | 3.27 | 31.2 | 34.5 | 3,362 | 238,417 | 241,779 | 346     | 26.1    | 9,380 | 267,581 |
| Average<br>Daily          | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | _     | _       |
| Mobile                    | 23.9 | 21.5 | 117  | 221  | 1.48    | 2.34 | 87.8 | 90.2 | 2.23 | 22.7 | 24.9 | _     | 153,928 | 153,928 | 2.04    | 16.1    | 164   | 158,953 |
| Area                      | 93.2 | 92.1 | 0.63 | 74.7 | < 0.005 | 0.13 | _    | 0.13 | 0.10 | _    | 0.10 | _     | 307     | 307     | 0.01    | < 0.005 | _     | 308     |
| Energy                    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | _    | 0.00 | _     | 24,521  | 24,521  | 2.34    | 0.28    | _     | 24,664  |
| Water                     | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,542 | 4,398   | 5,941   | 159     | 3.81    | _     | 11,040  |
| Waste                     | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,820 | 0.00    | 1,820   | 182     | 0.00    | _     | 6,366   |
| Refrig.                   | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | 9,367 | 9,367   |
| Stationa<br>ry            | 0.22 | 0.20 | 0.57 | 0.52 | < 0.005 | 0.03 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 | 0.00  | 104     | 104     | < 0.005 | < 0.005 | 0.00  | 104     |
| Total                     | 117  | 114  | 118  | 297  | 1.49    | 2.50 | 87.8 | 90.3 | 2.36 | 22.7 | 25.0 | 3,362 | 183,258 | 186,620 | 345     | 20.2    | 9,531 | 210,802 |
| Annual                    | _    | -    | -    | -    | _       | _    | _    | -    | -    | _    | -    | -     | -       | _       | _       | -       | _     | -       |

| Mobile         | 4.37 | 3.93 | 21.3 | 40.4 | 0.27    | 0.43 | 16.0 | 16.5 | 0.41 | 4.14 | 4.54 | _    | 25,485 | 25,485 | 0.34    | 2.67    | 27.2  | 26,316 |
|----------------|------|------|------|------|---------|------|------|------|------|------|------|------|--------|--------|---------|---------|-------|--------|
| Area           | 17.0 | 16.8 | 0.11 | 13.6 | < 0.005 | 0.02 | _    | 0.02 | 0.02 | _    | 0.02 | _    | 50.8   | 50.8   | < 0.005 | < 0.005 | _     | 51.0   |
| Energy         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | _    | 0.00 | _    | 4,060  | 4,060  | 0.39    | 0.05    | _     | 4,083  |
| Water          | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 255  | 728    | 984    | 26.3    | 0.63    | _     | 1,828  |
| Waste          | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 301  | 0.00   | 301    | 30.1    | 0.00    | _     | 1,054  |
| Refrig.        | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _    | _      | _      | _       | _       | 1,551 | 1,551  |
| Stationa<br>ry | 0.04 | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 17.1   | 17.1   | < 0.005 | < 0.005 | 0.00  | 17.2   |
| Total          | 21.4 | 20.8 | 21.5 | 54.1 | 0.27    | 0.46 | 16.0 | 16.5 | 0.43 | 4.14 | 4.57 | 557  | 30,341 | 30,897 | 57.1    | 3.35    | 1,578 | 34,901 |

# 2.6. Operations Emissions by Sector, Mitigated

|                           |      |      |      |      |          |       |       |       | _      |        |        |       |         |         |      |      |       |         |
|---------------------------|------|------|------|------|----------|-------|-------|-------|--------|--------|--------|-------|---------|---------|------|------|-------|---------|
| Sector                    | TOG  | ROG  | NOx  | со   | SO2      | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2  | NBCO2   | CO2T    | CH4  | N2O  | R     | CO2e    |
| Daily,<br>Summer<br>(Max) | _    | _    | _    | _    | _        | _     | _     | _     | _      | _      | _      | _     | _       | _       | _    | _    | _     | _       |
| Mobile                    | 35.1 | 31.8 | 149  | 361  | 2.09     | 3.20  | 121   | 124   | 3.05   | 31.2   | 34.3   | _     | 216,596 | 216,596 | 2.68 | 21.9 | 521   | 223,703 |
| Area                      | 107  | 105  | 1.27 | 151  | 0.01     | 0.27  | _     | 0.27  | 0.20   | _      | 0.20   | _     | 623     | 623     | 0.03 | 0.01 | _     | 625     |
| Energy                    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     | 0.00  | _     | 0.00  | 0.00   | _      | 0.00   | _     | 18,942  | 18,942  | 1.81 | 0.22 | _     | 19,052  |
| Water                     | _    | _    | _    | _    | _        | _     | _     | _     | _      | _      | _      | 1,390 | 3,964   | 5,354   | 143  | 3.43 | _     | 9,951   |
| Waste                     | _    | _    | _    | _    | <u> </u> | _     | _     | _     | _      | _      | _      | 1,820 | 0.00    | 1,820   | 182  | 0.00 | _     | 6,366   |
| Refrig.                   | _    | _    | _    | _    | _        | _     | _     | _     | _      | _      | _      | _     | _       | _       | _    | _    | 9,367 | 9,367   |
| Stationa<br>ry            | 1.62 | 1.48 | 4.13 | 3.77 | 0.01     | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00  | 756     | 756     | 0.03 | 0.01 | 0.00  | 758     |
| Total                     | 144  | 138  | 154  | 516  | 2.10     | 3.68  | 121   | 125   | 3.47   | 31.2   | 34.7   | 3,210 | 240,880 | 244,090 | 329  | 25.5 | 9,887 | 269,822 |
| Daily,<br>Winter<br>(Max) | _    | _    | _    | _    | -        | _     | _     | _     | -      | _      | _      | _     | _       | _       | _    | -    | _     | _       |
| Mobile                    | 32.5 | 29.3 | 158  | 281  | 2.01     | 3.20  | 121   | 124   | 3.05   | 31.2   | 34.3   | _     | 208,742 | 208,742 | 2.76 | 22.0 | 13.5  | 215,386 |
| Area                      | 79.9 | 79.9 | _    | _    | _        | _     | _     | _     | _      | _      | _      | _     | _       | _       | _    | _    | _     | _       |

| Energy           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | -    | 0.00 | _     | 18,942  | 18,942  | 1.81    | 0.22    | _     | 19,052  |
|------------------|------|------|------|------|---------|------|------|------|------|------|------|-------|---------|---------|---------|---------|-------|---------|
| Water            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,390 | 3,964   | 5,354   | 143     | 3.43    | _     | 9,951   |
| Waste            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,820 | 0.00    | 1,820   | 182     | 0.00    | _     | 6,366   |
| Refrig.          | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | 9,367 | 9,367   |
| Stationa<br>ry   | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00  | 756     | 756     | 0.03    | 0.01    | 0.00  | 758     |
| Total            | 114  | 111  | 162  | 285  | 2.02    | 3.42 | 121  | 124  | 3.27 | 31.2 | 34.5 | 3,210 | 232,403 | 235,613 | 329     | 25.7    | 9,380 | 260,880 |
| Average<br>Daily | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | -       | _       | _     | _       |
| Mobile           | 23.9 | 21.5 | 117  | 221  | 1.48    | 2.34 | 87.8 | 90.2 | 2.23 | 22.7 | 24.9 | _     | 153,928 | 153,928 | 2.04    | 16.1    | 164   | 158,953 |
| Area             | 93.2 | 92.1 | 0.63 | 74.7 | < 0.005 | 0.13 | _    | 0.13 | 0.10 | _    | 0.10 | _     | 307     | 307     | 0.01    | < 0.005 | _     | 308     |
| Energy           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | _    | 0.00 | _     | 18,942  | 18,942  | 1.81    | 0.22    | _     | 19,052  |
| Water            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,390 | 3,964   | 5,354   | 143     | 3.43    | _     | 9,951   |
| Waste            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 1,820 | 0.00    | 1,820   | 182     | 0.00    | _     | 6,366   |
| Refrig.          | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | 9,367 | 9,367   |
| Stationa<br>ry   | 0.22 | 0.20 | 0.57 | 0.52 | < 0.005 | 0.03 | 0.00 | 0.03 | 0.03 | 0.00 | 0.03 | 0.00  | 104     | 104     | < 0.005 | < 0.005 | 0.00  | 104     |
| Total            | 117  | 114  | 118  | 297  | 1.49    | 2.50 | 87.8 | 90.3 | 2.36 | 22.7 | 25.0 | 3,210 | 177,244 | 180,455 | 329     | 19.8    | 9,531 | 204,101 |
| Annual           | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | _     | _       |
| Mobile           | 4.37 | 3.93 | 21.3 | 40.4 | 0.27    | 0.43 | 16.0 | 16.5 | 0.41 | 4.14 | 4.54 | _     | 25,485  | 25,485  | 0.34    | 2.67    | 27.2  | 26,316  |
| Area             | 17.0 | 16.8 | 0.11 | 13.6 | < 0.005 | 0.02 | _    | 0.02 | 0.02 | _    | 0.02 | _     | 50.8    | 50.8    | < 0.005 | < 0.005 | _     | 51.0    |
| Energy           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | _    | 0.00 | 0.00 | _    | 0.00 | _     | 3,136   | 3,136   | 0.30    | 0.04    | _     | 3,154   |
| Water            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 230   | 656     | 886     | 23.7    | 0.57    | _     | 1,648   |
| Waste            | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | 301   | 0.00    | 301     | 30.1    | 0.00    | _     | 1,054   |
| Refrig.          | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _     | _       | _       | _       | _       | 1,551 | 1,551   |
| Stationa<br>ry   | 0.04 | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00  | 17.1    | 17.1    | < 0.005 | < 0.005 | 0.00  | 17.2    |
| Total            | 21.4 | 20.8 | 21.5 | 54.1 | 0.27    | 0.46 | 16.0 | 16.5 | 0.43 | 4.14 | 4.57 | 531   | 29,345  | 29,876  | 54.4    | 3.28    | 1,578 | 33,791  |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

