

## APPENDIX 2

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### Air Quality Impact Analysis



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# **2020 Optimum Basin Management Program Update**

## **AIR QUALITY IMPACT ANALYSIS**

### **CHINO BASIN WATERMASTER**

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## **LIST OF ABBREVIATED TERMS**

%	Percent
°F	Degrees Fahrenheit
(1)	Reference
µg/m <sup>3</sup>	Microgram per Cubic Meter
AB 2595	California Clean Air Act
af	Acre-Feet
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ASR	Aquifer Storage and Recovery
BACM	Best Available Control Measures
BAAQMD	Bay Area Air Quality Management District
C <sub>2</sub> H <sub>3</sub> Cl	Vinyl Chloride
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
COHb	carboxyhemoglobin
EMFAC	EMissions FAcTOR Model
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
H <sub>2</sub> S	Hydrogen Sulfide
HI	Hazard Index
hp	Horsepower
IEUA	Inland Empire Utilities Agency
lbs/day	Pounds Per Day
LF	Linear Feet
LST	Localized Significance Threshold
LST METHODOLOGY	Final Localized Significance Threshold Methodology

MAR	Managed Aquifer Recharge
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measures
mph	Miles Per Hour
MS4	Municipal Separate Storm Sewer System
MWELO	California Department of Water Resources' Model Water Efficient
N <sub>2</sub>	Nitrogen
N <sub>2</sub> O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
O <sub>2</sub>	Oxygen
O <sub>3</sub>	Ozone
O <sub>2</sub> Deficiency	Chronic Hypoxemia
OBMPU	Optimum Basin Management Program Update
Pb	Lead
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	2020 Optimum Basin Management Program Update
ROG	Reactive Organic Gases
RTP/SCS	Regional Transportation Plan/ Sustainable Communities Strategy
Rule 403	Fugitive Dust
Rule 1113	Architectural Coating
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>4</sub>	Sulfates
SO <sub>x</sub>	Sulfur Oxides
SRA	Source Receptor Area
Title 24	California Building Code
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
C <sub>2</sub> H <sub>3</sub> Cl	Vinyl Chloride

VOC	Volatile Organic Compounds
vph	Vehicles Per Hour
WFA	Water Facilities Authority



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## EXECUTIVE SUMMARY

### ES.1 SUMMARY OF FINDINGS

The results of this 2020 Optimum Basin Management Program Update (2020 OBMPU) 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 significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

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

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	<i>Potentially Significant</i>	<i>Less Than Significant</i>
Localized Construction Emissions	3.7	<i>Potentially Significant</i>	<i>Less Than Significant</i>
Regional Operational Emissions	3.5	<i>Less Than Significant</i>	<i>n/a</i>
Localized Operational Emissions	3.8	<i>Less Than Significant</i>	<i>n/a</i>
CO “Hot Spot” Analysis	3.9	<i>Less Than Significant</i>	<i>n/a</i>
Air Quality Management Plan	3.10	<i>Potentially Significant</i>	<i>Less Than Significant</i>
Sensitive Receptors	3.11	<i>Less Than Significant</i>	<i>n/a</i>
Odors	3.12	<i>Less Than Significant</i>	<i>n/a</i>
Cumulative Impacts	3.13	<i>Potentially Significant</i>	<i>Less Than Significant</i>

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

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

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

#### **BACM AQ-1**

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

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

### **ES.3 CONSTRUCTION-SOURCE MITIGATION MEASURES**

#### **MM AQ-1**

When using construction equipment greater than 150 horsepower (>150 hp), the Construction Contractor shall ensure that off-road diesel construction equipment complies with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent and shall ensure that all construction equipment is tuned and maintained in accordance with the manufacturer's specifications.

#### **MM AQ-2**

All actively graded areas within the Project site shall be watered at 2.1-hour watering intervals (e.g., 4 times per day) or a movable sprinkler system shall be in place to ensure minimum soil moisture of 12 percent (%) is maintained for actively graded areas. Moisture content can be verified with use of a moisture probe by the grading contractor.

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# 1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed 2020 OBMPU (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the proposed Project and, if warranted, recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

## 1.1 SITE LOCATION

The proposed 2020 OBMPU Project is generally located within the portions of the San Bernardino, Riverside, and Los Angeles counties, as shown on Exhibit 1-A.

## 1.2 PROJECT DESCRIPTION

The OBMPU consists of construction and operation of the various facilities which are separated into four project categories: 1) Project Category 1: Well Development and Monitoring Devices; 2) Project Category 2: Conveyance Facilities and Ancillary Facilities; 3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, 4) Project Category 4: Desalters and Water Treatment Facilities.

### PROJECT CATEGORY 1: WELL DEVELOPMENT AND MONITORING DEVICES

This Project Category includes the development of aquifer storage and recovery (ASR), injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Well development includes: 60 ASR wells, 10 wells relocated, 8 new wells to expand desalter capacity, modification of up to 5 wells, destruction and replacement of 5 wells for a total of 78 pumping wells. This category also includes the development of 100 monitoring wells, for a total of 178 wells, which serve the varying purposes listed above and outlined below. The monitoring devices proposed as part of the OBMPU include 300 flow meters and 3 extensometers.

### PROJECT CATEGORY 2: CONVEYANCE FACILITIES AND ANCILLARY FACILITIES

This category includes the construction of 550,000 linear feet (LF) of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

### PROJECT CATEGORY 3: STORAGE BASINS, RECHARGE FACILITIES, AND STORAGE BANDS

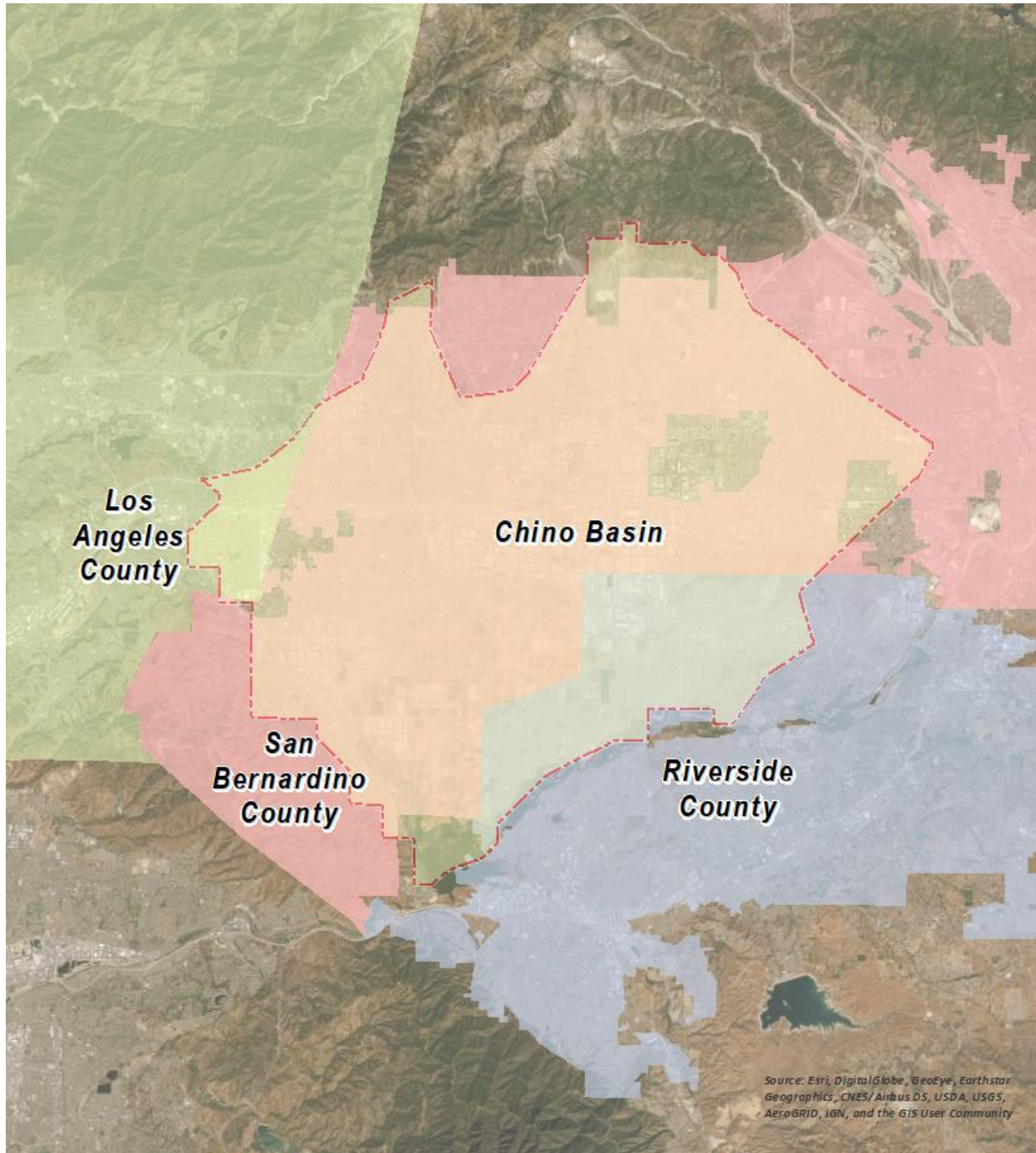
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood managed aquifer recharge (MAR) facilities, new municipal separate storm sewer system (MS4) compliance facilities, and expansion of the maximum storage space (safe storage

capacity) to be used within the Chino Basin from 600,000 acre-feet (af) (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af within this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

**PROJECT CATEGORY 4: DESALTERS AND WATER TREATMENT FACILITIES**

The projects proposed under this category are: upgrades at Inland Empire Utilities Agency's (IEUA) existing Treatment Plants, a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the Water Facilities Authority (WFA) Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities.

### EXHIBIT 1-A: PROJECT LOCATION MAP



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## 2 AIR QUALITY SETTING

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

### 2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (4). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

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

### 2.2 REGIONAL CLIMATE

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

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

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO<sub>2</sub>) to sulfates (SO<sub>4</sub>) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

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

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

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

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

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

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

## **2.3 WIND PATTERNS AND PROJECT LOCATION**

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

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

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

## 2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (5):

**TABLE 2-1: CRITERIA POLLUTANTS**

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O <sub>3</sub> ), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O <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> 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.

Criteria Pollutant	Description	Sources	Health Effects
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	<p>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>.</p> <p>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.</p> <p>Some population-based studies indicate that the mortality and morbidity effects associated with fine 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.</p>

Criteria Pollutant	Description	Sources	Health Effects
NO <sub>x</sub>	NO <sub>x</sub> consist of nitric oxide (NO), nitrogen dioxide (NO <sub>2</sub> ) and nitrous oxide (N <sub>2</sub> O) and are formed when nitrogen (N <sub>2</sub> ) combines with O <sub>2</sub> . Their lifespan in the atmosphere ranges from one to seven days for NO and N <sub>2</sub> O, to 170 years for nitrous oxide. NO <sub>x</sub> is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO <sub>2</sub> is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO <sub>2</sub> is the most abundant in the atmosphere. As ambient concentrations of NO <sub>2</sub> are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO <sub>2</sub> than those indicated by regional monitoring station.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	<p>Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to 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.</p> <p>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 O<sub>3</sub> exposure increases when animals are exposed to a combination of O<sub>3</sub> and NO<sub>2</sub>.</p>
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	Formed when reactive organic gases (ROG) and NO <sub>x</sub> react in the presence of sunlight. ROG sources	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O <sub>3</sub> effects. Short-

Criteria Pollutant	Description	Sources	Health Effects
	highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	<p>term 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 live in communities with high O<sub>3</sub> levels.</p> <p>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 exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.</p>
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	Sources of PM <sub>10</sub> include road dust, windblown dust and construction. Also formed from other pollutants (acid	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,

Criteria Pollutant	Description	Sources	Health Effects
	<p>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.</p> <p>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.</p>	<p>rain, NO<sub>x</sub>, SO<sub>x</sub>, organics). Incomplete combustion of any fuel.</p> <p>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).</p>	<p>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.</p> <p>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.</p> <p>The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM<sub>10</sub> and PM<sub>2.5</sub>.</p>
VOC	<p>VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels</p>	<p>Organic chemicals are widely used as ingredients in household products. Paints, varnishes and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic,</p>	<p>Breathing VOCs can irritate the eyes, nose and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.</p>

Criteria Pollutant	Description	Sources	Health Effects
	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.	degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	
ROG	Similar to VOC, ROG are also precursors in forming O <sub>3</sub> 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. ROG are a criteria pollutant since they are a precursor to O <sub>3</sub> , which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and 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	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



Criteria Pollutant	Description	Sources	Health Effects
	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.		<p>associated with increased blood pressure.</p> <p>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.</p>
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 (6).	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.

## 2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (7).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May ,4 2016 and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for 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 SCAQMD meets the standards set by the EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (8).

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

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

See footnotes on next page ...

See footnotes on next page ...

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

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above  $150 \mu\text{g}/\text{m}^3$  is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of  $25^\circ\text{C}$  and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of  $25^\circ\text{C}$  and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from  $15 \mu\text{g}/\text{m}^3$  to  $12.0 \mu\text{g}/\text{m}^3$ . The existing national 24-hour PM2.5 standards (primary and secondary) were retained at  $35 \mu\text{g}/\text{m}^3$ , as was the annual secondary standard of  $15 \mu\text{g}/\text{m}^3$ . The existing 24-hour PM10 standards (primary and secondary) of  $150 \mu\text{g}/\text{m}^3$  also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour  $\text{SO}_2$  standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971  $\text{SO}_2$  national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.  
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ( $1.5 \mu\text{g}/\text{m}^3$  as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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## 2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, 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 SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (9). On February 21, 2019, CARB posted the 2018 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (10). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

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

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

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

-- = The national 1-hour O<sub>3</sub> standard was revoked effective June 15, 2005

## 2.7 LOCAL AIR QUALITY

The Project site is located within multiple Source Receptor Areas (SRA) (11). The SRAs include the Pomona/Walnut Valley (SRA 10), Corona/Norco Area (SRA 22), Metropolitan Riverside County 1 (SRA 23), Northwest San Bernardino Valley (SRA 32), I-10 Near Road (SRA 33), CA-60 Near Road (SRA 33), and the Central San Bernardino Valley 1 (SRA 34).

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O<sub>3</sub>, CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> for 2016 through 2018 was obtained from the SCAQMD Air Quality Data Tables (12). Additionally, data for SO<sub>2</sub> has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO<sub>2</sub> concentrations.

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

**TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2016-2018<sup>2</sup>**

Pollutant	Standard	Year		
		2016	2017	2018
O <sub>3</sub>				
Maximum Federal 1-Hour Concentration (ppm)		0.156	0.150	0.133
Maximum Federal 8-Hour Concentration (ppm)		0.116	0.127	0.111
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	53	66	25
Number of Days Exceeding Federal/State 8-Hour Standard	> 0.070 ppm	89	87	52
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	1.7	2.0	2.2
Maximum Federal 8-Hour Concentration	> 20 ppm	1.3	1.6	2.0
NO <sub>2</sub>				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.093	0.093	0.068
Annual Federal Standard Design Value		0.029	0.032	0.019
PM <sub>10</sub>				
Maximum Federal 24-Hour Concentration (µg/m <sup>3</sup> )	> 150 µg/m <sup>3</sup>	94	138	129
Annual Federal Arithmetic Mean (µg/m <sup>3</sup> )		38.1	41.6	30.2
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m <sup>3</sup>	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m <sup>3</sup>	15	103	25
PM <sub>2.5</sub>				
Maximum Federal 24-Hour Concentration (µg/m <sup>3</sup> )	> 35 µg/m <sup>3</sup>	44.14	50.30	50.70
Annual Federal Arithmetic Mean (µg/m <sup>3</sup> )	> 12 µg/m <sup>3</sup>	14.73	12.18	12.41
Number of Days Exceeding Federal 24-Hour Standard	> 35 µg/m <sup>3</sup>	6	6	2

ppm = Parts Per Million

Source: Data for O<sub>3</sub>, CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> was obtained from SCAQMD Air Quality Data Tables.

## 2.8 REGULATORY BACKGROUND

### 2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O<sub>3</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and Pb (13). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

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

<sup>2</sup> As the Project is located within multiple quadrants, the higher value for O<sub>3</sub>, CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> will be presented in Table 2-4.



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

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (15) (16). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants  $O_3$ ,  $NO_2$ ,  $SO_2$ ,  $PM_{10}$ ,  $CO$ ,  $PM_{2.5}$ , and  $Pb$ . The NAAQS were amended in July 1997 to include an additional standard for  $O_3$  and to adopt a NAAQS for  $PM_{2.5}$ . Table 2-3 (previously presented) provides the NAAQS within the SCAB.

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

## **2.8.2 CALIFORNIA REGULATIONS**

### **CARB**

The CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for  $SO_4$ , 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 SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (17) (13).

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

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

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);

- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROG<sub>s</sub>, 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: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that will be effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided, they establish a minimum 65% diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official.

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

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



Because the Project will be constructed after January 1, 2019, the 2019 CALGreen standards are applicable to the Project and require, among other items (19):

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

- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gal/day (5.303.1.1 and 5.303.1.2).
- Outdoor water use in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

### **2.8.3 AIR QUALITY MANAGEMENT PLANNING**

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

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### 3 PROJECT AIR QUALITY IMPACT

#### 3.1 INTRODUCTION

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

#### 3.2 STANDARDS OF SIGNIFICANCE

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

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

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

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

Pollutant	Construction Regional Thresholds	Operational Regional Thresholds
NO <sub>x</sub>	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM <sub>10</sub>	150 lbs/day	150 lbs/day
PM <sub>2.5</sub>	55 lbs/day	55 lbs/day
SO <sub>x</sub>	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

### 3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ANALYZE AIR QUALITY

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

On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. 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 (22). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction air quality emissions. Output from the model runs are provided in Appendices 3.1 through 3.8.

### 3.4 REGIONAL CONSTRUCTION EMISSIONS

As previously stated, the Project consists of the construction and operation of the following facilities:

#### PROJECT CATEGORY 1: WELL DEVELOPMENT AND MONITORING DEVICES

This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Well development includes: 60 ASR wells, 10 wells relocated, 8 new wells to expand desalter capacity, modification of up to 5 wells, destruction and replacement of 5 wells for a total of 78 pumping wells. This category also includes the development of 100 monitoring wells, for a total of 178 wells, which serve the varying purposes listed above and outlined below. The monitoring devices proposed as part of the OBMPU include 300 flow meters and 3 extensometers.

#### PROJECT CATEGORY 2: CONVEYANCE FACILITIES AND ANCILLARY FACILITIES

This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

#### PROJECT CATEGORY 3: STORAGE BASINS, RECHARGE FACILITIES, AND STORAGE BANDS

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 acre-feet (af) (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af within this range of storage. The specific locations of

the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

#### **PROJECT CATEGORY 4: DESALTERS AND WATER TREATMENT FACILITIES**

The projects proposed under this category are: upgrades at Inland Empire Utilities Agency's (IEUA) existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities.

Because few details are known at this time regarding construction of specific projects, it is assumed that construction any Project facilities may occur simultaneously. As a conservative measure, and in order to identify the maximum daily emissions, this AQIA assumes that the Project would construct the following features simultaneously:

#### **PROJECT CATEGORY 1**

- 20 monitoring wells
- 10 production wells
- 65,000 linear feet (LF) of associated conveyance pipeline

#### **PROJECT CATEGORY 2**

- 200,000 LF of conveyance pipeline

#### **PROJECT CATEGORY 3**

- One new storage reservoir on a 100-acre site
- 60,000 LF of associated conveyance pipeline

#### **PROJECT CATEGORY 4**

- One new water treatment facility on a 10-acre site
- One new regional water treatment facility on a 10-acre site
- 60,000 LF of associated conveyance pipeline

#### **3.4.1 CONSTRUCTION ACTIVITIES**

During construction activities associated with individual projects, emissions of VOCs, NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> will likely be released through the burning of fossil fuel in construction equipment, grading fugitive dust, asphalt paving, and the application of architectural coatings during painting activity.

#### **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.). The CalEEMod model was utilized to calculate fugitive dust emissions resulting from this phase of activity. The Project is anticipated to include soil import and export within the Project site boundaries as a part of Project construction. Per the Project Description, it is anticipated that no more than 2 million cubic yards of material would be hauled off-site during the construction of the storage reservoirs. For purposes of analysis, and as a conservative measure, it is anticipated that 333,333 cubic yards of export will be required per storage reservoir. As such, the 333,333 cubic yards of export will be analyzed with the CalEEMod default hauling trip length of 20 miles.

### CONSTRUCTION WORKER VEHICLE TRIPS

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

### 3.4.2 CONSTRUCTION DURATION

As previously stated, individual project-specific details are currently unknown. Based on information provided in the Project Description, construction activities for Project Categories 1 and 2 are expected to occur over a 12-month period while construction activities for Project Categories 3 and 4 will occur over an 18-month period. Construction duration utilized in the analysis represents a “worst-case” analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as the analysis year increases.

### 3.4.3 CONSTRUCTION EQUIPMENT

Associated equipment was based on information provided by the Project Description. Please refer to specific detailed modeling inputs/outputs contained in Appendices 3.1 through 3.4 of this AQIA. A detailed summary of construction equipment is provided at Table 3-2.

**TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS (1 OF 2)**

Equipment	CalEEMod Equivalent	Amount	Hours Per Day
Project Category 1			
Bore/Drill Rigs	Bore/Drill Rigs	1	8
Cement Trucks	Off-Highway Trucks	1	8
Project Category 2			
Backhoes	Tractor/Loaders/Backhoes	2	8
Dump Trucks	Off-Highway Trucks	2	8
Excavators	Excavators	2	8
Pavers	Pavers	2	8
Rollers	Rollers	2	8
Water Trucks	Off-Highway Trucks	20	8

**TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS (2 OF 2)**

Equipment		Amount	Hours Per Day
Project Category 3			
Bulldozers	Rubber Tired Dozers	2	8
Dump Trucks	Off-Highway Trucks	4	8
Excavators	Excavators	2	8
Loaders	Tractors/Loaders/Backhoes	2	8
Scrapers	Scrapers	7	8
Water Trucks	Off-Highway Trucks	2	
Project Category 4			
Backhoes	Tractors/Loaders/Backhoes	3	8
Compactors	Plate Compactors	3	8
Concrete Trucks	Off-Highway Trucks	3	8
Cranes	Cranes	3	8
Delivery Trucks	Off-Highway Trucks	3	8
Dump Trucks	Off-Highway Trucks	3	8
Graders	Graders	3	8
Loaders	Tractors/Loaders/Backhoes	3	8
Other Trucks	Off-Highway Trucks	3	8
Water Trucks	Off-Highway Trucks	3	8

Source: Construction equipment based on information provided by the Project Description.

It is assumed that the construction of analyzed features would use the equipment listed in Table 3-3 simultaneously. Furthermore, the construction equipment provided in Table 3-3 represent a “worst-case” (i.e. overestimation) of actual construction equipment that may likely be used during construction activities.

### 3.4.4 REGIONAL CONSTRUCTION EMISSIONS SUMMARY

#### IMPACTS WITHOUT MITIGATION

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-3. Detailed construction model outputs are presented in Appendices 3.1, 3.3, 3.5, and 3.7. Under the assumed scenarios, emissions resulting from the Project construction would exceed criteria pollutant thresholds established by the SCAQMD for emissions of NO<sub>x</sub>.



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

Year	Emissions (lbs/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer						
Project Category 1	1.24	16.53	8.31	0.07	2.14	0.78
Project Category 2	15.56	138.27	104.19	0.35	7.00	5.25
Project Category 3	13.21	138.33	90.88	0.23	11.56	7.93
Project Category 4	12.52	115.57	80.14	0.27	6.70	4.54
Total	42.52	408.70	283.51	0.92	27.40	18.50
Winter						
Project Category 1	1.25	16.75	8.23	0.07	2.14	0.78
Project Category 2	15.59	138.38	103.65	0.35	7.00	5.25
Project Category 3	13.21	138.37	90.77	0.23	11.56	7.93
Project Category 4	12.54	115.66	79.54	0.27	6.70	4.54
Total	42.58	409.16	282.18	0.92	27.40	18.50
<b>Maximum Daily Emissions</b>	<b>42.58</b>	<b>409.16</b>	<b>283.51</b>	<b>0.92</b>	<b>27.40</b>	<b>18.50</b>
SCAQMD Regional Threshold	75	100	550	150	150	55
<b>Threshold Exceeded?</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: The unmitigated CalEEMod regional construction-source emissions are presented in Appendices 3.1, 3.3, 3.5, and 3.7.

### IMPACTS WITH MITIGATION

The estimated maximum daily construction emissions with mitigation are summarized on Table 3-4. Detailed construction model outputs are presented in Appendices 3.2, 3.4, 3.6, and 3.8. MM AQ-1 is recommended to reduce the severity of the impacts. After implementation of MM AQ-1, Project construction-source emissions of NO<sub>x</sub> would not exceed the applicable SCAQMD thresholds for any criteria pollutant. Thus, a less than significant impact would occur for Project-related construction-source emissions.

**TABLE 3-4: OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITH MITIGATION**

Year	Emissions (lbs/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer						
Project Category 1	0.65	9.45	12.84	0.07	1.82	0.54
Project Category 2	5.40	33.65	156.30	0.35	2.95	1.62
Project Category 3	3.11	16.74	104.41	0.23	4.71	2.46
Project Category 4	4.42	27.63	117.81	0.27	3.10	1.49
Total	13.58	87.47	391.36	0.92	12.58	6.11
Winter						
Project Category 1	0.66	9.67	12.77	0.07	1.82	0.54
Project Category 2	5.42	33.77	155.76	0.35	2.95	1.62
Project Category 3	3.11	16.78	104.30	0.23	4.71	2.46
Project Category 4	4.44	27.72	117.20	0.27	3.10	1.49
Total	13.64	87.93	390.03	0.92	12.58	6.11
<b>Maximum Daily Emissions</b>	<b>13.64</b>	<b>87.93</b>	<b>391.36</b>	<b>0.92</b>	<b>12.58</b>	<b>6.11</b>
SCAQMD Regional Threshold	75	100	550	150	150	55
<b>Threshold Exceeded?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: The mitigated CalEEMod regional construction-source emissions are presented in Appendices 3.2, 3.4, 3.6, and 3.8.

### 3.5 REGIONAL OPERATIONAL EMISSIONS

Long-term air quality impacts occur from mobile source emission generated from project-related traffic and from stationary source emissions generated from natural gas. The proposed Project primarily involves construction activity. For on-going operations, mobile emissions would be generated by the motor vehicles traveling to and from the Project sites during on-going maintenance. However, the Project would generate a nominal number of traffic trips for periodic maintenance and inspections and would not result in any substantive new long-term emissions sources. Stationary area source emissions are typically generated by the consumption of natural gas for space and water heating devices and the use of consumer products. As this Project involves the construction of wells, conveyance facilities and ancillary facilities, storage basins, recharge facilities, storage bands, desalters and water treatment facilities, and associated improvements, heating and consumer products would not be used. Stationary energy emissions would result from energy consumption associated with the proposed Project. However, the proposed Project may include the use of an emergency diesel generator, allowing the pump station to run on backup power in case of emergency. If a backup generator is installed, the lead agency would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary

sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the SCAB. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment. Backup generators would be used only in emergency situations and for routine testing and maintenance purposes and would not contribute a substantial amount of emissions capable of exceeding SCAQMD thresholds. As project operations would not exceed SCAQMD thresholds, the project would not violate an air quality standard or contribute to an existing violation. Therefore, project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant.

### 3.6 LOCALIZED SIGNIFICANCE

#### 3.6.1 BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLD (LST) DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (23). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the NAAQS and CAAQS. Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4<sup>3</sup>. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (24).

#### 3.6.2 APPLICABILITY OF LSTs FOR THE PROJECT

For this Project, as the majority of the Project is located within the Southwest San Bernardino Valley, SRA 33 will be used for the LST analysis. LSTs apply to CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

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

- CalEEMod is utilized to determine the maximum daily on-site emissions that will occur during construction activity.

<sup>3</sup> The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

- The SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and *CalEEMod User's Guide Appendix A: Calculation Details for CalEEMod* is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (25) (26).
- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be compared to CalEEMod outputs.
- If the total acreage disturbed is greater than five acres per day, then LST impacts are appropriately evaluated through dispersion modeling.
- The LST methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

### 3.6.3 EMISSIONS CONSIDERED

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (23)." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

### 3.6.4 MAXIMUM DAILY DISTURBED-ACREAGE

Based on information provided in the Project Description, the average disturbance for Project Category 1 construction activities, it is anticipated to be half an acre. For Project Category 2 activities, it is anticipated that roughly half an acre would be actively disturbed on a given day. For Project Category 3 construction activities, it is estimated that no more than 2 acres will be actively disturbed. Lastly, during Project Category 4 activities, the maximum area expected to be disturbed during construction is 2 acres.

### 3.6.5 SENSITIVE RECEPTORS

As previously stated, LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities.

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

used to determine construction and operational air quality impacts for emissions of PM<sub>10</sub> and PM<sub>2.5</sub>, since PM<sub>10</sub> and PM<sub>2.5</sub> thresholds are based on a 24 hour averaging time.

Commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for eight hours or less. The LST Methodology explicitly states that *“LSTs based on shorter averaging periods, such as the NO<sub>2</sub> and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours (23).”* For purposes of analysis, if an industrial/commercial use is located at a closer distance to the Project site than the nearest residential use, the nearest industrial/commercial use will be utilized to determine construction and operational LST air impacts for emissions of NO<sub>2</sub> and CO an individual could be present at these sites for periods of one to eight hours.

### PROJECT-RELATED SENSITIVE RECEPTORS

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project’s potential to cause an individual and cumulatively significant impact. As the location of many of these project sites are unknown, it is assumed that the nearest sensitive receptor could potentially be located immediately adjacent to construction activities. It should be noted that the LST Methodology also explicitly states that *“It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters (23).”* Consistent with the SCAQMD’s LST Methodology, a 25-meter receptor distance is utilized in this analysis and provide for a conservative i.e. “health protective” standard of care.

## 3.7 LOCALIZED CONSTRUCTION-SOURCE EMISSIONS

### 3.7.1 LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

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

**TABLE 3-5: MAXIMUM DAILY LOCALIZED EMISSIONS THRESHOLDS (1 OF 2)**

Pollutant	Construction Localized Thresholds
Project Category 1	
NO <sub>x</sub>	118 lbs/day
CO	863 lbs/day
PM <sub>10</sub>	5 lbs/day
PM <sub>2.5</sub>	4 lbs/day

**TABLE 3-5: MAXIMUM DAILY LOCALIZED EMISSIONS THRESHOLDS (2 OF 2)**

Pollutant	Construction Localized Thresholds
Project Category 2	
NO <sub>x</sub>	118 lbs/day
CO	863 lbs/day
PM <sub>10</sub>	5 lbs/day
PM <sub>2.5</sub>	4 lbs/day
Project Category 3	
NO <sub>x</sub>	170 lbs/day
CO	1,232 lbs/day
PM <sub>10</sub>	5 lbs/day
PM <sub>2.5</sub>	4 lbs/day
Project Category 4	
NO <sub>x</sub>	170 lbs/day
CO	1,232 lbs/day
PM <sub>10</sub>	5 lbs/day
PM <sub>2.5</sub>	4 lbs/day

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

### 3.7.2 CONSTRUCTION-SOURCE LOCALIZED EMISSIONS

#### IMPACTS WITHOUT MITIGATION

Table 3-6 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would exceed the applicable SCAQMD LSTs for emissions of PM<sub>10</sub>. Outputs from the model runs for unmitigated construction LSTs are provided in Appendix 3.1.

**TABLE 3-6: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION – WITHOUT MITIGATION (1 OF 2)**

On-Site Construction Emissions	Emissions (lbs/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Project Category 1				
Maximum Daily Emissions	8.29	5.68	0.49	0.28
SCAQMD Localized Threshold	118	863	5	4
Threshold Exceeded?	NO	NO	NO	NO

**TABLE 3-6: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION – WITHOUT MITIGATION (2 OF 2)**

On-Site Construction Emissions	Emissions (lbs/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Project Category 2				
Maximum Daily Emissions	133.40	100.22	5.39	4.79
SCAQMD Localized Threshold	118	863	5	4
Threshold Exceeded?	YES	NO	YES	YES
Project Category 3				
Maximum Daily Emissions	136.70	89.91	11.13	7.81
SCAQMD Localized Threshold	170	1,232	5	4
Threshold Exceeded?	NO	NO	YES	YES
Project Category 4				
Maximum Daily Emissions	896.04	76.21	5.21	4.13
SCAQMD Localized Threshold	170	1,232	5	4
Threshold Exceeded?	YES	NO	YES	YES

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

**IMPACTS WITH MITIGATION**

Table 3-7 identifies mitigated localized impacts at the receptors nearest the Project site. After implementation of mitigation measure (MM AQ-1), construction-source emissions would not exceed the applicable SCAQMD LSTs thresholds and would be less-than-significant. Outputs from the model runs for mitigated localized construction-source emissions are provided in Appendix 3.2.

**TABLE 3-7: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION – WITH MITIGATION (1 OF 2)**

On-Site Construction Emissions	Emissions (lbs/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Project Category 1				
Maximum Daily Emissions	1.21	10.21	0.18	0.05
SCAQMD Localized Threshold	118	863	5	4
Threshold Exceeded?	NO	NO	NO	NO
Project Category 2				
Maximum Daily Emissions	28.79	152.33	1.34	1.16
SCAQMD Localized Threshold	118	863	5	4
Threshold Exceeded?	NO	NO	NO	NO

**TABLE 3-7: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION – WITH MITIGATION (2 OF 2)**

On-Site Construction Emissions	Emissions (lbs/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Project Category 3				
Maximum Daily Emissions	15.11	103.43	4.27	2.34
SCAQMD Localized Threshold	170	1,232	5	4
Threshold Exceeded?	NO	NO	NO	NO
Project Category 4				
Maximum Daily Emissions	23.91	113.88	1.61	1.07
SCAQMD Localized Threshold	170	1,232	5	4
Threshold Exceeded?	NO	NO	NO	NO

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

### 3.8 LOCALIZED OPERATIONAL-SOURCE EMISSIONS

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). As previously discussed, the Project would generate a nominal number of traffic trips in the context of on-going maintenance resulting in a negligible amount of new mobile source emissions. Additionally, all pumps associated with the Project are assumed to be electrically powered and would not directly generate air emissions. However, the proposed Project may include the use of an emergency diesel generators, allowing pump stations to run on backup power in case of emergency. If backup generator would be installed, the lead agency would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the SCAB. Upon compliance with SCAQMD permitting procedures, localized emissions from any potential diesel generator would not result in substantial pollutant concentrations capable of exceeding operational LST thresholds. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

### 3.9 CO “HOT SPOT” ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or “hot spots.” Further, detailed modeling of Project-specific CO “hot spots” is not needed to reach this conclusion. An adverse CO concentration, known as a “hot spot”, would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO (27).



It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 2-3. Also, CO concentrations in the Project vicinity have steadily declined. To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO “hot spot” analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This “hot spot” analysis did not predict any violation of CO standards, as shown on Table 3-8.