| Land<br>Use                                    | TOG  | ROG  | NOx  | со   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2   | CO2T    | CH4  | N2O  | R    | CO2e    |
|--|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|---------|---------|------|------|------|---------|
| Daily,<br>Summer<br>(Max)                      | _    | _    | _    | _    | _    | _     | -     | -     | -      | _      | _      | _    | _       | _       | _    | _    | _    | _       |
| General<br>Heavy<br>Industry                   | 7.12 | 6.53 | 3.45 | 74.8 | 0.17 | 0.06  | 16.6  | 16.7  | 0.06   | 4.19   | 4.25   | _    | 16,844  | 16,844  | 0.54 | 0.37 | 40.1 | 17,008  |
| User<br>Defined<br>Industrial                  | 4.26 | 3.56 | 134  | 37.6 | 1.37 | 2.93  | 49.0  | 51.9  | 2.81   | 13.1   | 15.9   | _    | 143,691 | 143,691 | 0.34 | 20.3 | 347  | 150,087 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 2.12 | 1.94 | 1.03 | 22.2 | 0.05 | 0.02  | 4.95  | 4.96  | 0.02   | 1.25   | 1.26   | _    | 5,007   | 5,007   | 0.16 | 0.11 | 11.9 | 5,056   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 21.6 | 19.8 | 10.5 | 227  | 0.50 | 0.19  | 50.4  | 50.6  | 0.17   | 12.7   | 12.9   | _    | 51,054  | 51,054  | 1.64 | 1.13 | 122  | 51,552  |
| Parking<br>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    |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 0.00   | 0.00   | 0.00   | -    | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    |
| Total  | 35.1 | 31.8 | 149  | 361  | 2.09 | 3.20  | 121   | 124   | 3.05   | 31.2   | 34.3   | _    | 216,596 | 216,596 | 2.68 | 21.9 | 521  | 223,703 |
| Daily,<br>Winter<br>(Max)                      | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _       | _       | _    | _    | _    | _       |

| General<br>Heavy<br>Industry                   | 6.57 | 5.98 | 3.83 | 56.3 | 0.15 | 0.06    | 16.6 | 16.7 | 0.06    | 4.19 | 4.25 | _ | 15,017  | 15,017  | 0.56 | 0.40 | 1.04 | 15,150  |
|--|------|------|------|------|------|---------|------|------|---------|------|------|---|---------|---------|------|------|------|---------|
| User<br>Defined<br>Industrial                  | 4.07 | 3.40 | 141  | 37.8 | 1.37 | 2.93    | 49.0 | 51.9 | 2.81    | 13.1 | 15.9 | _ | 143,747 | 143,747 | 0.33 | 20.3 | 9.01 | 149,811 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 1.95 | 1.78 | 1.14 | 16.7 | 0.04 | 0.02    | 4.95 | 4.96 | 0.02    | 1.25 | 1.26 | _ | 4,464   | 4,464   | 0.17 | 0.12 | 0.31 | 4,504   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 19.9 | 18.1 | 11.6 | 171  | 0.45 | 0.19    | 50.4 | 50.6 | 0.17    | 12.7 | 12.9 | _ | 45,515  | 45,515  | 1.70 | 1.21 | 3.15 | 45,921  |
| Parking<br>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    |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | - | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    |
| Total  | 32.5 | 29.3 | 158  | 281  | 2.01 | 3.20    | 121  | 124  | 3.05    | 31.2 | 34.3 | _ | 208,742 | 208,742 | 2.76 | 22.0 | 13.5 | 215,386 |
| Annual   | _    | _    | _    | _    | _    | _       | _    | _    | _       | _    | _    | _ | _       | _       | _    | _    | _    | _       |
| General<br>Heavy<br>Industry                   | 0.88 | 0.80 | 0.53 | 8.18 | 0.02 | 0.01    | 2.20 | 2.21 | 0.01    | 0.55 | 0.56 | _ | 1,868   | 1,868   | 0.07 | 0.05 | 2.10 | 1,887   |
| User<br>Defined<br>Industrial                  | 0.55 | 0.46 | 19.0 | 5.00 | 0.18 | 0.39    | 6.50 | 6.89 | 0.37    | 1.74 | 2.11 | _ | 17,398  | 17,398  | 0.04 | 2.46 | 18.1 | 18,149  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.26 | 0.24 | 0.16 | 2.43 | 0.01 | < 0.005 | 0.65 | 0.66 | < 0.005 | 0.16 | 0.17 | _ | 555     | 555     | 0.02 | 0.01 | 0.62 | 561     |

| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 2.67 | 2.43 | 1.62 | 24.8 | 0.06 | 0.02 | 6.67 | 6.70 | 0.02 | 1.68 | 1.70 | _ | 5,663  | 5,663  | 0.21 | 0.15 | 6.35 | 5,719  |
|--|------|------|------|------|------|------|------|------|------|------|------|---|--------|--------|------|------|------|--------|
| Parking<br>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   |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00   |
| Total  | 4.37 | 3.93 | 21.3 | 40.4 | 0.27 | 0.43 | 16.0 | 16.5 | 0.41 | 4.14 | 4.54 | _ | 25,485 | 25,485 | 0.34 | 2.67 | 27.2 | 26,316 |

# 4.1.2. Mitigated

| Land<br>Use                                    | TOG  | ROG  | NOx  | СО   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2   | СО2Т    | CH4  | N2O  | R    | CO2e    |
|--|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|---------|---------|------|------|------|---------|
| Daily,<br>Summer<br>(Max)                      | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _       | _       | _    | _    | _    | _       |
| General<br>Heavy<br>Industry                   | 7.12 | 6.53 | 3.45 | 74.8 | 0.17 | 0.06  | 16.6  | 16.7  | 0.06   | 4.19   | 4.25   | _    | 16,844  | 16,844  | 0.54 | 0.37 | 40.1 | 17,008  |
| User<br>Defined<br>Industrial                  | 4.26 | 3.56 | 134  | 37.6 | 1.37 | 2.93  | 49.0  | 51.9  | 2.81   | 13.1   | 15.9   | _    | 143,691 | 143,691 | 0.34 | 20.3 | 347  | 150,087 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 2.12 | 1.94 | 1.03 | 22.2 | 0.05 | 0.02  | 4.95  | 4.96  | 0.02   | 1.25   | 1.26   | _    | 5,007   | 5,007   | 0.16 | 0.11 | 11.9 | 5,056   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 21.6 | 19.8 | 10.5 | 227  | 0.50 | 0.19  | 50.4  | 50.6  | 0.17   | 12.7   | 12.9   | _    | 51,054  | 51,054  | 1.64 | 1.13 | 122  | 51,552  |
| Parking<br>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    |

| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    |
|--|------|------|------|------|------|------|------|------|------|------|------|---|---------|---------|------|------|------|---------|
| Total  | 35.1 | 31.8 | 149  | 361  | 2.09 | 3.20 | 121  | 124  | 3.05 | 31.2 | 34.3 | _ | 216,596 | 216,596 | 2.68 | 21.9 | 521  | 223,703 |
| Daily,<br>Winter<br>(Max)                      | _    | _    | _    | -    | _    | -    | -    | -    | _    | -    | _    | _ | -       | _       | _    | -    | _    | _       |
| General<br>Heavy<br>Industry                   | 6.57 | 5.98 | 3.83 | 56.3 | 0.15 | 0.06 | 16.6 | 16.7 | 0.06 | 4.19 | 4.25 | _ | 15,017  | 15,017  | 0.56 | 0.40 | 1.04 | 15,150  |
| User<br>Defined<br>Industrial                  | 4.07 | 3.40 | 141  | 37.8 | 1.37 | 2.93 | 49.0 | 51.9 | 2.81 | 13.1 | 15.9 | _ | 143,747 | 143,747 | 0.33 | 20.3 | 9.01 | 149,811 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 1.95 | 1.78 | 1.14 | 16.7 | 0.04 | 0.02 | 4.95 | 4.96 | 0.02 | 1.25 | 1.26 | _ | 4,464   | 4,464   | 0.17 | 0.12 | 0.31 | 4,504   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 19.9 | 18.1 | 11.6 | 171  | 0.45 | 0.19 | 50.4 | 50.6 | 0.17 | 12.7 | 12.9 | _ | 45,515  | 45,515  | 1.70 | 1.21 | 3.15 | 45,921  |
| Parking<br>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    |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00    | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    |
| Total  | 32.5 | 29.3 | 158  | 281  | 2.01 | 3.20 | 121  | 124  | 3.05 | 31.2 | 34.3 | _ | 208,742 | 208,742 | 2.76 | 22.0 | 13.5 | 215,386 |
| Annual   | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _    | _ | _       | _       | _    | _    | _    | _       |
| General<br>Heavy<br>Industry                   | 0.88 | 0.80 | 0.53 | 8.18 | 0.02 | 0.01 | 2.20 | 2.21 | 0.01 | 0.55 | 0.56 | _ | 1,868   | 1,868   | 0.07 | 0.05 | 2.10 | 1,887   |
| User<br>Defined<br>Industrial                  | 0.55 | 0.46 | 19.0 | 5.00 | 0.18 | 0.39 | 6.50 | 6.89 | 0.37 | 1.74 | 2.11 | _ | 17,398  | 17,398  | 0.04 | 2.46 | 18.1 | 18,149  |

| Refriger ated                                  | 0.26 | 0.24 | 0.16 | 2.43 | 0.01 | < 0.005 | 0.65 | 0.66 | < 0.005 | 0.16 | 0.17 | _ | 555    | 555    | 0.02 | 0.01 | 0.62 | 561    |
|--|------|------|------|------|------|---------|------|------|---------|------|------|---|--------|--------|------|------|------|--------|
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 2.67 | 2.43 | 1.62 | 24.8 | 0.06 | 0.02    | 6.67 | 6.70 | 0.02    | 1.68 | 1.70 | _ | 5,663  | 5,663  | 0.21 | 0.15 | 6.35 | 5,719  |
| Parking<br>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   |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 | _ | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00   |
| Total  | 4.37 | 3.93 | 21.3 | 40.4 | 0.27 | 0.43    | 16.0 | 16.5 | 0.41    | 4.14 | 4.54 | _ | 25,485 | 25,485 | 0.34 | 2.67 | 27.2 | 26,316 |