**TABLE 3-8: CO MODEL RESULTS**

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

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

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

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak CO concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the “hot spot” analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (27). Therefore, even if the traffic volumes for the proposed Project were double or even triple of the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO “hot spot” at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (28).

Traffic volumes generating the CO concentrations for the “hot spot” analysis, shown on Table 3-9. The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vph. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).<sup>4</sup> At buildout of the Project, the highest daily traffic volumes generated at the roadways within the vicinity of the Project are expected to generate less than the highest daily traffic volumes generated at the busiest intersection in the CO “hot spot” analysis. As such, the Project would not likely exceed the most stringent 1-hour CO standard.

**TABLE 3-9: TRAFFIC VOLUMES**

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

Source: 2003 AQMP

### 3.10 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

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

In March 2017, the SCAQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and

<sup>4</sup> Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

developing a strategy with fair-share reductions at the federal, state, and local levels (29). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS), a planning document that supports the integration of land use and transportation to help the region meet the CAA requirements (30). The Project's consistency with the AQMP will be determined using the 2016 AQMP as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993) (31). These indicators are discussed below:

### **3.10.1 CONSISTENCY CRITERION No. 1**

***The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.***

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

#### ***Construction Impacts – Consistency Criterion 1***

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized or regional significance thresholds were exceeded. The Project would not exceed the applicable LST thresholds or regional significance thresholds for construction activity after implementation of applicable mitigation measures. Therefore, the Project would not conflict with the AQMP according to this criterion.

On the basis of the preceding discussion, the Project would not conflict with the AQMP according to this criterion.

### **3.10.2 CONSISTENCY CRITERION No. 2**

***The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.***

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

#### ***Construction Impacts – Consistency Criterion 2***

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

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

### **AQMP CONSISTENCY CONCLUSION**

The Project would not result in or cause NAAQS or CAAQS violations. The Project's does not propose a land use development but rather involves pump station, well construction, monitoring and associated improvements. The Project is therefore considered to be consistent with the AQMP.

### **3.11 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS**

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

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

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

### **3.12 ODORS**

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

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

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's 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 lead agency's solid waste regulations. The Project would be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required (32).

### 3.13 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> while the NAAQS designates the Project site as nonattainment for O<sub>3</sub> and PM<sub>2.5</sub>.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (33). In this report the AQMD clearly states (Page D-3):

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

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

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

## **CONSTRUCTION IMPACTS**

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project construction-source air pollutant emissions would not result in exceedances of regional thresholds after implementation of MM AQ-1 and MM AQ-2. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

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## 4 REFERENCES

1. **State of California.** 2019 CEQA California Environmental Quality Act. 2019.
2. **South Coast Air Quality Management District.** RULE 403. FUGITIVE DUST. [Online]  
<https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4>.
3. —. RULE 1113. Architectural Coatings. [Online] <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf>.
4. —. Southern California Air Basins. [Online]  
<https://www.arb.ca.gov/msprog/onroad/porttruck/maps/scabc7map.pdf>.
5. —. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*. 2005.
6. **St. Croix Sensory, Inc.** *The "Gray Line" Between Odor Nuisance and Health Effects*. 2000.
7. **California Air Resources Board.** Ambient Air Quality Standards (AAQS). [Online] 2016.  
<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.
8. **United State Environmental Protection Agency.** Frequent Questions about General Conformity . EPA. [Online] <https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity#8>.
9. **South Coast Air Quality Management District.** Annual Air Quality Monitoring Network Plan. [Online] July 2018. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/annual-air-quality-monitoring-network-plan-v2.pdf?sfvrsn=2>.
10. **Air Resources Board.** State and National Ambient Air Quality Standards. [Online]  
[https://www.arb.ca.gov/regact/2019/stateareadesignations/appc.pdf?\\_ga=2.169398369.1537615702.1554741141-1192937971.1505156621](https://www.arb.ca.gov/regact/2019/stateareadesignations/appc.pdf?_ga=2.169398369.1537615702.1554741141-1192937971.1505156621).
11. **South Coast Air Quality Management District.** Map of Monitoring Areas. [Online]  
<http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.
12. **District, South Coast Air Quality Management.** Air Quality Data Tables. [Online]  
<https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year>.
13. **Environmental Protection Agency.** National Ambient Air Quality Standards (NAAQS). [Online] 1990.  
<https://www.epa.gov/environmental-topics/air-topics>.
14. —. Air Pollution and the Clean Air Act. [Online] <http://www.epa.gov/air/caa/>.
15. **United States Environmental Protection Agency.** 1990 Clean Air Act Amendment Summary: Title I. [Online] <https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-i>.
16. —. 1990 Clean Air Act Amendment Summary: Title II. [Online] <https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-ii>.
17. **Air Resources Board.** California Ambient Air Quality Standards (CAAQS). [Online] 2009. [Cited: April 16, 2018.] <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>.
18. **The California Energy Commission.** 2019 Building Energy Efficiency Standards . *California Energy Commission*. [Online] 2018.  
[https://www.energy.ca.gov/title24/2019standards/documents/2018\\_Title\\_24\\_2019\\_Building\\_Standards\\_FAQ.pdf](https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf).
19. **Department of General Services.** Building Standards Commission. *CALGreen*. [Online]  
<https://codes.iccsafe.org/content/chapter/15778/>.



20. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016.  
<http://scagrtpscscs.net/Documents/2016/final/f2016RTPSCS.pdf>.
21. **South Coast Air Quality Management District (SCAQMD).** SCAQMD Air Quality Significance Thresholds. [Online] <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>.
22. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] September 2016. [www.caleemod.com](http://www.caleemod.com).
23. **South Coast Air Quality Management District.** *Localized Significance Thresholds Methodology*. s.l. : South Coast Air Quality Management District, 2003.
24. **Lake Environmental.** US EPA Models. *Lake Environmental*. [Online] [http://www.weblakes.com/download/us\\_epa.html](http://www.weblakes.com/download/us_epa.html).
25. **South Coast Air Quality Management District.** Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. [Online] <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf>.
26. **California Air Pollution Control Officers Association (CAPCOA).** Appendix A: Calculation Details for CalEEMod. *CalEEMod*. [Online] October 2017. [http://www.aqmd.gov/docs/default-source/caleemod/02\\_appendix-a2016-3-2.pdf?sfvrsn=6](http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6).
27. **South Coast Air Quality Management District.** 2003 Air Quality Management Plan. [Online] 2003. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2003-air-quality-management-plan/2003-aqmp-appendix-v.pdf>.
28. **Bay Area Air Quality Management District.** [Online] <http://www.baaqmd.gov/>.
29. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11>.
30. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016.  
<http://scagrtpscscs.net/Documents/2016/final/f2016RTPSCS.pdf>.
31. **South coast Air Quality Management District.** *CEQA Air Quality Handbook (1993)*. 1993.
32. **South Coast Air Quality Management District.** RULE 402 NUISANCE. [Online] <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf>.
33. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003.  
[http://www.aqmd.gov/rules/ciwg/final\\_white\\_paper.pdf](http://www.aqmd.gov/rules/ciwg/final_white_paper.pdf).

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## 5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed 2020 Optimum Basin Management Program Update. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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

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## **APPENDIX 2.1:**

### **STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS**

## **APPENDIX C**

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

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## **APPENDIX C**

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

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

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



# Ambient Air Quality Standards

(Updated 5/4/16)

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

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, 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 PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> 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/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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

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

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

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

**FIGURE 1**



**TABLE 1**

**California Ambient Air Quality Standards  
Area Designations for Ozone <sup>(1)</sup>**

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

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

FIGURE 2

**2018  
Area Designations for State  
Ambient Air Quality Standards  
PM<sub>10</sub>**



Source Date:  
October 2018  
Air Quality Planning and Science Division

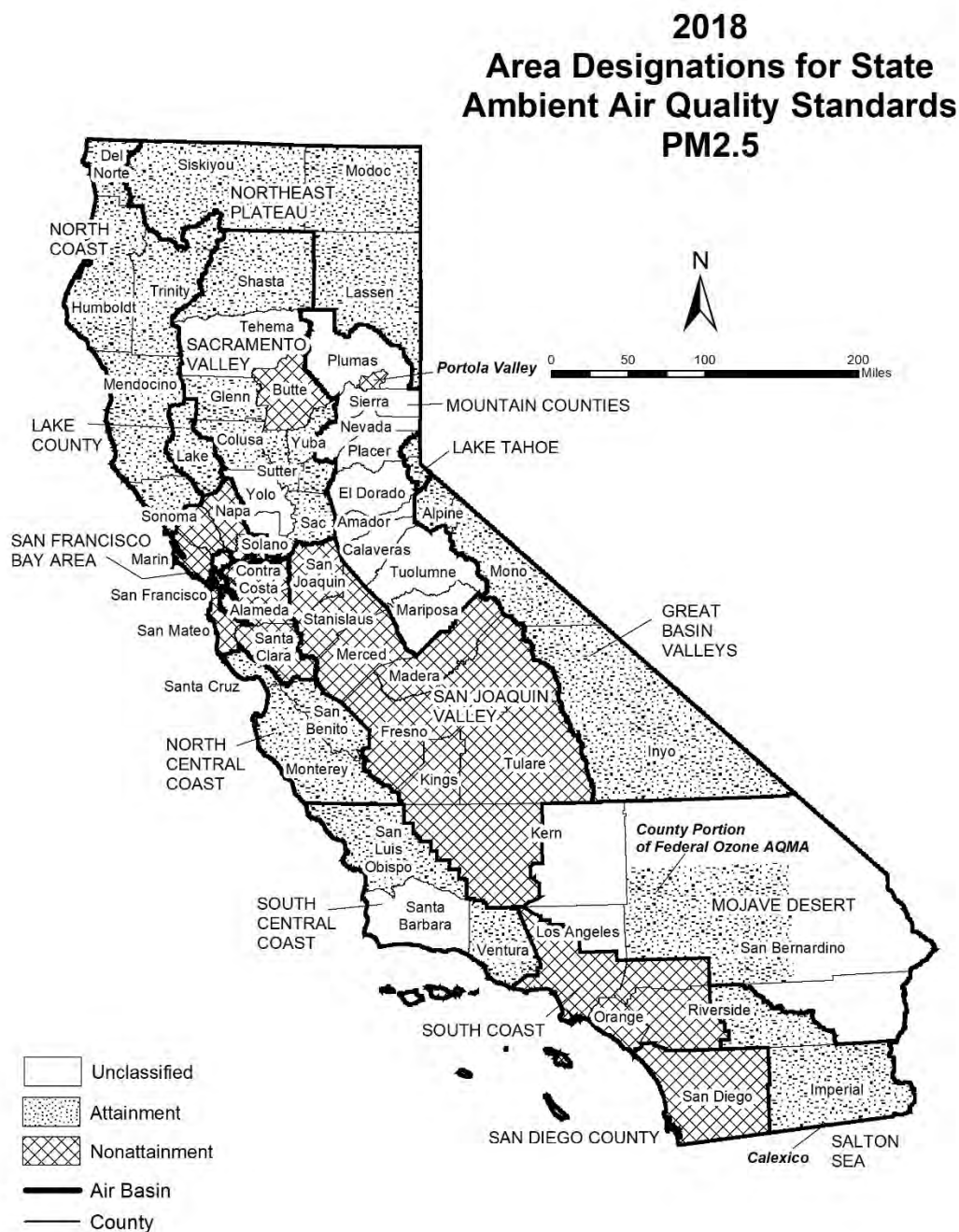
**TABLE 2**

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

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



FIGURE 3



**TABLE 3**

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

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

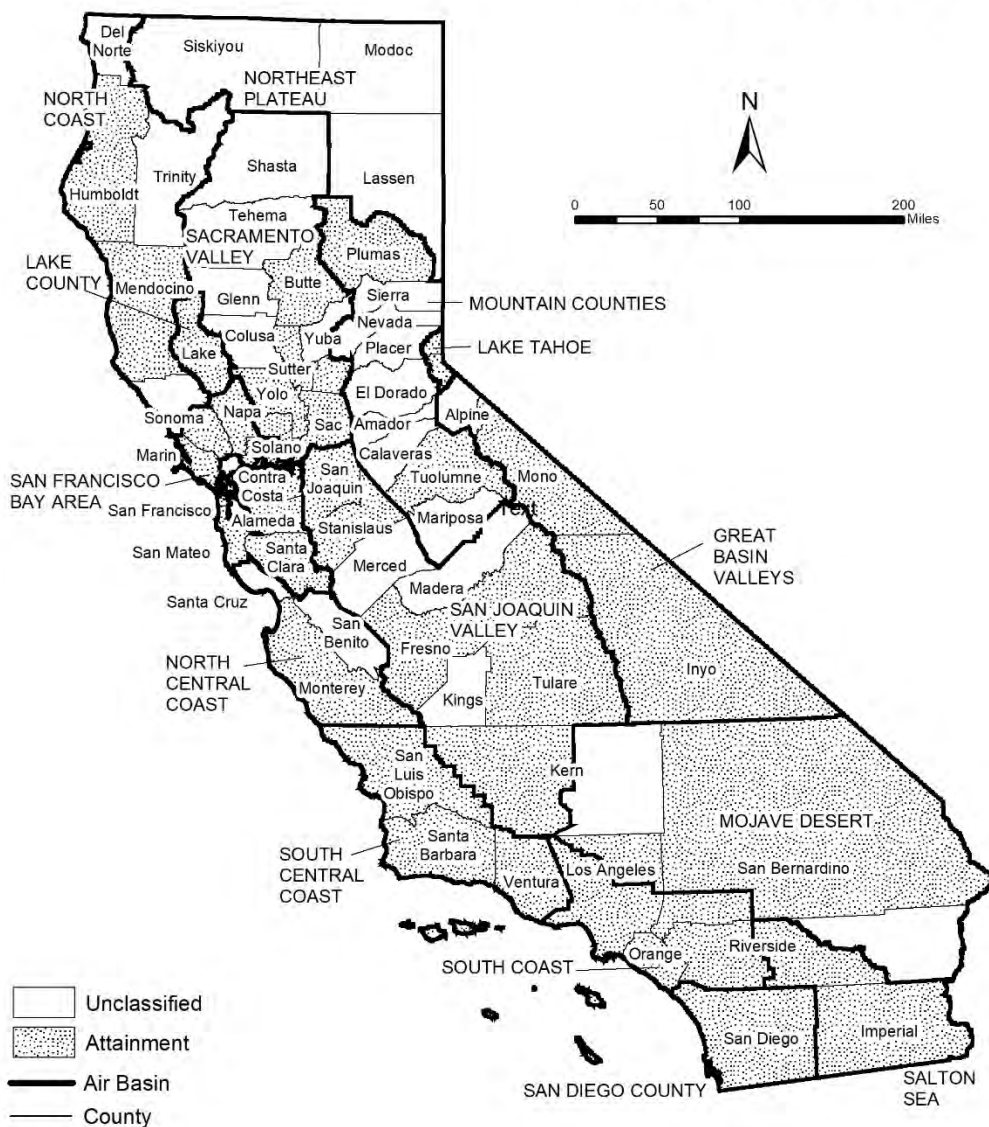
(1) California Code of Regulations, title 17, section 60200(b)

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

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

**FIGURE 4**

**2018  
Area Designations for State  
Ambient Air Quality Standards  
CARBON MONOXIDE**



Source Date:  
October 2018  
Air Quality Planning and Science Division

**TABLE 4**

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

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

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

FIGURE 5

**2018**  
**Area Designations for State**  
**Ambient Air Quality Standards**  
**NITROGEN DIOXIDE**



Source Date:  
 October 2018  
 Air Quality Planning and Science Division

**TABLE 5**

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

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

FIGURE 6



**TABLE 6****California Ambient Air Quality Standards  
Area Designation for Sulfur Dioxide\***

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

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



FIGURE 7

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



Source Date:  
 October 2018  
 Air Quality Planning and Science Division

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

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

FIGURE 8

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



Source Date:  
October 2018  
Air Quality Planning and Science Division

**TABLE 8**

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

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

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

FIGURE 9

**2018**  
**Area Designations for State**  
**Ambient Air Quality Standards**  
**HYDROGEN SULFIDE**



Source Date:  
 October 2018  
 Air Quality Planning and Science Division

**TABLE 9**

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

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

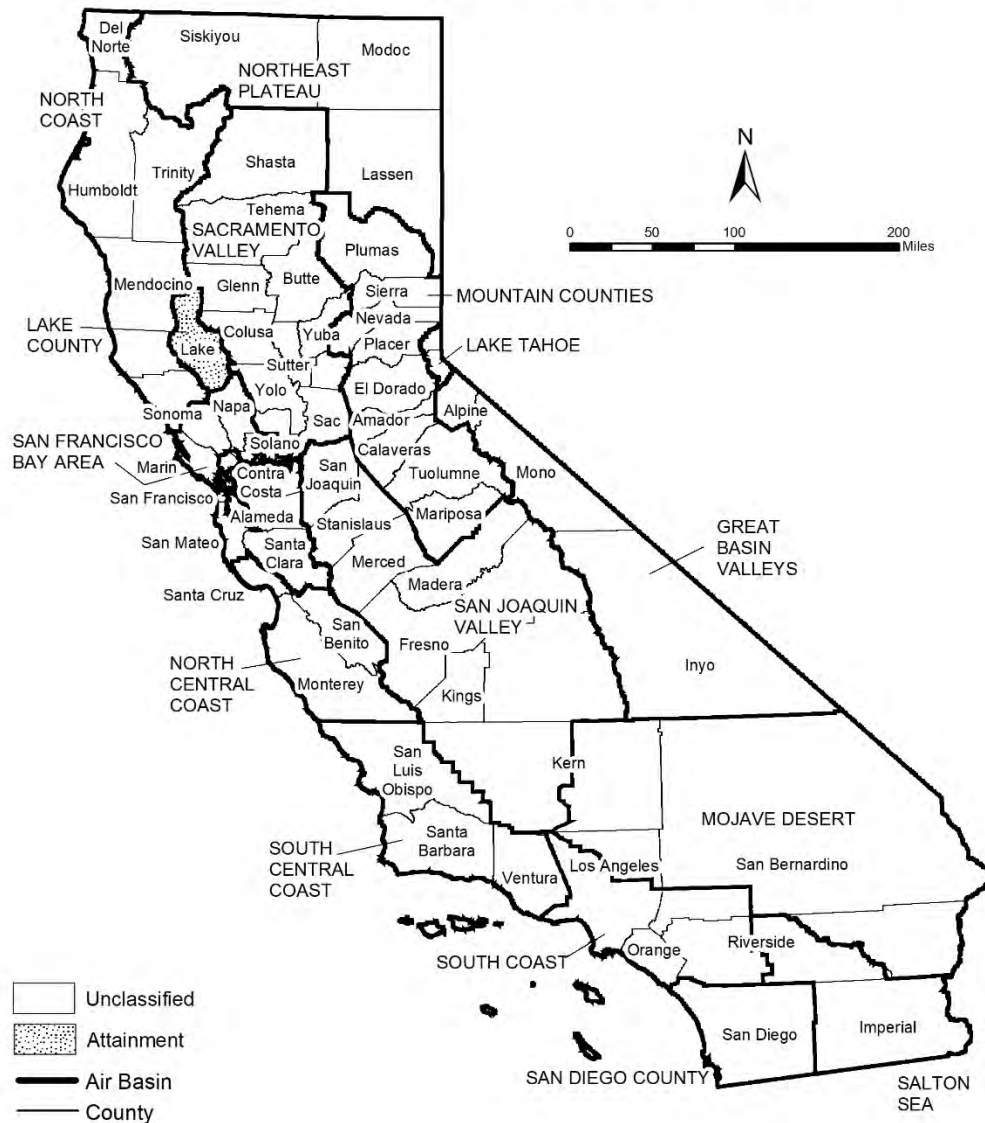
\* The area designated for hydrogen sulfide is a county or portion of a county