# 4.2. Energy

## 4.2.1. Electricity Emissions By Land Use - Unmitigated

| Land<br>Use                                  | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R | CO2e  |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|---|-------|
| Daily,<br>Summer<br>(Max)                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                 | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 3,948 | 3,948 | 0.38 | 0.05 | _ | 3,971 |
| User<br>Defined<br>Industrial                | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 7,229 | 7,229 | 0.69 | 0.08 | _ | 7,271 |

| Unrefrig<br>erated<br>Wareho                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 12,199 | 12,199 | 1.16 | 0.14 | _ | 12,270 |
|--|---|---|---|---|---|---|---|---|---|---|---|---|--------|--------|------|------|---|--------|
| Rail<br>Parking<br>Lot                         | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,147  | 1,147  | 0.11 | 0.01 | _ | 1,153  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 24,521 | 24,521 | 2.34 | 0.28 | _ | 24,664 |
| Daily,<br>Winter<br>(Max)                      | _ | - | - | - | _ | _ | _ | _ | _ | _ | _ | _ | _      | _      | _    | _    | _ | _      |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 3,948  | 3,948  | 0.38 | 0.05 | _ | 3,971  |
| User<br>Defined<br>Industrial                  | _ | - | _ | - | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 7,229  | 7,229  | 0.69 | 0.08 | _ | 7,271  |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail |   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 12,199 | 12,199 | 1.16 | 0.14 | _ | 12,270 |
| Parking<br>Lot                                 | _ | _ | - | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,147  | 1,147  | 0.11 | 0.01 | _ | 1,153  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 24,521 | 24,521 | 2.34 | 0.28 | _ | 24,664 |
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _      | _      | _    | _    | _ | _      |

| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 654   | 654   | 0.06 | 0.01    | _ | 657   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|-------|-------|------|---------|---|-------|
| User<br>Defined<br>Industrial                  | _ | _ | - | - | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00 | 0.00    | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,197 | 1,197 | 0.11 | 0.01    | _ | 1,204 |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 2,020 | 2,020 | 0.19 | 0.02    | _ | 2,031 |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 190   | 190   | 0.02 | < 0.005 | _ | 191   |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00 | 0.00    | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 4,060 | 4,060 | 0.39 | 0.05    | _ | 4,083 |

### 4.2.2. Electricity Emissions By Land Use - Mitigated

| Land<br>Use                   | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T  | CH4  | N2O  | R | CO2e  |
|-------------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|---|-------|
| Daily,<br>Summer<br>(Max)     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry  | _   | _   | _   | _  | _   | _     | _     |       | _      | _      |        | _    | 3,541 | 3,541 | 0.34 | 0.04 | _ | 3,561 |
| User<br>Defined<br>Industrial | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |

| Refriger<br>Warehous<br>Rail                   | —<br>se-No | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 3,276  | 3,276  | 0.31 | 0.04 | _ | 3,295  |
|--|------------|---|---|---|---|---|---|---|---|---|---|---|--------|--------|------|------|---|--------|
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail |            | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |   | 10,979 | 10,979 | 1.05 | 0.13 | _ | 11,043 |
| Parking<br>Lot                                 | _          | _ | _ | _ | - | _ | _ | _ | _ | _ | _ | - | 1,147  | 1,147  | 0.11 | 0.01 | _ | 1,153  |
| Other<br>Asphalt<br>Surfaces                   | -          | - | - |   | _ | _ | _ | - | _ | _ | - | _ | 0.00   | 0.00   | 0.00 | 0.00 | - | 0.00   |
| Total  | _          | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 18,942 | 18,942 | 1.81 | 0.22 | _ | 19,052 |
| Daily,<br>Winter<br>(Max)                      | _          | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _      | _      | _    | _    | _ | _      |
| General<br>Heavy<br>Industry                   | _          | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 3,541  | 3,541  | 0.34 | 0.04 | _ | 3,561  |
| User<br>Defined<br>Industrial                  | _          | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _          | - | _ | _ | - | _ | _ | _ | - | _ | _ | - | 3,276  | 3,276  | 0.31 | 0.04 | _ | 3,295  |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _          | - | _ | _ | - | _ | _ | _ | _ | _ | _ | - | 10,979 | 10,979 | 1.05 | 0.13 | _ | 11,043 |
| Parking<br>Lot                                 | _          | _ | - | - | - | _ | _ | - | - | - | _ | - | 1,147  | 1,147  | 0.11 | 0.01 | - | 1,153  |
| Other<br>Asphalt<br>Surfaces                   | _          | _ | - | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00 | _ | 0.00   |

| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 18,942 | 18,942 | 1.81 | 0.22    | _ | 19,052 |
|--|---|---|---|---|---|---|---|---|---|---|---|---|--------|--------|------|---------|---|--------|
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _      | _      | _    | _       | _ | _      |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 586    | 586    | 0.06 | 0.01    | _ | 590    |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00    | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | - | - | _ | _ | _ | _ | _ | _ | _ | _ | 542    | 542    | 0.05 | 0.01    | _ | 545    |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,818  | 1,818  | 0.17 | 0.02    | _ | 1,828  |
| Parking<br>Lot                                 | _ | _ | _ | _ | - | _ | _ | _ | _ | _ | _ | _ | 190    | 190    | 0.02 | < 0.005 | _ | 191    |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00   | 0.00   | 0.00 | 0.00    | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 3,136  | 3,136  | 0.30 | 0.04    | _ | 3,154  |

## 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

| Land<br>Use                  | TOG  | ROG  | NOx  | СО   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4  | N2O  | R | CO2e |
|------------------------------|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|---|------|
| Daily,<br>Summer<br>(Max)    | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| General<br>Heavy<br>Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  |       | 0.00  | 0.00   | _      | 0.00   | _    | 0.00  | 0.00 | 0.00 | 0.00 | _ | 0.00 |

| User<br>Defined<br>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 |
|--|------|------|------|------|------|------|---|------|------|---|------|---|------|------|------|------|---|------|
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Total  | 0.00 | 0.00 | 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,<br>Winter<br>(Max)                      | _    | _    | _    | -    | -    | _    | _ | _    | _    | _ | -    | _ | _    | _    | -    | -    | - | -    |
| General<br>Heavy<br>Industry                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 |
| User<br>Defined<br>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 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |
|--|------|------|------|------|------|------|---|------|------|---|------|---|------|------|------|------|---|------|
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Total  | 0.00 | 0.00 | 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   | _    | _    | _    | _    | _    | _    | _ | _    | _    | _ | _    | _ | _    | _    | _    | _    | _ | _    |
| General<br>Heavy<br>Industry                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| User<br>Defined<br>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 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | - | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 |
| Total  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |

## 4.2.4. Natural Gas Emissions By Land Use - Mitigated

|      |     | (    | ,    | <b>,</b> , | <b>J</b> | ,       |         | - (      | .,        | ,,,       | ,         |      |        |      |      |      |   |      |
|------|-----|------|------|------------|----------|---------|---------|----------|-----------|-----------|-----------|------|--------|------|------|------|---|------|
| Land | TOG | ROG  | NOx  | CO         | SO2      | PM10E   | PM10D   | PM10T    | PM2.5F    | PM2 5D    | PM2.5T    | BCO2 | NBCO2  | CO2T | CH4  | N2O  | R | CO2e |
| Land | 100 | INOU | 1107 |            | 1002     | I WITCE | I MITOD | 1 101101 | I IVIZ.OL | 1 1012.00 | 1 1012.01 | D002 | 140002 | 0021 | 0117 | 1420 | 1 | 0020 |
| Use  |     |      |      |            |          |         |         |          |           |           |           |      |        |      |      |      |   |      |

| Daily,<br>Summer<br>(Max)                      | _    | _    | _    | -    | -    | _    | _ | -    | _    | _ | _    | _ | _    | _    | _    | _    | _ | _    |
|--|------|------|------|------|------|------|---|------|------|---|------|---|------|------|------|------|---|------|
| General<br>Heavy<br>Industry                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 |
| User<br>Defined<br>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 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 |
| Total  | 0.00 | 0.00 | 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,<br>Winter<br>(Max)                      | _    | _    | _    | -    | _    | _    | _ | -    | _    | _ | _    | _ | _    | _    | _    | _    | - |      |
| General<br>Heavy<br>Industry                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| User<br>Defined<br>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 |

| Refriger<br>ated<br>Wareho<br>use-No           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
|--|------|------|------|------|------|------|---|------|------|---|------|---|------|------|------|------|---|------|
| Rail   |      |      |      |      |      |      |   |      |      |   |      |   |      |      |      |      |   |      |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Total  | 0.00 | 0.00 | 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   | _    | _    | _    | _    | _    | _    | _ | _    | _    | _ | _    | _ | _    | _    | _    | _    | _ | _    |
| General<br>Heavy<br>Industry                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| User<br>Defined<br>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 |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | 0.00 | 0.00 | 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<br>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 |
| Other<br>Asphalt<br>Surfaces                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |   | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 |   | 0.00 |

| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00 | 0.00 | _ | 0.00 | _ | 0.00 | 0.00 | 0.00 | 0.00 | <br>0.00 |
|-------|------|------|------|------|------|------|---|------|------|---|------|---|------|------|------|------|----------|
| iotai | 0.00 | 0.00 | 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

| Source                            | TOG  | ROG  | NOx  | со  | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4  | N2O  | R | CO2e |
|-----------------------------------|------|------|------|-----|------|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|---|------|
| Daily,<br>Summer<br>(Max)         | _    | _    | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Consum<br>er<br>Product<br>s      | 75.0 | 75.0 | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Architect<br>ural<br>Coating<br>s | 4.90 | 4.90 | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Landsca<br>pe<br>Equipm<br>ent    | 26.9 | 24.9 | 1.27 | 151 | 0.01 | 0.27  | _     | 0.27  | 0.20   | _      | 0.20   | _    | 623   | 623  | 0.03 | 0.01 | _ | 625  |
| Total                             | 107  | 105  | 1.27 | 151 | 0.01 | 0.27  | _     | 0.27  | 0.20   | _      | 0.20   | _    | 623   | 623  | 0.03 | 0.01 | _ | 625  |
| Daily,<br>Winter<br>(Max)         | _    | _    | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Consum<br>er<br>Product<br>s      | 75.0 | 75.0 | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Architect<br>ural<br>Coating<br>s | 4.90 | 4.90 | _    | _   | _    | _     | _     | _     | _      |        | _      | _    | _     | _    | _    | _    | _ | _    |
| Total                             | 79.9 | 79.9 | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |

| Annual                            | _    | _    | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
|-----------------------------------|------|------|------|------|---------|------|---|------|------|---|------|---|------|------|---------|---------|---|------|
| Consum<br>er<br>Product<br>s      | 13.7 | 13.7 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Architect<br>ural<br>Coating<br>s | 0.89 | 0.89 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Landsca<br>pe<br>Equipm<br>ent    | 2.43 | 2.24 | 0.11 | 13.6 | < 0.005 | 0.02 | _ | 0.02 | 0.02 | _ | 0.02 | _ | 50.8 | 50.8 | < 0.005 | < 0.005 | _ | 51.0 |
| Total                             | 17.0 | 16.8 | 0.11 | 13.6 | < 0.005 | 0.02 | _ | 0.02 | 0.02 | _ | 0.02 | _ | 50.8 | 50.8 | < 0.005 | < 0.005 | _ | 51.0 |

# 4.3.2. Mitigated

| Source                            | TOG  | ROG  | NOx  | со  | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | всо2 | NBCO2 | CO2T | CH4  | N2O  | R | CO2e |
|-----------------------------------|------|------|------|-----|------|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|---|------|
| Daily,<br>Summer<br>(Max)         | _    | _    | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Consum<br>er<br>Product<br>s      | 75.0 | 75.0 | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Architect<br>ural<br>Coating<br>s | 4.90 | 4.90 | _    | _   | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _ | _    |
| Landsca<br>pe<br>Equipm<br>ent    | 26.9 | 24.9 | 1.27 | 151 | 0.01 | 0.27  | _     | 0.27  | 0.20   | _      | 0.20   | _    | 623   | 623  | 0.03 | 0.01 | _ | 625  |
| Total                             | 107  | 105  | 1.27 | 151 | 0.01 | 0.27  | _     | 0.27  | 0.20   | _      | 0.20   | _    | 623   | 623  | 0.03 | 0.01 | _ | 625  |

| Daily,<br>Winter<br>(Max)         | _    | _    | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
|-----------------------------------|------|------|------|------|---------|------|---|------|------|---|------|---|------|------|---------|---------|---|------|
| Consum<br>er<br>Product<br>s      | 75.0 | 75.0 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Architect<br>ural<br>Coating<br>s | 4.90 | 4.90 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Total                             | 79.9 | 79.9 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Annual                            | _    | _    | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Consum<br>er<br>Product<br>s      | 13.7 | 13.7 | _    | _    | _       | _    | _ | _    | _    | _ | _    | _ | _    | _    | _       | _       | _ | _    |
| Architect<br>ural<br>Coating<br>s | 0.89 | 0.89 | _    | _    | -       | _    | _ | _    | _    | - | _    | _ | _    | -    | _       | _       | _ | _    |
| Landsca<br>pe<br>Equipm<br>ent    | 2.43 | 2.24 | 0.11 | 13.6 | < 0.005 | 0.02 | _ | 0.02 | 0.02 | _ | 0.02 | _ | 50.8 | 50.8 | < 0.005 | < 0.005 | _ | 51.0 |
| Total                             | 17.0 | 16.8 | 0.11 | 13.6 | < 0.005 | 0.02 | _ | 0.02 | 0.02 | _ | 0.02 | _ | 50.8 | 50.8 | < 0.005 | < 0.005 | _ | 51.0 |

# 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

| • | · Onata |     | a, a | ay, | y a. | iniaai, a |       | 0.10, 0.0 | .,     | ,,,    | ,      |      |       |      |     |     |   |      |
|---|---------|-----|------|-----|------|-----------|-------|-----------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Land<br>Use                             | TOG     | ROG | NOx  | СО  | SO2  | PM10E     | PM10D | PM10T     | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
| Daily,                                  | _       | _   | _    | _   | _    | _         | _     | _         | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Summer (Max)                            |         |     |      |     |      |           |       |           |        |        |        |      |       |      |     |     |   |      |

| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ |   | _ | _ | _ | _ | 154   | 440   | 594   | 15.9 | 0.38 | _ | 1,104  |
|--|---|---|---|---|---|---|---|---|---|---|---|-------|-------|-------|------|------|---|--------|
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   |   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 154   | 440   | 594   | 15.9 | 0.38 | _ | 1,104  |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,234 | 3,519 | 4,753 | 127  | 3.05 | _ | 8,832  |
| Parking<br>Lot                                 | _ |   | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,542 | 4,398 | 5,941 | 159  | 3.81 | _ | 11,040 |
| Daily,<br>Winter<br>(Max)                      | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     | _     | _    | _    | _ | _      |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 154   | 440   | 594   | 15.9 | 0.38 | _ | 1,104  |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ |   | _ | _ | _ | _ | _ | _ | _ | _ | 154   | 440   | 594   | 15.9 | 0.38 | _ | 1,104  |

| Unrefrig<br>erated<br>Wareho<br>Rail           | _ | _ | _ | _ | _ | _ | _ |   |   | _ | _ | 1,234 | 3,519 | 4,753 | 127  | 3.05 | _ | 8,832  |
|--|---|---|---|---|---|---|---|---|---|---|---|-------|-------|-------|------|------|---|--------|
| Parking<br>Lot                                 | _ | _ | - | _ | - | _ | _ | _ | - | - | - | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Other<br>Asphalt<br>Surfaces                   | _ | - | _ | _ | _ | _ | - | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | - | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,542 | 4,398 | 5,941 | 159  | 3.81 | _ | 11,040 |
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     | _     | _    | _    | _ | _      |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 25.5  | 72.8  | 98.3  | 2.63 | 0.06 | - | 183    |
| User<br>Defined<br>Industrial                  | _ | - | _ | - | _ | _ | _ | _ | _ | _ | - | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | - | 0.00   |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 25.5  | 72.8  | 98.3  | 2.63 | 0.06 | _ | 183    |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 204   | 583   | 787   | 21.0 | 0.50 | _ | 1,462  |
| Parking<br>Lot                                 | _ | _ | - | _ | _ | - | - | _ | - | - | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | - | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00   |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 255   | 728   | 984   | 26.3 | 0.63 | _ | 1,828  |

## 4.4.2. Mitigated

| Land<br>Use                                    | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2  | NBCO2 | СО2Т  | CH4  | N2O  | R | CO2e  |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|-------|-------|-------|------|------|---|-------|
| Daily,<br>Summer<br>(Max)                      | _   | -   | _   | -  | -   | -     | -     | -     | -      | _      | _      | _     | _     | -     | -    | _    | - | -     |
| General<br>Heavy<br>Industry                   | _   | _   | _   | _  | _   | _     | _     | _     | -      | _      | _      | 139   | 396   | 535   | 14.3 | 0.34 | _ | 995   |
| User<br>Defined<br>Industrial                  | _   | _   | _   | _  | _   | _     | -     | -     | -      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 139   | 396   | 535   | 14.3 | 0.34 | _ | 995   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 1,112 | 3,171 | 4,284 | 114  | 2.75 | _ | 7,961 |
| Parking<br>Lot                                 | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _   | _   | _   | _  | _   | _     | -     | -     | -      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Total  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 1,390 | 3,964 | 5,354 | 143  | 3.43 | _ | 9,951 |
| Daily,<br>Winter<br>(Max)                      | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _     | _     | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 139   | 396   | 535   | 14.3 | 0.34 | _ | 995   |
| User<br>Defined<br>Industrial                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |

| Refriger<br>ated<br>Wareho<br>Rail             | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 139   | 396   | 535   | 14.3 | 0.34 | _ | 995   |
|--|---|---|---|---|---|---|---|---|---|---|---|-------|-------|-------|------|------|---|-------|
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ |   | _ | _ | _ | _ | _ | 1,112 | 3,171 | 4,284 | 114  | 2.75 | _ | 7,961 |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,390 | 3,964 | 5,354 | 143  | 3.43 | _ | 9,951 |
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 23.0  | 65.6  | 88.6  | 2.37 | 0.06 | _ | 165   |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | - | - | - | _ | 23.0  | 65.6  | 88.6  | 2.37 | 0.06 | _ | 165   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ |   | - | _ | - | _ | 184   | 525   | 709   | 18.9 | 0.45 | _ | 1,318 |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | - | - | - | _ | _ | _ | _ | _ | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 230   | 656   | 886   | 23.7 | 0.57 | _ | 1,648 |

# 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

| Land<br>Use                                    | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2  | NBCO2 | СО2Т  | CH4  | N2O  | R | CO2e  |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|-------|-------|-------|------|------|---|-------|
| Daily,<br>Summer<br>(Max)                      | _   | _   | _   | _  | _   | -     | _     | _     | _      | _      | _      | _     | _     | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _   | _   | -   | _  | _   | _     | _     | _     | _      | _      | _      | 233   | 0.00  | 233   | 23.2 | 0.00 | _ | 814   |
| User<br>Defined<br>Industrial                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _   | _   | _   | _  |     | _     | _     | _     | _      | _      | _      | 176   | 0.00  | 176   | 17.6 | 0.00 | _ | 617   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _   | _   | _   | _  | -   | _     | _     | _     | _      | _      | _      | 1,411 | 0.00  | 1,411 | 141  | 0.00 | _ | 4,935 |
| Parking<br>Lot                                 | _   | -   | _   | -  | -   | _     | -     | -     | -      | -      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | - | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _   | _   | _   | _  | _   | -     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Total  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 1,820 | 0.00  | 1,820 | 182  | 0.00 | _ | 6,366 |
| Daily,<br>Winter<br>(Max)                      | _   | _   | -   | _  | _   | _     | _     | _     | _      | _      | _      | _     | _     | _     | _    | _    | _ | _     |

| General<br>Heavy<br>Industry                   | _ |   | _ | _ | _ |   | _ | _ | _ | _ | _ | 233   | 0.00 | 233   | 23.2 | 0.00 | _ | 814   |
|--|---|---|---|---|---|---|---|---|---|---|---|-------|------|-------|------|------|---|-------|
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 176   | 0.00 | 176   | 17.6 | 0.00 | _ | 617   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,411 | 0.00 | 1,411 | 141  | 0.00 | _ | 4,935 |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,820 | 0.00 | 1,820 | 182  | 0.00 | _ | 6,366 |
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _    | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 38.5  | 0.00 | 38.5  | 3.85 | 0.00 | _ | 135   |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 29.2  | 0.00 | 29.2  | 2.92 | 0.00 | _ | 102   |

| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 234  | 0.00 | 234  | 23.3 | 0.00 | _ | 817   |
|--|---|---|---|---|---|---|---|---|---|---|---|------|------|------|------|------|---|-------|
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   |   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 301  | 0.00 | 301  | 30.1 | 0.00 | _ | 1,054 |