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

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

FIGURE 10

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



Source Date:  
 October 2018  
 Air Quality Planning and Science Division

**TABLE 10**

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

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



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

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

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

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

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

### **Designation Categories**

*Suspended Particulate Matter (PM<sub>10</sub>)*. The U.S. EPA uses three categories to designate areas with respect to PM<sub>10</sub>:

- Attainment
- Nonattainment
- Unclassifiable

*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
- Unclassifiable/Attainment

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

On December 14, 2012, the U.S. EPA established a new national annual primary PM<sub>2.5</sub> standard of 12.0 µg/m<sup>3</sup>. New area designations reflecting this revised standard became final in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0 µg/m<sup>3</sup> as well as the 24-hour standard of 35 µg/m<sup>3</sup>, 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,
- Unclassifiable, and
- Attainment/Unclassifiable.

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 µg/m<sup>3</sup>. Designations were made for this standard in November 2010.

### Designation Areas

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

*[https://ecfr.io/Title-40/se40.20.81\\_1305](https://ecfr.io/Title-40/se40.20.81_1305)*

FIGURE 11



**TABLE 11**

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

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

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

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

(1) South Central Coast Air Basin Channel Islands:

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

Ventura County includes Anacapa and San Nicolas Islands.

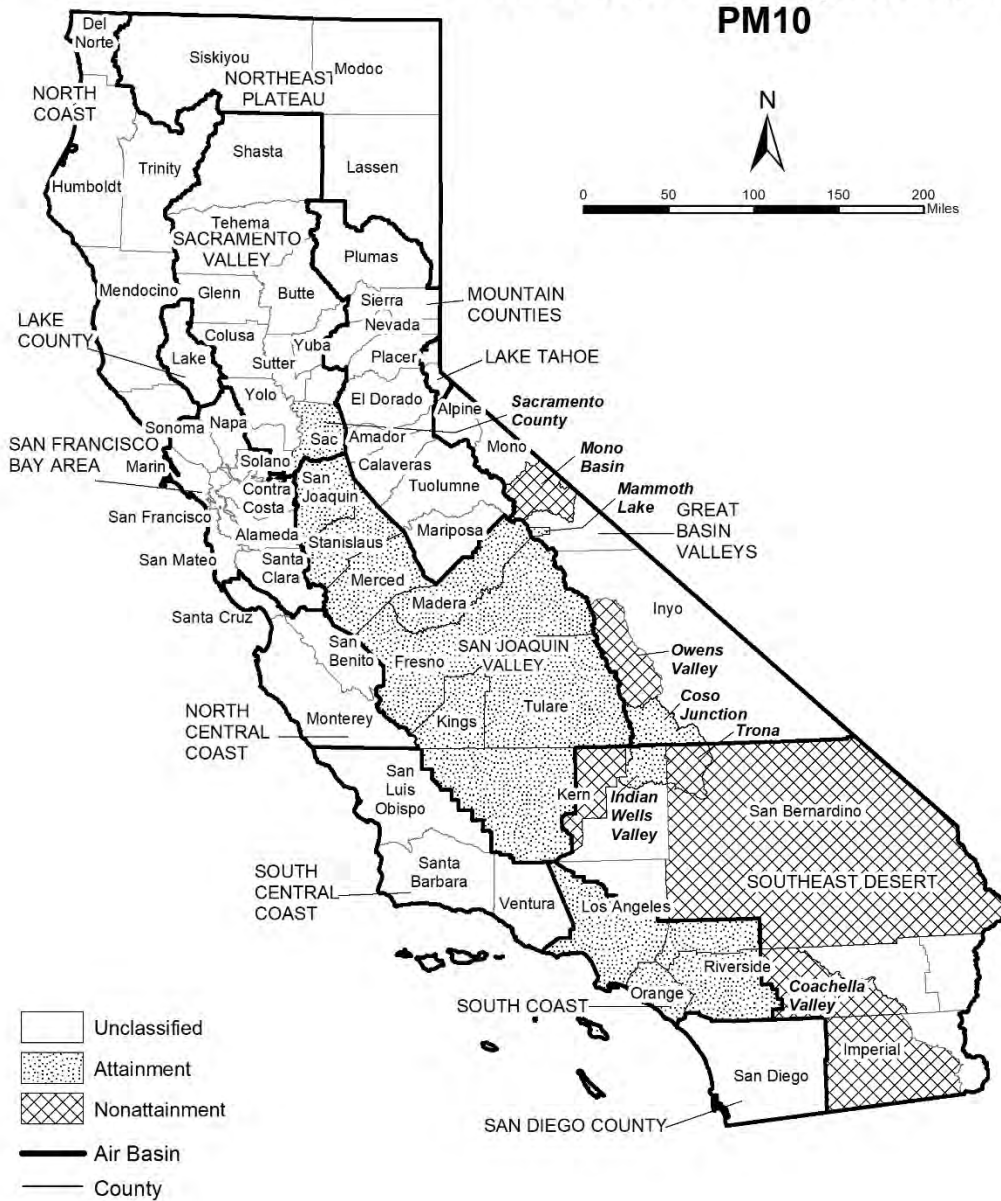
South Coast Air Basin:

Los Angeles County includes San Clemente and Santa Catalina Islands.

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

FIGURE 12

# Area Designations for National Ambient Air Quality Standards PM<sub>10</sub>



Source Date:  
October 2018  
Air Quality Planning and Science Division

**TABLE 12**

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

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

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

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

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

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

FIGURE 13

# Area Designations for National Ambient Air Quality Standards PM2.5



Source Date:  
October 2018  
Air Quality Planning and Science Division

**TABLE 13**

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

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

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

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

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

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

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



**FIGURE 14**



Source Date:  
October 2018  
Air Quality Planning and Science Division

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

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

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

**FIGURE 15**

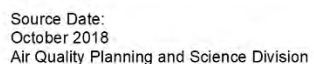


**TABLE 15****National Ambient Air Quality Standards  
Area Designations for Nitrogen Dioxide\***

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

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

## Area Designations for National Ambient Air Quality Standards SULFUR DIOXIDE



**TABLE 16**

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

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

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

NOTE: This map and table reflect the 2010 1-hour SO<sub>2</sub> standard of 75 ppb.

(1) South Central Coast Air Basin Channel Islands:

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

Ventura County includes Anacapa and San Nicolas Islands.

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

FIGURE 17

# Area Designations for National Ambient Air Quality Standards LEAD



**TABLE 17**

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

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

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



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## **APPENDIX 3.1:**

### **CALEEMOD PROJECT CATEGORY 1 CONSTRUCTION UNMITIGATED EMISSIONS MODEL OUTPUTS**

OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**OBMPU - Project Category 1 (Construction - Unmitigated)**  
**San Bernardino-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	22.50	1000sqft	0.52	22,500.00	0
Other Non-Asphalt Surfaces	455.00	1000sqft	10.45	455,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Asphalt Surfaces = 20 Monitoring Wells and Production Wells; Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes 20 Monitoring Wells, 10 Production Wells, and 65,000 LF of conveyance to be constructed in a single year.

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each well site is anticipated to be half an acre or less.

Construction Off-road Equipment Mitigation - Rule 403

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	0.00	183.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripLength	14.70	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2371	16.5304	8.3063	0.0681	2.1457	0.3189	2.4646	0.5167	0.2946	0.8113	0.0000	6,970.5806	6,970.5806	0.8261	0.0000	6,991.2333
2022	1.1023	13.7535	7.8477	0.0677	2.1456	0.2480	2.3936	0.5167	0.2291	0.7458	0.0000	6,925.8525	6,925.8525	0.8232	0.0000	6,946.4317
Maximum	1.2371	16.5304	8.3063	0.0681	2.1457	0.3189	2.4646	0.5167	0.2946	0.8113	0.0000	6,970.5806	6,970.5806	0.8261	0.0000	6,991.2333

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2371	16.5304	8.3063	0.0681	1.8222	0.3189	2.1411	0.4818	0.2946	0.7763	0.0000	6,970.5806	6,970.5806	0.8261	0.0000	6,991.2333
2022	1.1023	13.7535	7.8477	0.0677	1.8222	0.2480	2.0701	0.4817	0.2291	0.7109	0.0000	6,925.8525	6,925.8525	0.8232	0.0000	6,946.4317
Maximum	1.2371	16.5304	8.3063	0.0681	1.8222	0.3189	2.1411	0.4818	0.2946	0.7763	0.0000	6,970.5806	6,970.5806	0.8261	0.0000	6,991.2333

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	15.07	0.00	13.32	6.76	0.00	4.49	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.1114</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.1114</b>

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/1/2022	7	366	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 183****Acres of Paving: 10.97****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37

**Trips and VMT**

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	2	10.00	30.00	0.00	30.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8641	8.2861	5.6783	0.0226		0.2847	0.2847		0.2619	0.2619		2,190.585 4	2,190.585 4	0.7085		2,208.297 4
<b>Total</b>	<b>0.8641</b>	<b>8.2861</b>	<b>5.6783</b>	<b>0.0226</b>	<b>0.5303</b>	<b>0.2847</b>	<b>0.8149</b>	<b>0.0573</b>	<b>0.2619</b>	<b>0.3192</b>		<b>2,190.585 4</b>	<b>2,190.585 4</b>	<b>0.7085</b>		<b>2,208.297 4</b>



## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2848	8.1834	1.8261	0.0432	1.3874	0.0328	1.4202	0.3990	0.0314	0.4304		4,559.040 1	4,559.040 1	0.1115		4,561.827 6
Worker	0.0882	0.0608	0.8019	2.2200e-003	0.2280	1.3900e-003	0.2294	0.0605	1.2800e-003	0.0617		220.9551	220.9551	6.1300e-003		221.1083
<b>Total</b>	<b>0.3730</b>	<b>8.2442</b>	<b>2.6280</b>	<b>0.0455</b>	<b>1.6154</b>	<b>0.0342</b>	<b>1.6496</b>	<b>0.4594</b>	<b>0.0327</b>	<b>0.4921</b>		<b>4,779.995 2</b>	<b>4,779.995 2</b>	<b>0.1176</b>		<b>4,782.935 9</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.8641	8.2861	5.6783	0.0226		0.2847	0.2847		0.2619	0.2619	0.0000	2,190.585 4	2,190.585 4	0.7085		2,208.297 4
<b>Total</b>	<b>0.8641</b>	<b>8.2861</b>	<b>5.6783</b>	<b>0.0226</b>	<b>0.2068</b>	<b>0.2847</b>	<b>0.4915</b>	<b>0.0223</b>	<b>0.2619</b>	<b>0.2843</b>	<b>0.0000</b>	<b>2,190.585 4</b>	<b>2,190.585 4</b>	<b>0.7085</b>		<b>2,208.297 4</b>

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2848	8.1834	1.8261	0.0432	1.3874	0.0328	1.4202	0.3990	0.0314	0.4304		4,559.040 1	4,559.040 1	0.1115		4,561.827 6
Worker	0.0882	0.0608	0.8019	2.2200e-003	0.2280	1.3900e-003	0.2294	0.0605	1.2800e-003	0.0617		220.9551	220.9551	6.1300e-003		221.1083
<b>Total</b>	<b>0.3730</b>	<b>8.2442</b>	<b>2.6280</b>	<b>0.0455</b>	<b>1.6154</b>	<b>0.0342</b>	<b>1.6496</b>	<b>0.4594</b>	<b>0.0327</b>	<b>0.4921</b>		<b>4,779.995 2</b>	<b>4,779.995 2</b>	<b>0.1176</b>		<b>4,782.935 9</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7525	6.2801	5.3999	0.0227		0.2187	0.2187		0.2012	0.2012		2,192.546 1	2,192.546 1	0.7091		2,210.274 0
<b>Total</b>	<b>0.7525</b>	<b>6.2801</b>	<b>5.3999</b>	<b>0.0227</b>	<b>0.5303</b>	<b>0.2187</b>	<b>0.7490</b>	<b>0.0573</b>	<b>0.2012</b>	<b>0.2585</b>		<b>2,192.546 1</b>	<b>2,192.546 1</b>	<b>0.7091</b>		<b>2,210.274 0</b>

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2673	7.4187	1.7104	0.0429	1.3874	0.0279	1.4153	0.3990	0.0267	0.4256		4,520.3308	4,520.3308	0.1086		4,523.0447
Worker	0.0825	0.0547	0.7374	2.1400e-003	0.2280	1.3500e-003	0.2294	0.0605	1.2400e-003	0.0617		212.9756	212.9756	5.5000e-003		213.1131
<b>Total</b>	<b>0.3498</b>	<b>7.4734</b>	<b>2.4478</b>	<b>0.0450</b>	<b>1.6154</b>	<b>0.0293</b>	<b>1.6446</b>	<b>0.4594</b>	<b>0.0279</b>	<b>0.4873</b>		<b>4,733.3064</b>	<b>4,733.3064</b>	<b>0.1141</b>		<b>4,736.1577</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.7525	6.2801	5.3999	0.0227		0.2187	0.2187		0.2012	0.2012	0.0000	2,192.5461	2,192.5461	0.7091		2,210.2740
<b>Total</b>	<b>0.7525</b>	<b>6.2801</b>	<b>5.3999</b>	<b>0.0227</b>	<b>0.2068</b>	<b>0.2187</b>	<b>0.4255</b>	<b>0.0223</b>	<b>0.2012</b>	<b>0.2235</b>	<b>0.0000</b>	<b>2,192.5461</b>	<b>2,192.5461</b>	<b>0.7091</b>		<b>2,210.2740</b>

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2673	7.4187	1.7104	0.0429	1.3874	0.0279	1.4153	0.3990	0.0267	0.4256		4,520.3308	4,520.3308	0.1086		4,523.0447
Worker	0.0825	0.0547	0.7374	2.1400e-003	0.2280	1.3500e-003	0.2294	0.0605	1.2400e-003	0.0617		212.9756	212.9756	5.5000e-003		213.1131
<b>Total</b>	<b>0.3498</b>	<b>7.4734</b>	<b>2.4478</b>	<b>0.0450</b>	<b>1.6154</b>	<b>0.0293</b>	<b>1.6446</b>	<b>0.4594</b>	<b>0.0279</b>	<b>0.4873</b>		<b>4,733.3064</b>	<b>4,733.3064</b>	<b>0.1141</b>		<b>4,736.1577</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Unmitigated	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>		<b>0.1114</b>



## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>		<b>0.1114</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

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

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

Equipment Type	Number
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**11.0 Vegetation**

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OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**OBMPU - Project Category 1 (Construction - Unmitigated)**  
**San Bernardino-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	22.50	1000sqft	0.52	22,500.00	0
Other Non-Asphalt Surfaces	455.00	1000sqft	10.45	455,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Asphalt Surfaces = 20 Monitoring Wells and Production Wells; Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes 20 Monitoring Wells, 10 Production Wells, and 65,000 LF of conveyance to be constructed in a single year.

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each well site is anticipated to be half an acre or less.