# 4.5.2. Mitigated

| Land<br>Use                                    | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2  | NBCO2 | CO2T  | CH4  | N2O  | R | CO2e  |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|-------|-------|-------|------|------|---|-------|
| Daily,<br>Summer<br>(Max)                      | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _     | _     | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 233   | 0.00  | 233   | 23.2 | 0.00 | _ | 814   |
| User<br>Defined<br>Industrial                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _   | _   | _   | _  | _   | _     |       | _     | _      | _      | _      | 176   | 0.00  | 176   | 17.6 | 0.00 | _ | 617   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _   | _   | _   | _  | _   | _     |       |       | _      | _      | _      | 1,411 | 0.00  | 1,411 | 141  | 0.00 |   | 4,935 |
| Parking<br>Lot                                 | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | _ | 0.00  |

| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 |   | 0.00  |
|--|---|---|---|---|---|---|---|---|---|---|---|-------|------|-------|------|------|---|-------|
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,820 | 0.00 | 1,820 | 182  | 0.00 | _ | 6,366 |
| Daily,<br>Winter<br>(Max)                      | _ | _ | _ | - | _ | _ | _ | _ | _ | - | _ | _     | _    | _     | -    | -    | _ |       |
| General<br>Heavy<br>Industry                   | _ | - | _ | _ | _ | _ | _ | _ | _ | - | _ | 233   | 0.00 | 233   | 23.2 | 0.00 | _ | 814   |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 176   | 0.00 | 176   | 17.6 | 0.00 | _ | 617   |
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,411 | 0.00 | 1,411 | 141  | 0.00 |   | 4,935 |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | - | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | - | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,820 | 0.00 | 1,820 | 182  | 0.00 | _ | 6,366 |
| Annual   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _    | _     | _    | _    | _ | _     |
| General<br>Heavy<br>Industry                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 38.5  | 0.00 | 38.5  | 3.85 | 0.00 | _ | 135   |
| User<br>Defined<br>Industrial                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | _ | 0.00  |

| Refriger ated                                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 29.2 | 0.00 | 29.2 | 2.92 | 0.00 | _ | 102   |
|--|---|---|---|---|---|---|---|---|---|---|---|------|------|------|------|------|---|-------|
| Unrefrig<br>erated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 234  | 0.00 | 234  | 23.3 | 0.00 | _ | 817   |
| Parking<br>Lot                                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  |
| Other<br>Asphalt<br>Surfaces                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | _ | 0.00  |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 301  | 0.00 | 301  | 30.1 | 0.00 | _ | 1,054 |

# 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

| Land<br>Use                                  | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R     | CO2e  |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|-------|-------|
| Daily,<br>Summer<br>(Max)                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _     | _     |
| General<br>Heavy<br>Industry                 | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 90.6  | 90.6  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _   | _   |     | _  | _   |       | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 9,276 | 9,276 |
| Total  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 9,367 | 9,367 |
| Daily,<br>Winter<br>(Max)                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _     | _     |

| General<br>Heavy<br>Industry                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 90.6  | 90.6  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|-------|
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 9,276 | 9,276 |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 9,367 | 9,367 |
| Annual                                       | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     |
| General<br>Heavy<br>Industry                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 15.0  | 15.0  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _ | _ |   |   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,536 | 1,536 |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,551 | 1,551 |

## 4.6.2. Mitigated

| Land<br>Use                                  | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R     | CO2e  |
|--|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|-------|-------|
| Daily,<br>Summer<br>(Max)                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _     | _     |
| General<br>Heavy<br>Industry                 | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 90.6  | 90.6  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _   | _   | _   | _  |     | _     | _     | _     | _      | _      | _      | _    | _     |      |     | _   | 9,276 | 9,276 |
| Total  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | 9,367 | 9,367 |

| Daily,<br>Winter<br>(Max)                    | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|-------|
| General<br>Heavy<br>Industry                 | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 90.6  | 90.6  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 9,276 | 9,276 |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 9,367 | 9,367 |
| Annual                                       | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _     | _     |
| General<br>Heavy<br>Industry                 | _ | _ | _ | _ | _ | - | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 15.0  | 15.0  |
| Refriger<br>ated<br>Wareho<br>use-No<br>Rail | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,536 | 1,536 |
| Total  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1,551 | 1,551 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

| Equipm<br>ent<br>Type     | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    |       | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

| Daily,<br>Winter<br>(Max) | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total                     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Annual                    | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Total                     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |

### 4.7.2. Mitigated

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

| Equipm<br>ent<br>Type     | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    |       | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Annual                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

| Equipm<br>ent    | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Туре             |     |     |     |    |     |       |       |       |        |        |        |      |       |      |     |     |   |      |
| Daily,<br>Summer | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| (Max)            |     |     |     |    |     |       |       |       |        |        |        |      |       |      |     |     |   |      |

| Emerge<br>Generato             | 1.62<br>r | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00 | 756  | 756  | 0.03    | 0.01    | 0.00 | 758  |
|--------------------------------|-----------|------|------|------|---------|------|------|------|------|------|------|------|------|------|---------|---------|------|------|
| Total                          | 1.62      | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00 | 756  | 756  | 0.03    | 0.01    | 0.00 | 758  |
| Daily,<br>Winter<br>(Max)      | _         | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _    | _    | _    | _       | _       | _    | _    |
| Emerge<br>ncy<br>Generat<br>or | 1.62      | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00 | 756  | 756  | 0.03    | 0.01    | 0.00 | 758  |
| Total                          | 1.62      | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00 | 756  | 756  | 0.03    | 0.01    | 0.00 | 758  |
| Annual                         | _         | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _    | _    | _    | _       | _       | _    | _    |
| Emerge<br>ncy<br>Generat<br>or | 0.04      | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 17.1 | 17.1 | < 0.005 | < 0.005 | 0.00 | 17.2 |
| Total                          | 0.04      | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 17.1 | 17.1 | < 0.005 | < 0.005 | 0.00 | 17.2 |

### 4.8.2. Mitigated

| Equipm<br>ent<br>Type          | TOG  | ROG  | NOx  | СО   | SO2  | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4  | N2O  | R    | CO2e |
|--------------------------------|------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|------|------|
| Daily,<br>Summer<br>(Max)      | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _    | _    |
| Emerge<br>ncy<br>Generat<br>or | 1.62 | 1.48 | 4.13 | 3.77 | 0.01 | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00 | 756   | 756  | 0.03 | 0.01 | 0.00 | 758  |
| Total                          | 1.62 | 1.48 | 4.13 | 3.77 | 0.01 | 0.22  | 0.00  | 0.22  | 0.22   | 0.00   | 0.22   | 0.00 | 756   | 756  | 0.03 | 0.01 | 0.00 | 758  |
| Daily,<br>Winter<br>(Max)      | _    | _    | _    | _    | _    | _     | _     | _     | _      | _      | _      | _    | _     | _    | _    | _    | _    | _    |

| Emerge<br>ncy                  | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00 | 756  | 756  | 0.03    | 0.01    | 0.00 | 758  |
|--------------------------------|------|------|------|------|---------|------|------|------|------|------|------|------|------|------|---------|---------|------|------|
| Total                          | 1.62 | 1.48 | 4.13 | 3.77 | 0.01    | 0.22 | 0.00 | 0.22 | 0.22 | 0.00 | 0.22 | 0.00 | 756  | 756  | 0.03    | 0.01    | 0.00 | 758  |
| Annual                         | _    | _    | _    | _    | _       | _    | _    | _    | _    | _    | _    | _    | _    | _    | _       | _       | _    | _    |
| Emerge<br>ncy<br>Generat<br>or | 0.04 | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 17.1 | 17.1 | < 0.005 | < 0.005 | 0.00 | 17.2 |
| Total                          | 0.04 | 0.04 | 0.10 | 0.09 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 17.1 | 17.1 | < 0.005 | < 0.005 | 0.00 | 17.2 |

## 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)

|                           |     |     |     |    |     |       |       |       |        | <u> </u> |        |      |       |      |     |     |   |      |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|----------|--------|------|-------|------|-----|-----|---|------|
| Equipm<br>ent<br>Type     | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D   | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _        | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _        | _      | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _        | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _        | _      | _    | _     | _    | _   | _   | _ | _    |
| Annual                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _        | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _        | _      | _    | _     | _    | _   | _   | _ | _    |

### 4.9.2. Mitigated

| Е | quipm | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|-------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| е | nt    |     |     |     |    |     |       |       |       |        |        |        |      |       |      |     |     |   |      |
| T | ype   |     |     |     |    |     |       |       |       |        |        |        |      |       |      |     |     |   |      |

| Daily,<br>Summer<br>(Max) | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total                     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |   | _ | _ |
| Daily,<br>Winter<br>(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)

| Vegetati<br>on            | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   |     | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    |     | _   | _ | _    |
| Annual                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

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

|      |     |     | _   |    | ,   | ,     |       |       | ,      |        |        |      |       |      |     |     |   |      |
|------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Land | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
| Use  |     |     |     |    |     |       |       |       |        |        |        |      |       |      |     |     |   |      |

| Daily,<br>Summer<br>(Max) | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total                     | _ | _ | _ | _ | _ |   | _ | _ | _ | _ | _ |   | _ | _ |   | _ | _ | _ |
| Daily,<br>Winter<br>(Max) | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Total                     | _ | _ | _ | _ |   |   | _ | _ | _ | _ |   | _ | _ | _ |   | _ | _ | _ |
| Annual                    | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Total                     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |

# 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

| Species                   | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D |   | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|---|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | -   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Avoided                   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Sequest ered              | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Remove<br>d               | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| _                         | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Avoided                   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _ | _    | _     | _    | _   | _   | _ | _    |

| Sequest ered | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Subtotal     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Remove<br>d  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| _            | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Annual       | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Avoided      | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Sequest ered | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Remove<br>d  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal     | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| _            | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |

### 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

| Vegetati<br>on            | TOG | ROG | NOx | СО | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Annual                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

| _  |     |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |       |
|----|-----|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| To | tal | _ | _ | _ | I — | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | <br>_ |
|    |     |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |       |