Construction Off-road Equipment Mitigation - Rule 403

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	0.00	183.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripLength	14.70	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2473	16.7492	8.2292	0.0675	2.1457	0.3190	2.4647	0.5167	0.2947	0.8114	0.0000	6,914.521 2	6,914.521 2	0.8310	0.0000	6,935.296 2
2022	1.1123	13.9412	7.7798	0.0671	2.1456	0.2481	2.3937	0.5167	0.2293	0.7459	0.0000	6,870.640 8	6,870.640 8	0.8281	0.0000	6,891.342 5
Maximum	1.2473	16.7492	8.2292	0.0675	2.1457	0.3190	2.4647	0.5167	0.2947	0.8114	0.0000	6,914.521 2	6,914.521 2	0.8310	0.0000	6,935.296 2

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2473	16.7492	8.2292	0.0675	1.8222	0.3190	2.1412	0.4818	0.2947	0.7765	0.0000	6,914.521 2	6,914.521 2	0.8310	0.0000	6,935.296 2
2022	1.1123	13.9412	7.7798	0.0671	1.8222	0.2481	2.0703	0.4817	0.2293	0.7110	0.0000	6,870.640 8	6,870.640 8	0.8281	0.0000	6,891.342 5
Maximum	1.2473	16.7492	8.2292	0.0675	1.8222	0.3190	2.1412	0.4818	0.2947	0.7765	0.0000	6,914.521 2	6,914.521 2	0.8310	0.0000	6,935.296 2

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	15.07	0.00	13.32	6.76	0.00	4.48	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.1114</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.1114</b>

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/1/2022	7	366	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 183****Acres of Paving: 10.97****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37

**Trips and VMT**

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	2	10.00	30.00	0.00	30.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8641	8.2861	5.6783	0.0226		0.2847	0.2847		0.2619	0.2619		2,190.5854	2,190.5854	0.7085		2,208.2974
<b>Total</b>	<b>0.8641</b>	<b>8.2861</b>	<b>5.6783</b>	<b>0.0226</b>	<b>0.5303</b>	<b>0.2847</b>	<b>0.8149</b>	<b>0.0573</b>	<b>0.2619</b>	<b>0.3192</b>		<b>2,190.5854</b>	<b>2,190.5854</b>	<b>0.7085</b>		<b>2,208.2974</b>



## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2911	8.3991	1.9080	0.0429	1.3874	0.0330	1.4203	0.3990	0.0315	0.4305		4,525.877 6	4,525.877 6	0.1172		4,528.807 9
Worker	0.0921	0.0639	0.6429	1.9900e-003	0.2280	1.3900e-003	0.2294	0.0605	1.2800e-003	0.0617		198.0582	198.0582	5.3100e-003		198.1909
<b>Total</b>	<b>0.3832</b>	<b>8.4630</b>	<b>2.5508</b>	<b>0.0449</b>	<b>1.6154</b>	<b>0.0343</b>	<b>1.6497</b>	<b>0.4594</b>	<b>0.0328</b>	<b>0.4922</b>		<b>4,723.935 8</b>	<b>4,723.935 8</b>	<b>0.1225</b>		<b>4,726.998 8</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.8641	8.2861	5.6783	0.0226		0.2847	0.2847		0.2619	0.2619	0.0000	2,190.585 4	2,190.585 4	0.7085		2,208.297 4
<b>Total</b>	<b>0.8641</b>	<b>8.2861</b>	<b>5.6783</b>	<b>0.0226</b>	<b>0.2068</b>	<b>0.2847</b>	<b>0.4915</b>	<b>0.0223</b>	<b>0.2619</b>	<b>0.2843</b>	<b>0.0000</b>	<b>2,190.585 4</b>	<b>2,190.585 4</b>	<b>0.7085</b>		<b>2,208.297 4</b>

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2911	8.3991	1.9080	0.0429	1.3874	0.0330	1.4203	0.3990	0.0315	0.4305		4,525.877 6	4,525.877 6	0.1172		4,528.807 9
Worker	0.0921	0.0639	0.6429	1.9900e-003	0.2280	1.3900e-003	0.2294	0.0605	1.2800e-003	0.0617		198.0582	198.0582	5.3100e-003		198.1909
<b>Total</b>	<b>0.3832</b>	<b>8.4630</b>	<b>2.5508</b>	<b>0.0449</b>	<b>1.6154</b>	<b>0.0343</b>	<b>1.6497</b>	<b>0.4594</b>	<b>0.0328</b>	<b>0.4922</b>		<b>4,723.935 8</b>	<b>4,723.935 8</b>	<b>0.1225</b>		<b>4,726.998 8</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7525	6.2801	5.3999	0.0227		0.2187	0.2187		0.2012	0.2012		2,192.546 1	2,192.546 1	0.7091		2,210.274 0
<b>Total</b>	<b>0.7525</b>	<b>6.2801</b>	<b>5.3999</b>	<b>0.0227</b>	<b>0.5303</b>	<b>0.2187</b>	<b>0.7490</b>	<b>0.0573</b>	<b>0.2012</b>	<b>0.2585</b>		<b>2,192.546 1</b>	<b>2,192.546 1</b>	<b>0.7091</b>		<b>2,210.274 0</b>

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2733	7.6035	1.7895	0.0425	1.3874	0.0280	1.4154	0.3990	0.0268	0.4258		4,487.1768	4,487.1768	0.1142		4,490.0314
Worker	0.0865	0.0575	0.5904	1.9200e-003	0.2280	1.3500e-003	0.2294	0.0605	1.2400e-003	0.0617		190.9179	190.9179	4.7700e-003		191.0371
<b>Total</b>	<b>0.3598</b>	<b>7.6610</b>	<b>2.3799</b>	<b>0.0445</b>	<b>1.6154</b>	<b>0.0294</b>	<b>1.6448</b>	<b>0.4594</b>	<b>0.0281</b>	<b>0.4875</b>		<b>4,678.0947</b>	<b>4,678.0947</b>	<b>0.1190</b>		<b>4,681.0685</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.7525	6.2801	5.3999	0.0227		0.2187	0.2187		0.2012	0.2012	0.0000	2,192.5461	2,192.5461	0.7091		2,210.2740
<b>Total</b>	<b>0.7525</b>	<b>6.2801</b>	<b>5.3999</b>	<b>0.0227</b>	<b>0.2068</b>	<b>0.2187</b>	<b>0.4255</b>	<b>0.0223</b>	<b>0.2012</b>	<b>0.2235</b>	<b>0.0000</b>	<b>2,192.5461</b>	<b>2,192.5461</b>	<b>0.7091</b>		<b>2,210.2740</b>

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2733	7.6035	1.7895	0.0425	1.3874	0.0280	1.4154	0.3990	0.0268	0.4258		4,487.1768	4,487.1768	0.1142		4,490.0314
Worker	0.0865	0.0575	0.5904	1.9200e-003	0.2280	1.3500e-003	0.2294	0.0605	1.2400e-003	0.0617		190.9179	190.9179	4.7700e-003		191.0371
<b>Total</b>	<b>0.3598</b>	<b>7.6610</b>	<b>2.3799</b>	<b>0.0445</b>	<b>1.6154</b>	<b>0.0294</b>	<b>1.6448</b>	<b>0.4594</b>	<b>0.0281</b>	<b>0.4875</b>		<b>4,678.0947</b>	<b>4,678.0947</b>	<b>0.1190</b>		<b>4,681.0685</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Unmitigated	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>		<b>0.1114</b>



## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>		<b>0.1114</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 1 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## **APPENDIX 3.2:**

### **CALEEMOD PROJECT CATEGORY 2 CONSTRUCTION UNMITIGATED EMISSIONS MODEL OUTPUTS**

OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**OBMPU - Project Category 2 (Construction - Unmitigated)**  
**San Bernardino-South Coast County, Summer**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1,400.00	1000sqft	32.14	1,400,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes 100,000 LF of Conveyance Pipelines (Recycled and Potable Water) and 100,000 LF of Conveyance Pipelines (Surplus and Supplemental Water Supply) constructed per year

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be half an acre or less.

Construction Off-road Equipment Mitigation - Rule 403

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	45.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/4/2021	1/1/2022
tblGrading	AcresOfGrading	0.00	183.00
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	75.00	28.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	15.5639	138.2659	104.1901	0.3547	2.1215	5.2040	7.3255	0.4957	4.7884	5.2841	0.0000	34,561.28 46	34,561.28 46	10.2022	0.0000	34,816.33 90
2022	13.5985	107.6327	98.2978	0.3543	2.1214	3.9927	6.1141	0.4957	3.6738	4.1696	0.0000	34,521.65 14	34,521.65 14	10.2016	0.0000	34,776.69 15
Maximum	15.5639	138.2659	104.1901	0.3547	2.1215	5.2040	7.3255	0.4957	4.7884	5.2841	0.0000	34,561.28 46	34,561.28 46	10.2022	0.0000	34,816.33 90

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	15.5639	138.2659	104.1901	0.3547	1.7980	5.2040	7.0020	0.4608	4.7884	5.2492	0.0000	34,561.28 46	34,561.28 46	10.2022	0.0000	34,816.33 90
2022	13.5985	107.6327	98.2978	0.3543	1.7980	3.9927	5.7907	0.4608	3.6738	4.1346	0.0000	34,521.65 14	34,521.65 14	10.2016	0.0000	34,776.69 15
Maximum	15.5639	138.2659	104.1901	0.3547	1.7980	5.2040	7.0020	0.4608	4.7884	5.2492	0.0000	34,561.28 46	34,561.28 46	10.2022	0.0000	34,816.33 90

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	15.25	0.00	4.81	7.04	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>0.3266</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>0.3266</b>



## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

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

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/1/2022	7	366	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 183

Acres of Paving: 32.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Pavers	2	8.00	130	0.42
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Off-Highway Trucks	22	8.00	402	0.38

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	30	28.00	20.00	0.00	40.00	40.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	15.0907	133.4046	100.2156	0.3230		5.1813	5.1813		4.7668	4.7668		31,272.2399	31,272.2399	10.1141		31,525.0918
<b>Total</b>	<b>15.0907</b>	<b>133.4046</b>	<b>100.2156</b>	<b>0.3230</b>	<b>0.5303</b>	<b>5.1813</b>	<b>5.7116</b>	<b>0.0573</b>	<b>4.7668</b>	<b>4.8241</b>		<b>31,272.2399</b>	<b>31,272.2399</b>	<b>10.1141</b>		<b>31,525.0918</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1578	4.6373	1.0191	0.0234	0.7401	0.0176	0.7576	0.2128	0.0168	0.2296		2,466.2321	2,466.2321	0.0654		2,467.8679
Worker	0.3154	0.2240	2.9553	8.2600e-003	0.8512	5.1400e-003	0.8563	0.2257	4.7300e-003	0.2304		822.8126	822.8126	0.0227		823.3793
<b>Total</b>	<b>0.4732</b>	<b>4.8614</b>	<b>3.9745</b>	<b>0.0317</b>	<b>1.5912</b>	<b>0.0227</b>	<b>1.6139</b>	<b>0.4385</b>	<b>0.0215</b>	<b>0.4600</b>		<b>3,289.0447</b>	<b>3,289.0447</b>	<b>0.0881</b>		<b>3,291.2472</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	15.0907	133.4046	100.2156	0.3230		5.1813	5.1813		4.7668	4.7668	0.0000	31,272.2399	31,272.2399	10.1141		31,525.0918
<b>Total</b>	<b>15.0907</b>	<b>133.4046</b>	<b>100.2156</b>	<b>0.3230</b>	<b>0.2068</b>	<b>5.1813</b>	<b>5.3881</b>	<b>0.0223</b>	<b>4.7668</b>	<b>4.7891</b>	<b>0.0000</b>	<b>31,272.2399</b>	<b>31,272.2399</b>	<b>10.1141</b>		<b>31,525.0918</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1578	4.6373	1.0191	0.0234	0.7401	0.0176	0.7576	0.2128	0.0168	0.2296		2,466.232 1	2,466.232 1	0.0654		2,467.867 9
Worker	0.3154	0.2240	2.9553	8.2600e-003	0.8512	5.1400e-003	0.8563	0.2257	4.7300e-003	0.2304		822.8126	822.8126	0.0227		823.3793
<b>Total</b>	<b>0.4732</b>	<b>4.8614</b>	<b>3.9745</b>	<b>0.0317</b>	<b>1.5912</b>	<b>0.0227</b>	<b>1.6139</b>	<b>0.4385</b>	<b>0.0215</b>	<b>0.4600</b>		<b>3,289.044 7</b>	<b>3,289.044 7</b>	<b>0.0881</b>		<b>3,291.247 2</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	13.1551	103.2084	94.6260	0.3232		3.9728	3.9728		3.6550	3.6550		31,283.20 50	31,283.20 50	10.1176		31,536.14 56
<b>Total</b>	<b>13.1551</b>	<b>103.2084</b>	<b>94.6260</b>	<b>0.3232</b>	<b>0.5303</b>	<b>3.9728</b>	<b>4.5030</b>	<b>0.0573</b>	<b>3.6550</b>	<b>3.7122</b>		<b>31,283.20 50</b>	<b>31,283.20 50</b>	<b>10.1176</b>		<b>31,536.14 56</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1480	4.2227	0.9536	0.0232	0.7400	0.0149	0.7550	0.2128	0.0143	0.2271		2,445.3546	2,445.3546	0.0636		2,446.9455
Worker	0.2953	0.2017	2.7182	7.9600e-003	0.8512	4.9800e-003	0.8561	0.2257	4.5900e-003	0.2303		793.0918	793.0918	0.0204		793.6004
<b>Total</b>	<b>0.4434</b>	<b>4.4244</b>	<b>3.6718</b>	<b>0.0311</b>	<b>1.5912</b>	<b>0.0199</b>	<b>1.6111</b>	<b>0.4385</b>	<b>0.0189</b>	<b>0.4574</b>		<b>3,238.4464</b>	<b>3,238.4464</b>	<b>0.0840</b>		<b>3,240.5459</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	13.1551	103.2084	94.6260	0.3232		3.9728	3.9728		3.6550	3.6550	0.0000	31,283.2050	31,283.2050	10.1176		31,536.1455
<b>Total</b>	<b>13.1551</b>	<b>103.2084</b>	<b>94.6260</b>	<b>0.3232</b>	<b>0.2068</b>	<b>3.9728</b>	<b>4.1796</b>	<b>0.0223</b>	<b>3.6550</b>	<b>3.6773</b>	<b>0.0000</b>	<b>31,283.2050</b>	<b>31,283.2050</b>	<b>10.1176</b>		<b>31,536.1455</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1480	4.2227	0.9536	0.0232	0.7400	0.0149	0.7550	0.2128	0.0143	0.2271		2,445.3546	2,445.3546	0.0636		2,446.9455
Worker	0.2953	0.2017	2.7182	7.9600e-003	0.8512	4.9800e-003	0.8561	0.2257	4.5900e-003	0.2303		793.0918	793.0918	0.0204		793.6004
<b>Total</b>	<b>0.4434</b>	<b>4.4244</b>	<b>3.6718</b>	<b>0.0311</b>	<b>1.5912</b>	<b>0.0199</b>	<b>1.6111</b>	<b>0.4385</b>	<b>0.0189</b>	<b>0.4574</b>		<b>3,238.4464</b>	<b>3,238.4464</b>	<b>0.0840</b>		<b>3,240.5459</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## 5.0 Energy Detail

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Historical Energy Use: N

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>



## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Unmitigated	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4959					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0133	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>		<b>0.3266</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4959					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0133	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>		<b>0.3266</b>

**7.0 Water Detail**

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

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**7.1 Mitigation Measures Water**

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**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

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**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**OBMPU - Project Category 2 (Construction - Unmitigated)**  
**San Bernardino-South Coast County, Winter**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1,400.00	1000sqft	32.14	1,400,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes 100,000 LF of Conveyance Pipelines (Recycled and Potable Water) and 100,000 LF of Conveyance Pipelines (Surplus and Supplemental Water Supply) constructed per year

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be half an acre or less.

Construction Off-road Equipment Mitigation - Rule 403

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	45.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/4/2021	1/1/2022
tblGrading	AcresOfGrading	0.00	183.00
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	75.00	28.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	15.5858	138.3831	103.6460	0.3536	2.1215	5.2041	7.3256	0.4957	4.7884	5.2842	0.0000	34,453.76 54	34,453.76 54	10.2029	0.0000	34,708.83 86
2022	13.6200	107.7326	97.7971	0.3533	2.1214	3.9928	6.1142	0.4957	3.6739	4.1696	0.0000	34,417.26 84	34,417.26 84	10.2026	0.0000	34,672.33 40
Maximum	15.5858	138.3831	103.6460	0.3536	2.1215	5.2041	7.3256	0.4957	4.7884	5.2842	0.0000	34,453.76 54	34,453.76 54	10.2029	0.0000	34,708.83 86

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	15.5858	138.3831	103.6460	0.3536	1.7980	5.2041	7.0021	0.4608	4.7884	5.2493	0.0000	34,453.76 54	34,453.76 54	10.2029	0.0000	34,708.83 86
2022	13.6200	107.7326	97.7971	0.3533	1.7980	3.9928	5.7908	0.4608	3.6739	4.1347	0.0000	34,417.26 84	34,417.26 84	10.2026	0.0000	34,672.33 40
Maximum	15.5858	138.3831	103.6460	0.3536	1.7980	5.2041	7.0021	0.4608	4.7884	5.2493	0.0000	34,453.76 54	34,453.76 54	10.2029	0.0000	34,708.83 86

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	15.25	0.00	4.81	7.04	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>0.3266</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>0.3266</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

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

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/1/2022	7	366	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 183

Acres of Paving: 32.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Pavers	2	8.00	130	0.42
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Off-Highway Trucks	22	8.00	402	0.38



## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	30	28.00	20.00	0.00	40.00	40.00	20.00	LD_Mix	HDT_Mix	HHD

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	15.0907	133.4046	100.2156	0.3230		5.1813	5.1813		4.7668	4.7668		31,272.2399	31,272.2399	10.1141		31,525.0918
<b>Total</b>	<b>15.0907</b>	<b>133.4046</b>	<b>100.2156</b>	<b>0.3230</b>	<b>0.5303</b>	<b>5.1813</b>	<b>5.7116</b>	<b>0.0573</b>	<b>4.7668</b>	<b>4.8241</b>		<b>31,272.2399</b>	<b>31,272.2399</b>	<b>10.1141</b>		<b>31,525.0918</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1618	4.7430	1.0754	0.0232	0.7401	0.0177	0.7577	0.2128	0.0169	0.2297		2,444.1238	2,444.1238	0.0693		2,445.8553
Worker	0.3334	0.2355	2.3551	7.4000e-003	0.8512	5.1400e-003	0.8563	0.2257	4.7300e-003	0.2304		737.4018	737.4018	0.0196		737.8915
<b>Total</b>	<b>0.4952</b>	<b>4.9785</b>	<b>3.4304</b>	<b>0.0306</b>	<b>1.5912</b>	<b>0.0228</b>	<b>1.6140</b>	<b>0.4385</b>	<b>0.0216</b>	<b>0.4601</b>		<b>3,181.5256</b>	<b>3,181.5256</b>	<b>0.0889</b>		<b>3,183.7468</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	15.0907	133.4046	100.2156	0.3230		5.1813	5.1813		4.7668	4.7668	0.0000	31,272.2399	31,272.2399	10.1141		31,525.0918
<b>Total</b>	<b>15.0907</b>	<b>133.4046</b>	<b>100.2156</b>	<b>0.3230</b>	<b>0.2068</b>	<b>5.1813</b>	<b>5.3881</b>	<b>0.0223</b>	<b>4.7668</b>	<b>4.7891</b>	<b>0.0000</b>	<b>31,272.2399</b>	<b>31,272.2399</b>	<b>10.1141</b>		<b>31,525.0918</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1618	4.7430	1.0754	0.0232	0.7401	0.0177	0.7577	0.2128	0.0169	0.2297		2,444.1238	2,444.1238	0.0693		2,445.8553
Worker	0.3334	0.2355	2.3551	7.4000e-003	0.8512	5.1400e-003	0.8563	0.2257	4.7300e-003	0.2304		737.4018	737.4018	0.0196		737.8915
<b>Total</b>	<b>0.4952</b>	<b>4.9785</b>	<b>3.4304</b>	<b>0.0306</b>	<b>1.5912</b>	<b>0.0228</b>	<b>1.6140</b>	<b>0.4385</b>	<b>0.0216</b>	<b>0.4601</b>		<b>3,181.5256</b>	<b>3,181.5256</b>	<b>0.0889</b>		<b>3,183.7468</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	13.1551	103.2084	94.6260	0.3232		3.9728	3.9728		3.6550	3.6550		31,283.2050	31,283.2050	10.1176		31,536.1456
<b>Total</b>	<b>13.1551</b>	<b>103.2084</b>	<b>94.6260</b>	<b>0.3232</b>	<b>0.5303</b>	<b>3.9728</b>	<b>4.5030</b>	<b>0.0573</b>	<b>3.6550</b>	<b>3.7122</b>		<b>31,283.2050</b>	<b>31,283.2050</b>	<b>10.1176</b>		<b>31,536.1456</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1518	4.3124	1.0077	0.0230	0.7400	0.0150	0.7551	0.2128	0.0144	0.2272		2,423.2520	2,423.2520	0.0674		2,424.9371
Worker	0.3131	0.2119	2.1635	7.1300e-003	0.8512	4.9800e-003	0.8561	0.2257	4.5900e-003	0.2303		710.8114	710.8114	0.0176		711.2514
<b>Total</b>	<b>0.4649</b>	<b>4.5243</b>	<b>3.1711</b>	<b>0.0301</b>	<b>1.5912</b>	<b>0.0200</b>	<b>1.6112</b>	<b>0.4385</b>	<b>0.0190</b>	<b>0.4574</b>		<b>3,134.0634</b>	<b>3,134.0634</b>	<b>0.0850</b>		<b>3,136.1884</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	13.1551	103.2084	94.6260	0.3232		3.9728	3.9728		3.6550	3.6550	0.0000	31,283.2050	31,283.2050	10.1176		31,536.1455
<b>Total</b>	<b>13.1551</b>	<b>103.2084</b>	<b>94.6260</b>	<b>0.3232</b>	<b>0.2068</b>	<b>3.9728</b>	<b>4.1796</b>	<b>0.0223</b>	<b>3.6550</b>	<b>3.6773</b>	<b>0.0000</b>	<b>31,283.2050</b>	<b>31,283.2050</b>	<b>10.1176</b>		<b>31,536.1455</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1518	4.3124	1.0077	0.0230	0.7400	0.0150	0.7551	0.2128	0.0144	0.2272		2,423.2520	2,423.2520	0.0674		2,424.9371
Worker	0.3131	0.2119	2.1635	7.1300e-003	0.8512	4.9800e-003	0.8561	0.2257	4.5900e-003	0.2303		710.8114	710.8114	0.0176		711.2514
<b>Total</b>	<b>0.4649</b>	<b>4.5243</b>	<b>3.1711</b>	<b>0.0301</b>	<b>1.5912</b>	<b>0.0200</b>	<b>1.6112</b>	<b>0.4385</b>	<b>0.0190</b>	<b>0.4574</b>		<b>3,134.0634</b>	<b>3,134.0634</b>	<b>0.0850</b>		<b>3,136.1884</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## 5.0 Energy Detail

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Historical Energy Use: N

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Unmitigated	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266



## OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4959					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0133	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>		<b>0.3266</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4959					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0133	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>		<b>0.3266</b>

**7.0 Water Detail**

OBMPU - Project Category 2 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

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**7.1 Mitigation Measures Water****8.0 Waste Detail**

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**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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### **APPENDIX 3.3:**

#### **CALEEMOD PROJECT CATEGORY 3 CONSTRUCTION UNMITIGATED EMISSIONS MODEL OUTPUTS**

OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**OBMPU - Project Category 3 (Construction - Unmitigated)**  
**San Bernardino-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	100.00	Acre	100.00	4,356,000.00	0
Other Non-Asphalt Surfaces	420.00	1000sqft	9.64	420,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Non-Asphalt Surfaces = Conveyance; Other Asphalt Surfaces = Storage Basin

Construction Phase - As a conservative measure, analysis assumes the construction of one New Storage Basin (Chino Institute for Men + the associated pipeline)

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be 2 acres on any given day.

Construction Off-road Equipment Mitigation - Rule 403

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	550.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	3,850.00	1,100.00
tblGrading	MaterialExported	0.00	333,333.33
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Off-Highway Tractors	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	41,667.00	370.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	48.00	6.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	13.2057	138.3313	90.8782	0.2289	14.6625	5.5832	20.2457	6.9786	5.1367	12.1153	0.0000	22,235.61 90	22,235.61 90	6.8980	0.0000	22,408.06 94
2022	11.4422	112.7854	83.9339	0.2290	14.6821	4.5168	19.1989	6.9834	4.1557	11.1390	0.0000	22,241.25 60	22,241.25 60	6.9031	0.0000	22,413.83 35
Maximum	13.2057	138.3313	90.8782	0.2290	14.6821	5.5832	20.2457	6.9834	5.1367	12.1153	0.0000	22,241.25 60	22,241.25 60	6.9031	0.0000	22,413.83 35

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	13.2057	138.3313	90.8782	0.2289	5.9800	5.5832	11.5631	2.7941	5.1367	7.9308	0.0000	22,235.61 90	22,235.61 90	6.8980	0.0000	22,408.06 94
2022	11.4422	112.7854	83.9339	0.2290	5.9995	4.5168	10.5164	2.7988	4.1557	6.9545	0.0000	22,241.25 59	22,241.25 59	6.9031	0.0000	22,413.83 35
Maximum	13.2057	138.3313	90.8782	0.2290	5.9995	5.5832	11.5631	2.7988	5.1367	7.9308	0.0000	22,241.25 59	22,241.25 59	6.9031	0.0000	22,413.83 35

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	59.18	0.00	44.02	59.94	0.00	35.99	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.1213</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.1213</b>



## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	7/4/2022	7	550	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 1100****Acres of Paving: 109.64****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	6	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	7	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

**Trips and VMT**

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	19	6.00	6.00	370.00	40.00	40.00	30.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.2337	0.0000	14.2337	6.8599	0.0000	6.8599			0.0000			0.0000
Off-Road	13.0854	136.6986	89.9068	0.2194		5.5761	5.5761		5.1300	5.1300		21,241.76 28	21,241.76 28	6.8700		21,413.51 32
<b>Total</b>	<b>13.0854</b>	<b>136.6986</b>	<b>89.9068</b>	<b>0.2194</b>	<b>14.2337</b>	<b>5.5761</b>	<b>19.8098</b>	<b>6.8599</b>	<b>5.1300</b>	<b>11.9899</b>		<b>21,241.76 28</b>	<b>21,241.76 28</b>	<b>6.8700</b>		<b>21,413.51 32</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.3200e-003	0.1935	0.0324	7.3000e-004	0.0244	6.4000e-004	0.0251	6.5000e-003	6.1000e-004	7.1100e-003		77.6696	77.6696	3.5100e-003		77.7574
Vendor	0.0473	1.3912	0.3057	7.0200e-003	0.2220	5.2700e-003	0.2273	0.0639	5.0400e-003	0.0689		739.8696	739.8696	0.0196		740.3604
Worker	0.0676	0.0480	0.6333	1.7700e-003	0.1824	1.1000e-003	0.1835	0.0484	1.0100e-003	0.0494		176.3170	176.3170	4.8600e-003		176.4384
<b>Total</b>	<b>0.1203</b>	<b>1.6327</b>	<b>0.9714</b>	<b>9.5200e-003</b>	<b>0.4288</b>	<b>7.0100e-003</b>	<b>0.4358</b>	<b>0.1187</b>	<b>6.6600e-003</b>	<b>0.1254</b>		<b>993.8563</b>	<b>993.8563</b>	<b>0.0280</b>		<b>994.5562</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5512	0.0000	5.5512	2.6753	0.0000	2.6753			0.0000			0.0000
Off-Road	13.0854	136.6986	89.9068	0.2194		5.5761	5.5761		5.1300	5.1300	0.0000	21,241.7628	21,241.7628	6.8700		21,413.5132
<b>Total</b>	<b>13.0854</b>	<b>136.6986</b>	<b>89.9068</b>	<b>0.2194</b>	<b>5.5512</b>	<b>5.5761</b>	<b>11.1273</b>	<b>2.6753</b>	<b>5.1300</b>	<b>7.8054</b>	<b>0.0000</b>	<b>21,241.7628</b>	<b>21,241.7628</b>	<b>6.8700</b>		<b>21,413.5132</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.3200e-003	0.1935	0.0324	7.3000e-004	0.0244	6.4000e-004	0.0251	6.5000e-003	6.1000e-004	7.1100e-003		77.6696	77.6696	3.5100e-003		77.7574
Vendor	0.0473	1.3912	0.3057	7.0200e-003	0.2220	5.2700e-003	0.2273	0.0639	5.0400e-003	0.0689		739.8696	739.8696	0.0196		740.3604
Worker	0.0676	0.0480	0.6333	1.7700e-003	0.1824	1.1000e-003	0.1835	0.0484	1.0100e-003	0.0494		176.3170	176.3170	4.8600e-003		176.4384
<b>Total</b>	<b>0.1203</b>	<b>1.6327</b>	<b>0.9714</b>	<b>9.5200e-003</b>	<b>0.4288</b>	<b>7.0100e-003</b>	<b>0.4358</b>	<b>0.1187</b>	<b>6.6600e-003</b>	<b>0.1254</b>		<b>993.8563</b>	<b>993.8563</b>	<b>0.0280</b>		<b>994.5562</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.2337	0.0000	14.2337	6.8599	0.0000	6.8599			0.0000			0.0000
Off-Road	11.3295	111.2997	83.0339	0.2196		4.5108	4.5108		4.1499	4.1499		21,260.9178	21,260.9178	6.8762		21,432.8231
<b>Total</b>	<b>11.3295</b>	<b>111.2997</b>	<b>83.0339</b>	<b>0.2196</b>	<b>14.2337</b>	<b>4.5108</b>	<b>18.7445</b>	<b>6.8599</b>	<b>4.1499</b>	<b>11.0098</b>		<b>21,260.9178</b>	<b>21,260.9178</b>	<b>6.8762</b>		<b>21,432.8231</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0300e-003	0.1757	0.0315	7.2000e-004	0.0440	5.3000e-004	0.0445	0.0113	5.1000e-004	0.0118		76.7835	76.7835	3.4400e-003		76.8695
Vendor	0.0444	1.2668	0.2861	6.9500e-003	0.2220	4.4800e-003	0.2265	0.0638	4.2800e-003	0.0681		733.6064	733.6064	0.0191		734.0837
Worker	0.0633	0.0432	0.5825	1.7100e-003	0.1824	1.0700e-003	0.1835	0.0484	9.8000e-004	0.0493		169.9482	169.9482	4.3600e-003		170.0572
<b>Total</b>	<b>0.1127</b>	<b>1.4857</b>	<b>0.9000</b>	<b>9.3800e-003</b>	<b>0.4484</b>	<b>6.0800e-003</b>	<b>0.4545</b>	<b>0.1235</b>	<b>5.7700e-003</b>	<b>0.1293</b>		<b>980.3382</b>	<b>980.3382</b>	<b>0.0269</b>		<b>981.0104</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5512	0.0000	5.5512	2.6753	0.0000	2.6753			0.0000			0.0000
Off-Road	11.3295	111.2997	83.0339	0.2196		4.5108	4.5108		4.1499	4.1499	0.0000	21,260.9178	21,260.9178	6.8762		21,432.8231
<b>Total</b>	<b>11.3295</b>	<b>111.2997</b>	<b>83.0339</b>	<b>0.2196</b>	<b>5.5512</b>	<b>4.5108</b>	<b>10.0619</b>	<b>2.6753</b>	<b>4.1499</b>	<b>6.8252</b>	<b>0.0000</b>	<b>21,260.9178</b>	<b>21,260.9178</b>	<b>6.8762</b>		<b>21,432.8231</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0300e-003	0.1757	0.0315	7.2000e-004	0.0440	5.3000e-004	0.0445	0.0113	5.1000e-004	0.0118		76.7835	76.7835	3.4400e-003		76.8695
Vendor	0.0444	1.2668	0.2861	6.9500e-003	0.2220	4.4800e-003	0.2265	0.0638	4.2800e-003	0.0681		733.6064	733.6064	0.0191		734.0837
Worker	0.0633	0.0432	0.5825	1.7100e-003	0.1824	1.0700e-003	0.1835	0.0484	9.8000e-004	0.0493		169.9482	169.9482	4.3600e-003		170.0572
<b>Total</b>	<b>0.1127</b>	<b>1.4857</b>	<b>0.9000</b>	<b>9.3800e-003</b>	<b>0.4484</b>	<b>6.0800e-003</b>	<b>0.4545</b>	<b>0.1235</b>	<b>5.7700e-003</b>	<b>0.1293</b>		<b>980.3382</b>	<b>980.3382</b>	<b>0.0269</b>		<b>981.0104</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000



## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Unmitigated	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6917					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9500e-003	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>		<b>0.1213</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6917					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9500e-003	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>		<b>0.1213</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

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

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

Equipment Type	Number
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**11.0 Vegetation**

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OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**OBMPU - Project Category 3 (Construction - Unmitigated)**  
**San Bernardino-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	100.00	Acre	100.00	4,356,000.00	0
Other Non-Asphalt Surfaces	420.00	1000sqft	9.64	420,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Non-Asphalt Surfaces = Conveyance; Other Asphalt Surfaces = Storage Basin

Construction Phase - As a conservative measure, analysis assumes the construction of one New Storage Basin (Chino Institute for Men + the associated pipeline)

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be 2 acres on any given day.