### 4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

| Land<br>Use               | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Daily,<br>Winter<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Annual                    | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Total                     | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

### 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

| Species                   | TOG | ROG | NOx | со | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---------------------------|-----|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|---|------|
| Daily,<br>Summer<br>(Max) | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Avoided                   | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Sequest ered              | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Remove<br>d               | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |
| Subtotal                  | _   | _   | _   | _  | _   | _     | _     | _     | _      | _      | _      | _    | _     | _    | _   | _   | _ | _    |

| _                         | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily,<br>Winter<br>(Max) | _ | _ | _ | _ |   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Avoided                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |   | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Sequest ered              | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Remove<br>d               | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| _                         | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Annual                    | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Avoided                   | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Sequest ered              | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Remove<br>d               | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |   | _ | _ | _ | _ |
| Subtotal                  | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| _                         | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |

# 5. Activity Data

# 5.9. Operational Mobile Sources

# 5.9.1. Unmitigated

| Land Use Type Trips/Weekday Trips/Sature  | ay Tring/Sunday | Tring/Vear  | VMT/Weekday    | VMT/Saturday   | VMT/Sunday    | VMT/Vear    |
|---|-----------------|-------------|----------------|----------------|---------------|-------------|
| Land Ose Type Thips/ Weekday Thips/ Satur | ay Imps/Sunday  | IIIps/ Ieai | VIVII/VVCCRuay | VIVIT/Gaturday | VIVIT/Outludy | VIVII/ ICai |

| General Heavy<br>Industry           | 1,608 | 136  | 54.4 | 429,158   | 24,008 | 2,031 | 812   | 6,407,471  |
|-------------------------------------|-------|------|------|-----------|--------|-------|-------|------------|
| User Defined<br>Industrial          | 90.0  | 7.62 | 3.06 | 24,025    | 3,600  | 305   | 123   | 960,984    |
| Refrigerated<br>Warehouse-No Rail   | 478   | 40.4 | 16.2 | 127,577   | 7,137  | 604   | 242   | 1,904,769  |
| User Defined<br>Industrial          | 264   | 22.3 | 8.95 | 70,464    | 10,561 | 894   | 358   | 2,818,556  |
| Unrefrigerated<br>Warehouse-No Rail | 4,874 | 412  | 165  | 1,300,785 | 72,768 | 6,157 | 2,461 | 19,421,177 |
| User Defined<br>Industrial          | 1,056 | 89.4 | 35.6 | 281,812   | 42,237 | 3,575 | 1,426 | 11,272,466 |
| Parking Lot                         | 0.00  | 0.00 | 0.00 | 0.00      | 0.00   | 0.00  | 0.00  | 0.00       |
| Other Asphalt<br>Surfaces           | 0.00  | 0.00 | 0.00 | 0.00      | 0.00   | 0.00  | 0.00  | 0.00       |

# 5.9.2. Mitigated

| Land Use Type                       | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year   |
|-------------------------------------|---------------|----------------|--------------|------------|-------------|--------------|------------|------------|
| General Heavy<br>Industry           | 1,608         | 136            | 54.4         | 429,158    | 24,008      | 2,031        | 812        | 6,407,471  |
| User Defined<br>Industrial          | 90.0          | 7.62           | 3.06         | 24,025     | 3,600       | 305          | 123        | 960,984    |
| Refrigerated<br>Warehouse-No Rail   | 478           | 40.4           | 16.2         | 127,577    | 7,137       | 604          | 242        | 1,904,769  |
| User Defined<br>Industrial          | 264           | 22.3           | 8.95         | 70,464     | 10,561      | 894          | 358        | 2,818,556  |
| Unrefrigerated<br>Warehouse-No Rail | 4,874         | 412            | 165          | 1,300,785  | 72,768      | 6,157        | 2,461      | 19,421,177 |
| User Defined<br>Industrial          | 1,056         | 89.4           | 35.6         | 281,812    | 42,237      | 3,575        | 1,426      | 11,272,466 |
| Parking Lot                         | 0.00          | 0.00           | 0.00         | 0.00       | 0.00        | 0.00         | 0.00       | 0.00       |
| Other Asphalt<br>Surfaces           | 0.00          | 0.00           | 0.00         | 0.00       | 0.00        | 0.00         | 0.00       | 0.00       |

## 5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) |           | Non-Residential Exterior Area<br>Coated (sq ft) | Parking Area Coated (sq ft) |
|--|--|-----------|---|-----------------------------|
| 0  | 0.00                                     | 5,221,104 | 1,740,368                                       | 377,465                     |

### 5.10.3. Landscape Equipment

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

### 5.10.4. Landscape Equipment - Mitigated

| 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)

| =100tillolty (1t11111/j1/ allia | sources (Northly), and obtained the and trade |     |        |        |                       |  |  |
|---------------------------------|---|-----|--------|--------|-----------------------|--|--|
| Land Use                        | Electricity (kWh/yr)  | CO2 | CH4    | N2O    | Natural Gas (kBTU/yr) |  |  |
| General Heavy Industry          | 4,161,943   | 346 | 0.0330 | 0.0040 | 0.00                  |  |  |

| User Defined Industrial             | 0.00       | 346 | 0.0330 | 0.0040 | 0.00 |
|-------------------------------------|------------|-----|--------|--------|------|
| Refrigerated Warehouse-No<br>Rail   | 7,621,233  | 346 | 0.0330 | 0.0040 | 0.00 |
| User Defined Industrial             | 0.00       | 346 | 0.0330 | 0.0040 | 0.00 |
| Unrefrigerated Warehouse-No<br>Rail | 12,861,185 | 346 | 0.0330 | 0.0040 | 0.00 |
| User Defined Industrial             | 0.00       | 346 | 0.0330 | 0.0040 | 0.00 |
| Parking Lot                         | 1,208,863  | 346 | 0.0330 | 0.0040 | 0.00 |
| Other Asphalt Surfaces              | 0.00       | 346 | 0.0330 | 0.0040 | 0.00 |

### 5.11.2. Mitigated

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) |
|----------------------------------|----------------------|-----|--------|--------|-----------------------|
| General Heavy Industry           | 3,732,975            | 346 | 0.0330 | 0.0040 | 0.00                  |
| User Defined Industrial          | 0.00                 | 346 | 0.0330 | 0.0040 | 0.00                  |
| Refrigerated Warehouse-No Rail   | 3,453,489            | 346 | 0.0330 | 0.0040 | 0.00                  |
| User Defined Industrial          | 0.00                 | 346 | 0.0330 | 0.0040 | 0.00                  |
| Unrefrigerated Warehouse-No Rail | 11,575,067           | 346 | 0.0330 | 0.0040 | 0.00                  |
| User Defined Industrial          | 0.00                 | 346 | 0.0330 | 0.0040 | 0.00                  |
| Parking Lot                      | 1,208,863            | 346 | 0.0330 | 0.0040 | 0.00                  |
| Other Asphalt Surfaces           | 0.00                 | 346 | 0.0330 | 0.0040 | 0.00                  |

# 5.12. Operational Water and Wastewater Consumption

## 5.12.1. Unmitigated

| Land Use               | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|------------------------|-------------------------|--------------------------|
| General Heavy Industry | 80,492,113              | 0.00                     |

| User Defined Industrial          | 0.00        | 0.00    |
|----------------------------------|-------------|---------|
| Refrigerated Warehouse-No Rail   | 80,492,113  | 0.00    |
| User Defined Industrial          | 0.00        | 0.00    |
| Unrefrigerated Warehouse-No Rail | 643,935,975 | 552,711 |
| User Defined Industrial          | 0.00        | 0.00    |
| Parking Lot                      | 0.00        | 0.00    |
| Other Asphalt Surfaces           | 0.00        | 0.00    |

## 5.12.2. Mitigated

| Land Use                         | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|----------------------------------|-------------------------|--------------------------|
| General Heavy Industry           | 72,563,639              | 0.00                     |
| User Defined Industrial          | 0.00                    | 0.00                     |
| Refrigerated Warehouse-No Rail   | 72,563,639              | 0.00                     |
| User Defined Industrial          | 0.00                    | 0.00                     |
| Unrefrigerated Warehouse-No Rail | 580,508,281             | 231,040                  |
| User Defined Industrial          | 0.00                    | 0.00                     |
| Parking Lot                      | 0.00                    | 0.00                     |
| Other Asphalt Surfaces           | 0.00                    | 0.00                     |

# 5.13. Operational Waste Generation

## 5.13.1. Unmitigated

| Land Use                         | Waste (ton/year) | Cogeneration (kWh/year) |
|----------------------------------|------------------|-------------------------|
| General Heavy Industry           | 432              | _                       |
| User Defined Industrial          | 0.00             | _                       |
| Refrigerated Warehouse-No Rail   | 327              | _                       |
| User Defined Industrial          | 0.00             | _                       |
| Unrefrigerated Warehouse-No Rail | 2,618            | _                       |

| User Defined Industrial | 0.00 | _ |
|-------------------------|------|---|
| Parking Lot             | 0.00 | _ |
| Other Asphalt Surfaces  | 0.00 | _ |

### 5.13.2. Mitigated

| Land Use                         | Waste (ton/year) | Cogeneration (kWh/year) |
|----------------------------------|------------------|-------------------------|
| General Heavy Industry           | 432              | _                       |
| User Defined Industrial          | 0.00             | _                       |
| Refrigerated Warehouse-No Rail   | 327              | _                       |
| User Defined Industrial          | 0.00             | _                       |
| Unrefrigerated Warehouse-No Rail | 2,618            | _                       |
| User Defined Industrial          | 0.00             | _                       |
| Parking Lot                      | 0.00             | _                       |
| Other Asphalt Surfaces           | 0.00             | _                       |

# 5.14. Operational Refrigeration and Air Conditioning Equipment

## 5.14.1. Unmitigated

| Land Use Type                     | Equipment Type                      | Refrigerant | GWP   | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|-----------------------------------|-------------------------------------|-------------|-------|---------------|----------------------|-------------------|----------------|
| General Heavy<br>Industry         | Other commercial A/C and heat pumps | R-410A      | 2,088 | 0.30          | 4.00                 | 4.00              | 18.0           |
| Refrigerated<br>Warehouse-No Rail | Cold storage                        | R-404A      | 3,922 | 7.50          | 7.50                 | 7.50              | 25.0           |