Construction Off-road Equipment Mitigation - Rule 403

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	550.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	3,850.00	1,100.00
tblGrading	MaterialExported	0.00	333,333.33
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Off-Highway Tractors	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	41,667.00	370.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	48.00	6.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	13.2109	138.3679	90.7698	0.2286	14.6625	5.5832	20.2457	6.9786	5.1367	12.1153	0.0000	22,209.22 94	22,209.22 94	6.8988	0.0000	22,381.69 84
2022	11.4473	112.8163	83.8345	0.2287	14.6821	4.5169	19.1990	6.9834	4.1557	11.1391	0.0000	22,215.53 96	22,215.53 96	6.9039	0.0000	22,388.13 69
Maximum	13.2109	138.3679	90.7698	0.2287	14.6821	5.5832	20.2457	6.9834	5.1367	12.1153	0.0000	22,215.53 96	22,215.53 96	6.9039	0.0000	22,388.13 69

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	13.2109	138.3679	90.7698	0.2286	5.9800	5.5832	11.5631	2.7941	5.1367	7.9308	0.0000	22,209.22 94	22,209.22 94	6.8988	0.0000	22,381.69 83
2022	11.4473	112.8163	83.8345	0.2287	5.9995	4.5169	10.5164	2.7988	4.1557	6.9545	0.0000	22,215.53 96	22,215.53 96	6.9039	0.0000	22,388.13 69
Maximum	13.2109	138.3679	90.7698	0.2287	5.9995	5.5832	11.5631	2.7988	5.1367	7.9308	0.0000	22,215.53 96	22,215.53 96	6.9039	0.0000	22,388.13 69

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	59.18	0.00	44.02	59.94	0.00	35.99	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.1213</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.1213</b>



## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	7/4/2022	7	550	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 1100****Acres of Paving: 109.64****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	6	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	7	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

**Trips and VMT**

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	19	6.00	6.00	370.00	40.00	40.00	30.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.2337	0.0000	14.2337	6.8599	0.0000	6.8599			0.0000			0.0000
Off-Road	13.0854	136.6986	89.9068	0.2194		5.5761	5.5761		5.1300	5.1300		21,241.76 28	21,241.76 28	6.8700		21,413.51 32
<b>Total</b>	<b>13.0854</b>	<b>136.6986</b>	<b>89.9068</b>	<b>0.2194</b>	<b>14.2337</b>	<b>5.5761</b>	<b>19.8098</b>	<b>6.8599</b>	<b>5.1300</b>	<b>11.9899</b>		<b>21,241.76 28</b>	<b>21,241.76 28</b>	<b>6.8700</b>		<b>21,413.51 32</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5000e-003	0.1959	0.0357	7.2000e-004	0.0244	6.5000e-004	0.0251	6.5000e-003	6.2000e-004	7.1200e-003		76.2148	76.2148	3.7700e-003		76.3090
Vendor	0.0485	1.4229	0.3226	6.9500e-003	0.2220	5.3000e-003	0.2273	0.0639	5.0700e-003	0.0689		733.2371	733.2371	0.0208		733.7566
Worker	0.0714	0.0505	0.5047	1.5900e-003	0.1824	1.1000e-003	0.1835	0.0484	1.0100e-003	0.0494		158.0147	158.0147	4.2000e-003		158.1196
<b>Total</b>	<b>0.1255</b>	<b>1.6693</b>	<b>0.8630</b>	<b>9.2600e-003</b>	<b>0.4288</b>	<b>7.0500e-003</b>	<b>0.4359</b>	<b>0.1187</b>	<b>6.7000e-003</b>	<b>0.1254</b>		<b>967.4666</b>	<b>967.4666</b>	<b>0.0288</b>		<b>968.1852</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5512	0.0000	5.5512	2.6753	0.0000	2.6753			0.0000			0.0000
Off-Road	13.0854	136.6986	89.9068	0.2194		5.5761	5.5761		5.1300	5.1300	0.0000	21,241.7628	21,241.7628	6.8700		21,413.5132
<b>Total</b>	<b>13.0854</b>	<b>136.6986</b>	<b>89.9068</b>	<b>0.2194</b>	<b>5.5512</b>	<b>5.5761</b>	<b>11.1273</b>	<b>2.6753</b>	<b>5.1300</b>	<b>7.8054</b>	<b>0.0000</b>	<b>21,241.7628</b>	<b>21,241.7628</b>	<b>6.8700</b>		<b>21,413.5132</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5000e-003	0.1959	0.0357	7.2000e-004	0.0244	6.5000e-004	0.0251	6.5000e-003	6.2000e-004	7.1200e-003		76.2148	76.2148	3.7700e-003		76.3090
Vendor	0.0485	1.4229	0.3226	6.9500e-003	0.2220	5.3000e-003	0.2273	0.0639	5.0700e-003	0.0689		733.2371	733.2371	0.0208		733.7566
Worker	0.0714	0.0505	0.5047	1.5900e-003	0.1824	1.1000e-003	0.1835	0.0484	1.0100e-003	0.0494		158.0147	158.0147	4.2000e-003		158.1196
<b>Total</b>	<b>0.1255</b>	<b>1.6693</b>	<b>0.8630</b>	<b>9.2600e-003</b>	<b>0.4288</b>	<b>7.0500e-003</b>	<b>0.4359</b>	<b>0.1187</b>	<b>6.7000e-003</b>	<b>0.1254</b>		<b>967.4666</b>	<b>967.4666</b>	<b>0.0288</b>		<b>968.1852</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.2337	0.0000	14.2337	6.8599	0.0000	6.8599			0.0000			0.0000
Off-Road	11.3295	111.2997	83.0339	0.2196		4.5108	4.5108		4.1499	4.1499		21,260.9178	21,260.9178	6.8762		21,432.8231
<b>Total</b>	<b>11.3295</b>	<b>111.2997</b>	<b>83.0339</b>	<b>0.2196</b>	<b>14.2337</b>	<b>4.5108</b>	<b>18.7445</b>	<b>6.8599</b>	<b>4.1499</b>	<b>11.0098</b>		<b>21,260.9178</b>	<b>21,260.9178</b>	<b>6.8762</b>		<b>21,432.8231</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.2100e-003	0.1775	0.0347	7.1000e-004	0.0440	5.4000e-004	0.0445	0.0113	5.1000e-004	0.0118		75.3295	75.3295	3.6900e-003		75.4217
Vendor	0.0455	1.2937	0.3023	6.8900e-003	0.2220	4.5000e-003	0.2265	0.0638	4.3100e-003	0.0682		726.9756	726.9756	0.0202		727.4811
Worker	0.0671	0.0454	0.4636	1.5300e-003	0.1824	1.0700e-003	0.1835	0.0484	9.8000e-004	0.0493		152.3167	152.3167	3.7700e-003		152.4110
<b>Total</b>	<b>0.1179</b>	<b>1.5166</b>	<b>0.8006</b>	<b>9.1300e-003</b>	<b>0.4484</b>	<b>6.1100e-003</b>	<b>0.4545</b>	<b>0.1235</b>	<b>5.8000e-003</b>	<b>0.1293</b>		<b>954.6218</b>	<b>954.6218</b>	<b>0.0277</b>		<b>955.3139</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5512	0.0000	5.5512	2.6753	0.0000	2.6753			0.0000			0.0000
Off-Road	11.3295	111.2997	83.0339	0.2196		4.5108	4.5108		4.1499	4.1499	0.0000	21,260.9178	21,260.9178	6.8762		21,432.8231
<b>Total</b>	<b>11.3295</b>	<b>111.2997</b>	<b>83.0339</b>	<b>0.2196</b>	<b>5.5512</b>	<b>4.5108</b>	<b>10.0619</b>	<b>2.6753</b>	<b>4.1499</b>	<b>6.8252</b>	<b>0.0000</b>	<b>21,260.9178</b>	<b>21,260.9178</b>	<b>6.8762</b>		<b>21,432.8231</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.2100e-003	0.1775	0.0347	7.1000e-004	0.0440	5.4000e-004	0.0445	0.0113	5.1000e-004	0.0118		75.3295	75.3295	3.6900e-003		75.4217
Vendor	0.0455	1.2937	0.3023	6.8900e-003	0.2220	4.5000e-003	0.2265	0.0638	4.3100e-003	0.0682		726.9756	726.9756	0.0202		727.4811
Worker	0.0671	0.0454	0.4636	1.5300e-003	0.1824	1.0700e-003	0.1835	0.0484	9.8000e-004	0.0493		152.3167	152.3167	3.7700e-003		152.4110
<b>Total</b>	<b>0.1179</b>	<b>1.5166</b>	<b>0.8006</b>	<b>9.1300e-003</b>	<b>0.4484</b>	<b>6.1100e-003</b>	<b>0.4545</b>	<b>0.1235</b>	<b>5.8000e-003</b>	<b>0.1293</b>		<b>954.6218</b>	<b>954.6218</b>	<b>0.0277</b>		<b>955.3139</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000



## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Unmitigated	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6917					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9500e-003	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>		<b>0.1213</b>

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6917					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9500e-003	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>		<b>0.1213</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 3 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## **APPENDIX 3.4:**

### **CALCEMOD PROJECT CATEGORY 4 CONSTRUCTION UNMITIGATED EMISSIONS MODEL OUTPUTS**

OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**OBMPU - Project Category 4 (Construction - Unmitigated)**  
**San Bernardino-South Coast County, Summer**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	871.20	1000sqft	20.00	871,200.00	0
Other Non-Asphalt Surfaces	420.00	1000sqft	9.64	420,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

## Project Characteristics -

Land Use - General Light Industry = Water Treatment and Regional Water Treatment Facility; Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes construction of a single Water Treatment and Regional Water Treatment Facility and Pipelines that would be constructed within an 18-month period

Off-road Equipment - Based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be 2 acres on any given day.

Construction Off-road Equipment Mitigation - Rule 403

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	45.00	547.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/4/2021	7/1/2022
tblEnergyUse	LightingElect	2.93	0.00
tblEnergyUse	NT24E	5.02	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	T24E	2.20	0.00
tblEnergyUse	T24NG	15.36	0.00
tblGrading	AcresOfGrading	273.50	1,092.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors



## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblSolidWaste	SolidWasteGenerationRate	1,080.29	0.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	15.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	70.00	30.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	201,465,000.00	0.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	12.5178	115.5693	80.1360	0.2694	3.5841	4.4035	7.9876	0.6300	4.0540	4.6840	0.0000	26,220.75 01	26,220.75 01	7.6476	0.0000	26,411.94 7
2022	11.0285	92.4257	75.6810	0.2691	3.5841	3.4718	7.0559	0.6300	3.1968	3.8268	0.0000	26,182.118 4	26,182.118 4	7.6467	0.0000	26,373.28 48
Maximum	12.5178	115.5693	80.1360	0.2694	3.5841	4.4035	7.9876	0.6300	4.0540	4.6840	0.0000	26,220.75 01	26,220.75 01	7.6476	0.0000	26,411.94 07

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	12.5178	115.5693	80.1360	0.2694	2.2927	4.4035	6.6961	0.4906	4.0540	4.5446	0.0000	26,220.75 01	26,220.75 01	7.6476	0.0000	26,411.94 7
2022	11.0285	92.4257	75.6810	0.2691	2.2927	3.4718	5.7645	0.4906	3.1968	3.6874	0.0000	26,182.118 3	26,182.118 3	7.6467	0.0000	26,373.28 48
Maximum	12.5178	115.5693	80.1360	0.2694	2.2927	4.4035	6.6961	0.4906	4.0540	4.5446	0.0000	26,220.75 01	26,220.75 01	7.6476	0.0000	26,411.94 07

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	36.03	0.00	17.17	22.13	0.00	3.28	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>0.3012</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>0.3012</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

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

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	7/1/2022	7	547	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1092

Acres of Paving: 9.64

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Off-Highway Trucks	15	8.00	402	0.38
Grading	Cranes	3	8.00	231	0.29
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Plate Compactors	3	8.00	8	0.43
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	6	8.00	97	0.37

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	28	30.00	15.00	0.00	40.00	40.00	20.00	LD_Mix	HDT_Mix	HHD

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1171	0.0000	2.1171	0.2286	0.0000	0.2286			0.0000			0.0000
Off-Road	12.0615	111.8513	76.2052	0.2430		4.3848	4.3848		4.0363	4.0363		23,489.4911	23,489.4911	7.5743		23,678.8476
<b>Total</b>	<b>12.0615</b>	<b>111.8513</b>	<b>76.2052</b>	<b>0.2430</b>	<b>2.1171</b>	<b>4.3848</b>	<b>6.5019</b>	<b>0.2286</b>	<b>4.0363</b>	<b>4.2649</b>		<b>23,489.4911</b>	<b>23,489.4911</b>	<b>7.5743</b>		<b>23,678.8476</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1184	3.4780	0.7643	0.0175	0.5550	0.0132	0.5682	0.1596	0.0126	0.1722		1,849.674 1	1,849.674 1	0.0491		1,850.901 0
Worker	0.3380	0.2400	3.1664	8.8500e-003	0.9120	5.5000e-003	0.9175	0.2418	5.0700e-003	0.2469		881.5849	881.5849	0.0243		882.1921
<b>Total</b>	<b>0.4563</b>	<b>3.7180</b>	<b>3.9308</b>	<b>0.0264</b>	<b>1.4670</b>	<b>0.0187</b>	<b>1.4857</b>	<b>0.4014</b>	<b>0.0177</b>	<b>0.4191</b>		<b>2,731.259 0</b>	<b>2,731.259 0</b>	<b>0.0734</b>		<b>2,733.093 0</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8257	0.0000	0.8257	0.0892	0.0000	0.0892			0.0000			0.0000
Off-Road	12.0615	111.8513	76.2052	0.2430		4.3848	4.3848		4.0363	4.0363	0.0000	23,489.491 1	23,489.491 1	7.5743		23,678.84 76
<b>Total</b>	<b>12.0615</b>	<b>111.8513</b>	<b>76.2052</b>	<b>0.2430</b>	<b>0.8257</b>	<b>4.3848</b>	<b>5.2105</b>	<b>0.0892</b>	<b>4.0363</b>	<b>4.1255</b>	<b>0.0000</b>	<b>23,489.49 11</b>	<b>23,489.49 11</b>	<b>7.5743</b>		<b>23,678.84 76</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1184	3.4780	0.7643	0.0175	0.5550	0.0132	0.5682	0.1596	0.0126	0.1722		1,849.674 1	1,849.674 1	0.0491		1,850.901 0
Worker	0.3380	0.2400	3.1664	8.8500e-003	0.9120	5.5000e-003	0.9175	0.2418	5.0700e-003	0.2469		881.5849	881.5849	0.0243		882.1921
<b>Total</b>	<b>0.4563</b>	<b>3.7180</b>	<b>3.9308</b>	<b>0.0264</b>	<b>1.4670</b>	<b>0.0187</b>	<b>1.4857</b>	<b>0.4014</b>	<b>0.0177</b>	<b>0.4191</b>		<b>2,731.259 0</b>	<b>2,731.259 0</b>	<b>0.0734</b>		<b>2,733.093 0</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1171	0.0000	2.1171	0.2286	0.0000	0.2286			0.0000			0.0000
Off-Road	10.6010	89.0426	72.0535	0.2431		3.4553	3.4553		3.1812	3.1812		23,498.36 12	23,498.36 12	7.5771		23,687.78 95
<b>Total</b>	<b>10.6010</b>	<b>89.0426</b>	<b>72.0535</b>	<b>0.2431</b>	<b>2.1171</b>	<b>3.4553</b>	<b>5.5724</b>	<b>0.2286</b>	<b>3.1812</b>	<b>3.4098</b>		<b>23,498.36 12</b>	<b>23,498.36 12</b>	<b>7.5771</b>		<b>23,687.78 95</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1110	3.1670	0.7152	0.0174	0.5550	0.0112	0.5662	0.1596	0.0107	0.1703		1,834.016 0	1,834.016 0	0.0477		1,835.209 1
Worker	0.3164	0.2161	2.9124	8.5300e-003	0.9120	5.3400e-003	0.9173	0.2418	4.9200e-003	0.2467		849.7412	849.7412	0.0218		850.2862
<b>Total</b>	<b>0.4275</b>	<b>3.3831</b>	<b>3.6276</b>	<b>0.0259</b>	<b>1.4670</b>	<b>0.0165</b>	<b>1.4835</b>	<b>0.4014</b>	<b>0.0156</b>	<b>0.4170</b>		<b>2,683.757 1</b>	<b>2,683.757 1</b>	<b>0.0695</b>		<b>2,685.495 3</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8257	0.0000	0.8257	0.0892	0.0000	0.0892			0.0000			0.0000
Off-Road	10.6010	89.0426	72.0535	0.2431		3.4553	3.4553		3.1812	3.1812	0.0000	23,498.36 12	23,498.36 12	7.5771		23,687.78 95
<b>Total</b>	<b>10.6010</b>	<b>89.0426</b>	<b>72.0535</b>	<b>0.2431</b>	<b>0.8257</b>	<b>3.4553</b>	<b>4.2809</b>	<b>0.0892</b>	<b>3.1812</b>	<b>3.2703</b>	<b>0.0000</b>	<b>23,498.36 12</b>	<b>23,498.36 12</b>	<b>7.5771</b>		<b>23,687.78 95</b>



## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1110	3.1670	0.7152	0.0174	0.5550	0.0112	0.5662	0.1596	0.0107	0.1703		1,834.016 0	1,834.016 0	0.0477		1,835.209 1
Worker	0.3164	0.2161	2.9124	8.5300e-003	0.9120	5.3400e-003	0.9173	0.2418	4.9200e-003	0.2467		849.7412	849.7412	0.0218		850.2862
<b>Total</b>	<b>0.4275</b>	<b>3.3831</b>	<b>3.6276</b>	<b>0.0259</b>	<b>1.4670</b>	<b>0.0165</b>	<b>1.4835</b>	<b>0.4014</b>	<b>0.0156</b>	<b>0.4170</b>		<b>2,683.757 1</b>	<b>2,683.757 1</b>	<b>0.0695</b>		<b>2,685.495 3</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Unmitigated	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.3985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0123	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>		<b>0.3012</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.3985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0123	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>		<b>0.3012</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Summer

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

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

Equipment Type	Number
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**11.0 Vegetation**

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OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**OBMPU - Project Category 4 (Construction - Unmitigated)**  
**San Bernardino-South Coast County, Winter**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	871.20	1000sqft	20.00	871,200.00	0
Other Non-Asphalt Surfaces	420.00	1000sqft	9.64	420,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data



## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

## Project Characteristics -

Land Use - General Light Industry = Water Treatment and Regional Water Treatment Facility; Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes construction of a single Water Treatment and Regional Water Treatment Facility and Pipelines that would be constructed within an 18-month period

Off-road Equipment - Based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be 2 acres on any given day.