## 5.14.2. Mitigated

| Land Use Type             | Equipment Type                      | Refrigerant | GWP   | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---------------------------|-------------------------------------|-------------|-------|---------------|----------------------|-------------------|----------------|
| General Heavy<br>Industry | Other commercial A/C and heat pumps | R-410A      | 2,088 | 0.30          | 4.00                 | 4.00              | 18.0           |

| Refrigerated      | Cold storage | R-404A | 3,922 | 7.50 | 7.50 | 7.50 | 25.0 |
|-------------------|--------------|--------|-------|------|------|------|------|
| Warehouse-No Rail |              |        |       |      |      |      |      |

## 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 |  |
|----------------|-----------|-------------|----------------|---------------|------------|-------------|--|
|----------------|-----------|-------------|----------------|---------------|------------|-------------|--|

### 5.15.2. Mitigated

| E | 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 |
|---------------------|-----------|----------------|---------------|----------------|------------|-------------|
| Emergency Generator | Diesel    | 1.00           | 1.00          | 50.0           | 300        | 0.73        |
| Emergency Generator | Diesel    | 1.00           | 1.00          | 50.0           | 300        | 0.73        |
| Emergency Generator | Diesel    | 1.00           | 1.00          | 50.0           | 300        | 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

#### 5.18.1.2. Mitigated

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 Final Acres Final Acres

#### 5.18.1.2. Mitigated

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)

#### 5.18.2.2. Mitigated

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 | 34.9                        | annual days of extreme heat                |
| Extreme Precipitation        | 1.05                        | annual days with precipitation above 20 mm |
| Sea Level Rise               | _                           | meters of inundation depth                 |
| Wildfire                     | 0.99                        | 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

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 dat 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 | N/A            | N/A               | N/A                     | N/A                 |
| Extreme Precipitation        | N/A            | N/A               | N/A                     | N/A                 |
| Sea Level Rise               | N/A            | N/A               | N/A                     | N/A                 |
| Wildfire                     | N/A            | N/A               | N/A                     | N/A                 |
| Flooding                     | N/A            | N/A               | N/A                     | N/A                 |
| Drought                      | N/A            | N/A               | N/A                     | N/A                 |
| Snowpack Reduction           | N/A            | N/A               | N/A                     | N/A                 |
| Air Quality Degradation      | N/A            | N/A               | N/A                     | N/A                 |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

### 6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores 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            | 80.0                            |
| AQ-PM               | 7.52                            |

| 21.9 |
|------|
|      |
| 34.9 |
| 27.7 |
| 0.00 |
| 37.1 |
| 59.7 |
| _    |
| 52.1 |
| 44.8 |
| 16.6 |
| 51.2 |
| 84.7 |
| _    |
| 88.0 |
| 89.5 |
| 91.9 |
|      |
| 26.9 |
| 11.6 |
| _    |
| 52.5 |
| 90.6 |
|      |

# 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 | 44.97626075                     |

| Median HI         35.0442705           Education         —           Bachelor's or higher         42.93596818           High school enrollment         100           Preschool enrollment         39.7912113           Transportation         —           Auto Access         85.40998332           Active commuting         24.00872578           Social         —           2-parent households         51.18696266           Voting         75.34967278           Neighborhood         —           Alcohol availability         88.7418196           Park access         18.65597331           Retail density         8.46913971           Supermarket access         2.399588375           Tree canopy         0.71859361           Housing         —           Housing habitability         6.20746824           Housing habitability         6.439112024           Low-inc homeowner severe housing cost burden         17.8108559           Low-inc rainer severe housing cost burden         77.19744842           Uncrowded housing         —           Housing dailuts         6.422430386           Arthritis         4.4   |  |             |
|--|--|-------------|
| Education         —           Backelor's or higher         42,93598818           High school enrollment         100           Preschool enrollment         39,79212113           Transportation         —           Auto Access         85,40988332           Active commuting         24,00872578           Social         —           2-parent households         51,1896266           Voting         75,34967278           Naloghborhood         —           Alcohol availability         88,37418196           Park access         16,65597331           Retail density         8,499139871           Housing         —           Housing         —           Housing         —           Housing         4,499389375           Homeownership         62,60748824           Housing habitability         64,39112024           Low-inc homeowner severe housing cost burden         17,8108559           Low-inc homeowner severe housing cost burden         17,19748492           Low-inc homeowner severe housing cost burden         47,19748492           Low-inc homeowner severe housing cost burden         48,66418561           Herath Outcomes         —           Insured ad | Employed                                     | 30.46323624 |
| Backelor's or higher         42,93596818           High school enrollment         100           Preschool enrollment         39,79212113           Transportation         —           Active commuting         24,00872578           Social         —           22-parent households         51,18696266           Voting         75,34967278           Neighborhood         —           Alcohol availability         8,37418196           Park access         16,65597331           Retail density         8,469138971           Supermarket access         2,399589375           Tree canopy         0,71859361           Housing         —           Housing habitability         62,60746824           Housing habitability         63,9112024           Low-inc nearer severe housing cost burden         17,8108559           Low-inc renter severe housing cost burden         77,19748492           Low-inc renter severe housing cost burden         86,6641881           Health Outcomes         —           Insured adults         64,22430386  | Median HI                                    | 35.0442705  |
| High school enrollment         100           Preschool enrollment         39.7921213           Transportation         —           Auto Access         85.40998332           Active commuting         24.00872578           Social         —           2-parent households         51.18696266           Voting         75.34967278           Neighborhood         —           Alcohol availability         88.37418196           Park access         16.65597331           Retail density         8.469138971           Supermarket access         2.399589375           Tree canopy         0.71859361           Housing         —           Housing habitability         62.60748824           Housing habitability         64.39112024           Low-inc homeowner severe housing cost burden         17.8108559           Low-inc renter severe housing cost burden         77.19748492           Low-incremet severe housing cost burden         77.19748492           Low-incremet severe housing cost burden         68.66418881           Health Outcomes         —           Insured adults         64.22430386   | Education                                    | _           |
| Preschool enrollment         39.79212113           Transportation         —           Auto Access         85.4098332           Active commuting         24.00872578           Social         —           2-parent households         51.8696266           Voting         75.34967278           Notinghorhood         —           Alcohol availability         88.37418196           Park access         16.6559731           Retail density         8.469138971           Supermarket access         2.399589375           Tree canopy         0.71859361           Housing         —           Homeownership         64.39112024           Low-inc merowner severe housing cost burden         17.8108559           Low-inc renter severe housing cost burden         77.19748492           Uncrowded housing         68.66418581           Health Outcomes         —           Instred adults         64.22430386           Arthritis         4.4  | Bachelor's or higher                         | 42.93596818 |
| Transportation         —           Auto Access         85.40998332           Active commuting         24.00872578           Social         —           2-parent households         51.18696266           Voting         75.34967278           Neighborhood         —           Alcohol availability         88.37418196           Park access         16.65597331           Retail density         8.469138971           Supermarket access         2.389589375           Tree canopy         0.71859361           Housing         —           Housing habitability         62.60746824           Housing habitability         64.39112024           Low-inc nether severe housing cost burden         17.8108559           Uncrowded housing         68.66418581           Health Outcomes         —           Insured adults         64.22430386           Arthritis         4.4   | High school enrollment                       | 100         |
| Auto Access         85.40988332           Active commuting         24.00872578           Social         —           2-parent households         51.18696266           Voting         75.34967278           Neighborhood         —           Alcohol availability         88.37418196           Park access         16.65597331           Retail density         8.469138971           Supermarket access         2.399589375           Tree canopy         0.71859361           Housing         —           Housing habitability         64.3911024           Low-inc nomeowner severe housing cost burden         17.8108559           Low-inc renter severe housing cost burden         77.19748492           Uncrowded housing         68.66418581           Health Outcomes         —           Insured adults         64.22430386           Arthritis         4.4   | Preschool enrollment                         | 39.79212113 |
| Active commuting         24.00872578           Social         —           2-parent households         51.18696266           Voting         75.34967278           Neighborhood         —           Alcohol availability         88.37418196           Park access         16.65597331           Retail density         8.469138971           Supermarket access         2.399589375           Tree canopy         0.71859361           Housing         —           Housing habitability         63.60746824           Housing habitability         64.39112024           Low-inc renter severe housing cost burden         17.8108559           Low-inc renter severe housing cost burden         77.19748492           Uncrowded housing         68.66418581           Health Outcomes         —           Insured adults         64.22430386           Arthritis         4.4  | Transportation                               | _           |
| Social         —           2-parent households         51.18696266           Voting         75.34967278           Neighborhood         —           Alcohol availability         88.37418196           Park access         16.65597331           Retail density         8.469138971           Supermarket access         2.399589375           Tree canopy         0.71859361           Housing         —           Homeownership         62.60746824           Housing habitability         64.39112024           Low-inc homeowner severe housing cost burden         17.8108559           Low-inc renter severe housing cost burden         77.19748492           Uncrowded housing         68.66418581           Health Outcomes         —           Insured adults         64.22430386           Arthritis         4.4   | Auto Access                                  | 85.40998332 |
| 2-parent households         51.18696266           Voting         75.34967278           Neighborhood         —           Alcohol availability         88.37418196           Park access         16.65597331           Retail density         8.469138971           Supermarket access         2.399589375           Tree canopy         0.71859361           Housing         —           Howeownership         62.60746824           Housing habitability         64.39112024           Low-inc homeowner severe housing cost burden         17.8108559           Low-inc renter severe housing cost burden         77.19748492           Uncrowded housing         68.66418581           Health Outcomes         —           Insured adults         64.22430386           Arthritis         4.4  | Active commuting                             | 24.00872578 |
| Voting         75.34967278           Neighborhood         —           Alcohol availability         88.37418196           Park access         16.65597331           Retail density         8.469138971           Supermarket access         2.399589375           Tree canopy         0.71859361           Housing         —           Homeownership         62.60746824           Housing habitability         64.39112024           Low-inc nemewner severe housing cost burden         17.8108559           Low-inc renter severe housing cost burden         77.19748492           Uncrowded housing         68.66418581           Health Outcomes         —           Insured adults         64.22430386           Arthritis         4.4   | Social                                       | _           |
| Neighborhood         —           Alcohol availability         88.37418196           Park access         16.65597331           Retail density         8.469138971           Supermarket access         2.399589375           Tree canopy         0.71859361           Housing         —           Homeownership         62.60746824           Housing habitability         64.39112024           Low-inc homeowner severe housing cost burden         17.8108559           Low-inc renter severe housing cost burden         77.19748492           Uncrowded housing         68.66418581           Health Outcomes         —           Insured adults         64.22430386           Arthritis         4.4   | 2-parent households                          | 51.18696266 |
| Alcohol availability       88.37418196         Park access       16.65597331         Retail density       8.469138971         Supermarket access       2.399589375         Tree canopy       0.71859361         Housing       —         Homeownership       62.60746824         Housing habitability       64.39112024         Low-inc homeowner severe housing cost burden       17.8108559         Low-inc renter severe housing cost burden       77.19748492         Uncrowded housing       68.66418581         Health Outcomes       —         Insured adults       64.22430386         Arthritis       4.4  | Voting                                       | 75.34967278 |
| Park access       16.65597331         Retail density       8.469138971         Supermarket access       2.399589375         Tree canopy       0.71859361         Housing       —         Homeownership       62.60746824         Housing habitability       64.39112024         Low-inc homeowner severe housing cost burden       17.8108559         Low-inc renter severe housing cost burden       77.19748492         Uncrowded housing       68.66418581         Health Outcomes       —         Insured adults       64.22430386         Arthritis       4.4   | Neighborhood                                 | _           |
| Retail density       8.469138971         Supermarket access       2.399589375         Tree canopy       0.71859361         Housing       —         Homeownership       62.60746824         Housing habitability       64.39112024         Low-inc homeowner severe housing cost burden       17.8108559         Low-inc renter severe housing cost burden       77.19748492         Uncrowded housing       68.66418581         Health Outcomes       —         Insured adults       64.22430386         Arthritis       4.4   | Alcohol availability                         | 88.37418196 |
| Supermarket access       2.399589375         Tree canopy       0.71859361         Housing       —         Homeownership       62.60746824         Housing habitability       64.39112024         Low-inc homeowner severe housing cost burden       17.8108559         Low-inc renter severe housing cost burden       77.19748492         Uncrowded housing       68.66418581         Health Outcomes       —         Insured adults       64.22430386         Arthritis       4.4  | Park access                                  | 16.65597331 |
| Tree canopy Housing Homeownership 62.60746824 Housing habitability 64.39112024 Low-inc homeowner severe housing cost burden 17.8108559 Low-inc renter severe housing cost burden 77.19748492 Uncrowded housing 68.66418581 Health Outcomes Housing adults 64.22430386 Arthritis 4.4  | Retail density                               | 8.469138971 |
| Housing — Homeownership 62.60746824 Housing habitability 64.39112024 Low-inc homeowner severe housing cost burden 17.8108559 Low-inc renter severe housing cost burden 77.19748492 Uncrowded housing 68.66418581 Health Outcomes — Insured adults 64.22430386 Arthritis 4.4  | Supermarket access                           | 2.399589375 |
| Homeownership Housing habitability 64.39112024 Low-inc homeowner severe housing cost burden 17.8108559 Low-inc renter severe housing cost burden 77.19748492 Uncrowded housing 68.66418581 Health Outcomes   | Tree canopy                                  | 0.71859361  |
| Housing habitability  Low-inc homeowner severe housing cost burden  Low-inc renter severe housing cost burden  T7.19748492  Uncrowded housing  Health Outcomes  Insured adults  Arthritis  64.39112024  66.39112024  64.391659  67.19748492  68.66418581  —  68.66418581  —  4.4   | Housing                                      | _           |
| Low-inc homeowner severe housing cost burden 17.8108559  Low-inc renter severe housing cost burden 77.19748492  Uncrowded housing 68.66418581  Health Outcomes — 64.22430386  Arthritis 4.4  | Homeownership                                | 62.60746824 |
| Low-inc renter severe housing cost burden 77.19748492 Uncrowded housing 68.66418581 Health Outcomes — 64.22430386 Arthritis 4.4  | Housing habitability                         | 64.39112024 |
| Uncrowded housing       68.66418581         Health Outcomes       —         Insured adults       64.22430386         Arthritis       4.4   | Low-inc homeowner severe housing cost burden | 17.8108559  |
| Health Outcomes — Insured adults 64.22430386 Arthritis 4.4   | Low-inc renter severe housing cost burden    | 77.19748492 |
| Insured adults 64.22430386 Arthritis 4.4   | Uncrowded housing                            | 68.66418581 |
| Arthritis 4.4  | Health Outcomes                              | _           |
|  | Insured adults                               | 64.22430386 |
| Asthma ER Admissions 7.6   | Arthritis                                    | 4.4         |
|  | Asthma ER Admissions                         | 7.6         |

| High Blood Pressure                   | 8.9  |
|---------------------------------------|------|
| Cancer (excluding skin)               | 9.1  |
| Asthma                                | 30.0 |
| Coronary Heart Disease                | 6.8  |
| Chronic Obstructive Pulmonary Disease | 13.3 |
| Diagnosed Diabetes                    | 35.6 |
| Life Expectancy at Birth              | 34.2 |
| Cognitively Disabled                  | 41.3 |
| Physically Disabled                   | 11.3 |
| Heart Attack ER Admissions            | 2.7  |
| Mental Health Not Good                | 48.5 |
| Chronic Kidney Disease                | 20.1 |
| Obesity                               | 46.5 |
| Pedestrian Injuries                   | 48.3 |
| Physical Health Not Good              | 39.9 |
| Stroke                                | 15.1 |
| Health Risk Behaviors                 | _    |
| Binge Drinking                        | 57.0 |
| Current Smoker                        | 46.7 |
| No Leisure Time for Physical Activity | 58.0 |
| Climate Change Exposures              | _    |
| Wildfire Risk                         | 0.0  |
| SLR Inundation Area                   | 0.0  |
| Children                              | 58.1 |
| Elderly                               | 16.8 |
| English Speaking                      | 81.5 |
| Foreign-born                          | 11.0 |
| Outdoor Workers                       | 47.0 |
|                                       |      |

| Climate Change Adaptive Capacity | _    |
|----------------------------------|------|
| Impervious Surface Cover         | 90.2 |
| Traffic Density                  | 37.9 |
| Traffic Access                   | 23.0 |
| Other Indices                    | _    |
| Hardship                         | 32.7 |
| Other Decision Support           | _    |
| 2016 Voting                      | 75.3 |

### 7.3. Overall Health & Equity Scores

| Metric  | Result for Project Census Tract |
|---|---------------------------------|
| CalEnviroScreen 4.0 Score for Project Location (a)                                  | 65.0                            |
| Healthy Places Index Score for Project Location (b)                                 | 46.0                            |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535)           | No                              |
| Project Located in a Low-Income Community (Assembly Bill 1550)                      | No                              |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No                              |

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

### 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

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.

# Lake Creek Logistics Center (Operations - Mitigated) Detailed Report, 2/21/2025

| Land Use                          | Total Project area is 224.90 acres   |
|-----------------------------------|--|
| Construction: Construction Phases | Construction schedule adjusted based on the 2029 Opening Year  |
| Construction: Off-Road Equipment  | Construction equipment adjusted based on changes made to the schedule  |
| Construction: Trips and VMT       | Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction   |
| Operations: Vehicle Data          | Trip characteristics based on information provided in the Traffic analysis   |
| Operations: Fleet Mix             | Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, & MCY). Truck Mix based on information in the Traffic analysis |
| Operations: Energy Use            | No natural gas for building envelope. Electricity usage for the General Heavy Industry land use was adjusted to account for electricity usage from on-site cargo handling equipment            |

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### **APPENDIX 3.3:**

**TRU EMISSION CALCULATIONS** 



### **TRU Emissions**

| 2029                | Year   |
|---------------------|--------|
| San Bernardino (MD) | Region |

## Transport Refrigeration Unit - Instate Trailer

| 71 | No. of Units |
|----|--------------|
| 4  | Hours/day    |

### **Transport Refrigeration Unit - Instate Truck**

| 61 | No. of Units |
|----|--------------|
| 4  | Hours/day    |

|  | Activity (hrs/year) |
|--|---------------------|
| Transport Refrigeration Unit - Instate Trailer | 2,377,676           |
| Transport Refrigeration Unit - Instate Truck   | 38,856              |

| Total Two-Way TRU Trips per day |  |
|---------------------------------|--|
| 264                             |  |

| Unit |  | Emission Factor      |                 |          |                 |                  |                   |                 |          |
|------|--|----------------------|-----------------|----------|-----------------|------------------|-------------------|-----------------|----------|
|      |  | ROG                  | NO <sub>X</sub> | СО       | so <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> | CO <sub>2</sub> |          |
| Tran | Transport Refrigeration Unit - Instate Trailer | Emissions (tons/day) | 2.70E-01        | 2.02E-01 | 3.49E-02        | 0.00E+00         | 3.51E-03          | 3.23E-03        | 5.14E+01 |
| IIai |  | Emissions (lbs/hr)   | 8.30E-02        | 6.20E-02 | 1.07E-02        | 0.00E+00         | 1.08E-03          | 9.90E-04        | 1.58E+01 |
| Tra  | Transport Refrigeration Unit - Instate Truck   | Emissions (tons/day) | 3.28E-03        | 4.14E-03 | 3.57E-04        | 0.00E+00         | 2.13E-04          | 1.96E-04        | 6.62E-01 |
| IIa  |  | Emissions (lbs/hr)   | 6.16E-02        | 7.78E-02 | 6.70E-03        | 0.00E+00         | 4.00E-03          | 3.68E-03        | 1.24E+01 |

| Unit   | Emissions (lbs/day) |                 |      |                 |                  | MT/yr             |                 |
|--|---------------------|-----------------|------|-----------------|------------------|-------------------|-----------------|
|  | ROG                 | NO <sub>x</sub> | СО   | so <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> | CO <sub>2</sub> |
| Transport Refrigeration Unit - Instate Trailer | 23.56               | 17.60           | 3.04 | 0.00            | 0.31             | 0.28              | 741.79          |
| Transport Refrigeration Unit - Instate Truck   | 15.03               | 18.98           | 1.64 | 0.00            | 0.98             | 0.90              | 502.27          |
| Total  | 38.58               | 36.58           | 4.68 | 0.00            | 1.28             | 1.18              | 1,244.06        |

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