Construction Off-road Equipment Mitigation - Rule 403

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	45.00	547.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/4/2021	7/1/2022
tblEnergyUse	LightingElect	2.93	0.00
tblEnergyUse	NT24E	5.02	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	T24E	2.20	0.00
tblEnergyUse	T24NG	15.36	0.00
tblGrading	AcresOfGrading	273.50	1,092.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblSolidWaste	SolidWasteGenerationRate	1,080.29	0.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	15.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	70.00	30.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	201,465,000.00	0.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	12.5400	115.6609	79.5350	0.2683	3.5841	4.4035	7.9876	0.6300	4.0541	4.6841	0.0000	26,112.657 2	26,112.657 2	7.6472	0.0000	26,303.83 71
2022	11.0503	92.5039	75.1272	0.2680	3.5841	3.4719	7.0560	0.6300	3.1969	3.8269	0.0000	26,077.38 39	26,077.38 39	7.6465	0.0000	26,268.54 74
Maximum	12.5400	115.6609	79.5350	0.2683	3.5841	4.4035	7.9876	0.6300	4.0541	4.6841	0.0000	26,112.65 72	26,112.65 72	7.6472	0.0000	26,303.83 71

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	12.5400	115.6609	79.5350	0.2683	2.2927	4.4035	6.6962	0.4906	4.0541	4.5446	0.0000	26,112.657 2	26,112.657 2	7.6472	0.0000	26,303.83 71
2022	11.0503	92.5039	75.1272	0.2680	2.2927	3.4719	5.7645	0.4906	3.1969	3.6874	0.0000	26,077.38 39	26,077.38 39	7.6465	0.0000	26,268.54 73
Maximum	12.5400	115.6609	79.5350	0.2683	2.2927	4.4035	6.6962	0.4906	4.0541	4.5446	0.0000	26,112.65 72	26,112.65 72	7.6472	0.0000	26,303.83 71

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	36.03	0.00	17.17	22.13	0.00	3.28	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>0.3012</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>0.3012</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

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

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	7/1/2022	7	547	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1092

Acres of Paving: 9.64

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Off-Highway Trucks	15	8.00	402	0.38
Grading	Cranes	3	8.00	231	0.29
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Plate Compactors	3	8.00	8	0.43
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	6	8.00	97	0.37

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	28	30.00	15.00	0.00	40.00	40.00	20.00	LD_Mix	HDT_Mix	HHD

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1171	0.0000	2.1171	0.2286	0.0000	0.2286			0.0000			0.0000
Off-Road	12.0615	111.8513	76.2052	0.2430		4.3848	4.3848		4.0363	4.0363		23,489.4911	23,489.4911	7.5743		23,678.8476
<b>Total</b>	<b>12.0615</b>	<b>111.8513</b>	<b>76.2052</b>	<b>0.2430</b>	<b>2.1171</b>	<b>4.3848</b>	<b>6.5019</b>	<b>0.2286</b>	<b>4.0363</b>	<b>4.2649</b>		<b>23,489.4911</b>	<b>23,489.4911</b>	<b>7.5743</b>		<b>23,678.8476</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1213	3.5572	0.8065	0.0174	0.5550	0.0132	0.5683	0.1596	0.0127	0.1723		1,833.0928	1,833.0928	0.0520		1,834.3915
Worker	0.3572	0.2524	2.5233	7.9300e-003	0.9120	5.5000e-003	0.9175	0.2418	5.0700e-003	0.2469		790.0733	790.0733	0.0210		790.5980
<b>Total</b>	<b>0.4786</b>	<b>3.8096</b>	<b>3.3298</b>	<b>0.0253</b>	<b>1.4670</b>	<b>0.0187</b>	<b>1.4857</b>	<b>0.4014</b>	<b>0.0177</b>	<b>0.4191</b>		<b>2,623.1662</b>	<b>2,623.1662</b>	<b>0.0729</b>		<b>2,624.9895</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8257	0.0000	0.8257	0.0892	0.0000	0.0892			0.0000			0.0000
Off-Road	12.0615	111.8513	76.2052	0.2430		4.3848	4.3848		4.0363	4.0363	0.0000	23,489.4911	23,489.4911	7.5743		23,678.8476
<b>Total</b>	<b>12.0615</b>	<b>111.8513</b>	<b>76.2052</b>	<b>0.2430</b>	<b>0.8257</b>	<b>4.3848</b>	<b>5.2105</b>	<b>0.0892</b>	<b>4.0363</b>	<b>4.1255</b>	<b>0.0000</b>	<b>23,489.4911</b>	<b>23,489.4911</b>	<b>7.5743</b>		<b>23,678.8476</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1213	3.5572	0.8065	0.0174	0.5550	0.0132	0.5683	0.1596	0.0127	0.1723		1,833.0928	1,833.0928	0.0520		1,834.3915
Worker	0.3572	0.2524	2.5233	7.9300e-003	0.9120	5.5000e-003	0.9175	0.2418	5.0700e-003	0.2469		790.0733	790.0733	0.0210		790.5980
<b>Total</b>	<b>0.4786</b>	<b>3.8096</b>	<b>3.3298</b>	<b>0.0253</b>	<b>1.4670</b>	<b>0.0187</b>	<b>1.4857</b>	<b>0.4014</b>	<b>0.0177</b>	<b>0.4191</b>		<b>2,623.1662</b>	<b>2,623.1662</b>	<b>0.0729</b>		<b>2,624.9895</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1171	0.0000	2.1171	0.2286	0.0000	0.2286			0.0000			0.0000
Off-Road	10.6010	89.0426	72.0535	0.2431		3.4553	3.4553		3.1812	3.1812		23,498.3612	23,498.3612	7.5771		23,687.7895
<b>Total</b>	<b>10.6010</b>	<b>89.0426</b>	<b>72.0535</b>	<b>0.2431</b>	<b>2.1171</b>	<b>3.4553</b>	<b>5.5724</b>	<b>0.2286</b>	<b>3.1812</b>	<b>3.4098</b>		<b>23,498.3612</b>	<b>23,498.3612</b>	<b>7.5771</b>		<b>23,687.7895</b>



## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1139	3.2343	0.7557	0.0172	0.5550	0.0113	0.5663	0.1596	0.0108	0.1704		1,817.4390	1,817.4390	0.0506		1,818.7028
Worker	0.3355	0.2271	2.3180	7.6400e-003	0.9120	5.3400e-003	0.9173	0.2418	4.9200e-003	0.2467		761.5837	761.5837	0.0189		762.0550
<b>Total</b>	<b>0.4493</b>	<b>3.4613</b>	<b>3.0738</b>	<b>0.0249</b>	<b>1.4670</b>	<b>0.0166</b>	<b>1.4836</b>	<b>0.4014</b>	<b>0.0157</b>	<b>0.4171</b>		<b>2,579.0227</b>	<b>2,579.0227</b>	<b>0.0694</b>		<b>2,580.7579</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8257	0.0000	0.8257	0.0892	0.0000	0.0892			0.0000			0.0000
Off-Road	10.6010	89.0426	72.0535	0.2431		3.4553	3.4553		3.1812	3.1812	0.0000	23,498.3612	23,498.3612	7.5771		23,687.7895
<b>Total</b>	<b>10.6010</b>	<b>89.0426</b>	<b>72.0535</b>	<b>0.2431</b>	<b>0.8257</b>	<b>3.4553</b>	<b>4.2809</b>	<b>0.0892</b>	<b>3.1812</b>	<b>3.2703</b>	<b>0.0000</b>	<b>23,498.3612</b>	<b>23,498.3612</b>	<b>7.5771</b>		<b>23,687.7895</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1139	3.2343	0.7557	0.0172	0.5550	0.0113	0.5663	0.1596	0.0108	0.1704		1,817.4390	1,817.4390	0.0506		1,818.7028
Worker	0.3355	0.2271	2.3180	7.6400e-003	0.9120	5.3400e-003	0.9173	0.2418	4.9200e-003	0.2467		761.5837	761.5837	0.0189		762.0550
<b>Total</b>	<b>0.4493</b>	<b>3.4613</b>	<b>3.0738</b>	<b>0.0249</b>	<b>1.4670</b>	<b>0.0166</b>	<b>1.4836</b>	<b>0.4014</b>	<b>0.0157</b>	<b>0.4171</b>		<b>2,579.0227</b>	<b>2,579.0227</b>	<b>0.0694</b>		<b>2,580.7579</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Unmitigated	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.3985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0123	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>		<b>0.3012</b>

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.3985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0123	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>		<b>0.3012</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 4 (Construction - Unmitigated) - San Bernardino-South Coast County, Winter

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## **APPENDIX 3.5:**

### **CALEEMOD PROJECT CATEGORY 1 CONSTRUCTION MITIGATED EMISSIONS MODEL OUTPUTS**

OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**OBMPU - Project Category 1 (Construction - Mitigated)**  
**San Bernardino-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	22.50	1000sqft	0.52	22,500.00	0
Other Non-Asphalt Surfaces	455.00	1000sqft	10.45	455,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Asphalt Surfaces = 20 Monitoring Wells and Production Wells; Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes 20 Monitoring Wells, 10 Production Wells, and 65,000 LF of conveyance to be constructed in a single year.

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be half an acre or less.

Construction Off-road Equipment Mitigation - All equipment operating at >150 hp are required to be equipped with Tier 4 or better engines. Increase watering to 4 times per day.

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	0.00	183.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripLength	14.70	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2371	16.5304	8.3063	0.0681	2.1457	0.3189	2.4646	0.5167	0.2946	0.8113	0.0000	6,970.5806	6,970.5806	0.8261	0.0000	6,991.2333
2022	1.1023	13.7535	7.8477	0.0677	2.1456	0.2480	2.3936	0.5167	0.2291	0.7458	0.0000	6,925.8525	6,925.8525	0.8232	0.0000	6,946.4317
Maximum	1.2371	16.5304	8.3063	0.0681	2.1457	0.3189	2.4646	0.5167	0.2946	0.8113	0.0000	6,970.5806	6,970.5806	0.8261	0.0000	6,991.2333

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.6516	9.4514	12.8428	0.0681	1.7533	0.0714	1.8246	0.4743	0.0698	0.5441	0.0000	6,970.5806	6,970.5806	0.8261	0.0000	6,991.2333
2022	0.6284	8.6806	12.6627	0.0677	1.7533	0.0664	1.8196	0.4743	0.0651	0.5394	0.0000	6,925.8525	6,925.8525	0.8232	0.0000	6,946.4317
Maximum	0.6516	9.4514	12.8428	0.0681	1.7533	0.0714	1.8246	0.4743	0.0698	0.5441	0.0000	6,970.5806	6,970.5806	0.8261	0.0000	6,991.2333

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	45.29	40.13	-57.89	0.00	18.29	75.70	24.99	8.20	74.24	30.41	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.1114</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.1114</b>

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/1/2022	7	366	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 183****Acres of Paving: 10.97****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37

**Trips and VMT**

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	2	10.00	30.00	0.00	30.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8641	8.2861	5.6783	0.0226		0.2847	0.2847		0.2619	0.2619		2,190.585 4	2,190.585 4	0.7085		2,208.297 4
<b>Total</b>	<b>0.8641</b>	<b>8.2861</b>	<b>5.6783</b>	<b>0.0226</b>	<b>0.5303</b>	<b>0.2847</b>	<b>0.8149</b>	<b>0.0573</b>	<b>0.2619</b>	<b>0.3192</b>		<b>2,190.585 4</b>	<b>2,190.585 4</b>	<b>0.7085</b>		<b>2,208.297 4</b>



## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2848	8.1834	1.8261	0.0432	1.3874	0.0328	1.4202	0.3990	0.0314	0.4304		4,559.040 1	4,559.040 1	0.1115		4,561.827 6
Worker	0.0882	0.0608	0.8019	2.2200e-003	0.2280	1.3900e-003	0.2294	0.0605	1.2800e-003	0.0617		220.9551	220.9551	6.1300e-003		221.1083
<b>Total</b>	<b>0.3730</b>	<b>8.2442</b>	<b>2.6280</b>	<b>0.0455</b>	<b>1.6154</b>	<b>0.0342</b>	<b>1.6496</b>	<b>0.4594</b>	<b>0.0327</b>	<b>0.4921</b>		<b>4,779.995 2</b>	<b>4,779.995 2</b>	<b>0.1176</b>		<b>4,782.935 9</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1379	0.0000	0.1379	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	0.2786	1.2072	10.2149	0.0226		0.0371	0.0371		0.0371	0.0371	0.0000	2,190.585 4	2,190.585 4	0.7085		2,208.297 4
<b>Total</b>	<b>0.2786</b>	<b>1.2072</b>	<b>10.2149</b>	<b>0.0226</b>	<b>0.1379</b>	<b>0.0371</b>	<b>0.1750</b>	<b>0.0149</b>	<b>0.0371</b>	<b>0.0520</b>	<b>0.0000</b>	<b>2,190.585 4</b>	<b>2,190.585 4</b>	<b>0.7085</b>		<b>2,208.297 4</b>

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2848	8.1834	1.8261	0.0432	1.3874	0.0328	1.4202	0.3990	0.0314	0.4304		4,559.040 1	4,559.040 1	0.1115		4,561.827 6
Worker	0.0882	0.0608	0.8019	2.2200e-003	0.2280	1.3900e-003	0.2294	0.0605	1.2800e-003	0.0617		220.9551	220.9551	6.1300e-003		221.1083
<b>Total</b>	<b>0.3730</b>	<b>8.2442</b>	<b>2.6280</b>	<b>0.0455</b>	<b>1.6154</b>	<b>0.0342</b>	<b>1.6496</b>	<b>0.4594</b>	<b>0.0327</b>	<b>0.4921</b>		<b>4,779.995 2</b>	<b>4,779.995 2</b>	<b>0.1176</b>		<b>4,782.935 9</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7525	6.2801	5.3999	0.0227		0.2187	0.2187		0.2012	0.2012		2,192.546 1	2,192.546 1	0.7091		2,210.274 0
<b>Total</b>	<b>0.7525</b>	<b>6.2801</b>	<b>5.3999</b>	<b>0.0227</b>	<b>0.5303</b>	<b>0.2187</b>	<b>0.7490</b>	<b>0.0573</b>	<b>0.2012</b>	<b>0.2585</b>		<b>2,192.546 1</b>	<b>2,192.546 1</b>	<b>0.7091</b>		<b>2,210.274 0</b>

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2673	7.4187	1.7104	0.0429	1.3874	0.0279	1.4153	0.3990	0.0267	0.4256		4,520.3308	4,520.3308	0.1086		4,523.0447
Worker	0.0825	0.0547	0.7374	2.1400e-003	0.2280	1.3500e-003	0.2294	0.0605	1.2400e-003	0.0617		212.9756	212.9756	5.5000e-003		213.1131
<b>Total</b>	<b>0.3498</b>	<b>7.4734</b>	<b>2.4478</b>	<b>0.0450</b>	<b>1.6154</b>	<b>0.0293</b>	<b>1.6446</b>	<b>0.4594</b>	<b>0.0279</b>	<b>0.4873</b>		<b>4,733.3064</b>	<b>4,733.3064</b>	<b>0.1141</b>		<b>4,736.1577</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1379	0.0000	0.1379	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	0.2786	1.2072	10.2149	0.0227		0.0371	0.0371		0.0371	0.0371	0.0000	2,192.5461	2,192.5461	0.7091		2,210.2740
<b>Total</b>	<b>0.2786</b>	<b>1.2072</b>	<b>10.2149</b>	<b>0.0227</b>	<b>0.1379</b>	<b>0.0371</b>	<b>0.1750</b>	<b>0.0149</b>	<b>0.0371</b>	<b>0.0520</b>	<b>0.0000</b>	<b>2,192.5461</b>	<b>2,192.5461</b>	<b>0.7091</b>		<b>2,210.2740</b>

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2673	7.4187	1.7104	0.0429	1.3874	0.0279	1.4153	0.3990	0.0267	0.4256		4,520.3308	4,520.3308	0.1086		4,523.0447
Worker	0.0825	0.0547	0.7374	2.1400e-003	0.2280	1.3500e-003	0.2294	0.0605	1.2400e-003	0.0617		212.9756	212.9756	5.5000e-003		213.1131
<b>Total</b>	<b>0.3498</b>	<b>7.4734</b>	<b>2.4478</b>	<b>0.0450</b>	<b>1.6154</b>	<b>0.0293</b>	<b>1.6446</b>	<b>0.4594</b>	<b>0.0279</b>	<b>0.4873</b>		<b>4,733.3064</b>	<b>4,733.3064</b>	<b>0.1141</b>		<b>4,736.1577</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Unmitigated	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>		<b>0.1114</b>



## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>		<b>0.1114</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

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

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

Equipment Type	Number
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**11.0 Vegetation**

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OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**OBMPU - Project Category 1 (Construction - Mitigated)**  
**San Bernardino-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	22.50	1000sqft	0.52	22,500.00	0
Other Non-Asphalt Surfaces	455.00	1000sqft	10.45	455,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Asphalt Surfaces = 20 Monitoring Wells and Production Wells; Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes 20 Monitoring Wells, 10 Production Wells, and 65,000 LF of conveyance to be constructed in a single year.

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be half an acre or less.

Construction Off-road Equipment Mitigation - All equipment operating at >150 hp are required to be equipped with Tier 4 or better engines. Increase watering to 4 times per day.

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	0.00	183.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripLength	14.70	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2473	16.7492	8.2292	0.0675	2.1457	0.3190	2.4647	0.5167	0.2947	0.8114	0.0000	6,914.521 2	6,914.521 2	0.8310	0.0000	6,935.296 2
2022	1.1123	13.9412	7.7798	0.0671	2.1456	0.2481	2.3937	0.5167	0.2293	0.7459	0.0000	6,870.640 8	6,870.640 8	0.8281	0.0000	6,891.342 5
Maximum	1.2473	16.7492	8.2292	0.0675	2.1457	0.3190	2.4647	0.5167	0.2947	0.8114	0.0000	6,914.521 2	6,914.521 2	0.8310	0.0000	6,935.296 2

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.6618	9.6703	12.7657	0.0675	1.7533	0.0715	1.8248	0.4743	0.0699	0.5443	0.0000	6,914.521 2	6,914.521 2	0.8310	0.0000	6,935.296 2
2022	0.6383	8.8683	12.5947	0.0671	1.7533	0.0665	1.8198	0.4743	0.0652	0.5395	0.0000	6,870.640 8	6,870.640 8	0.8281	0.0000	6,891.342 5
Maximum	0.6618	9.6703	12.7657	0.0675	1.7533	0.0715	1.8248	0.4743	0.0699	0.5443	0.0000	6,914.521 2	6,914.521 2	0.8310	0.0000	6,935.296 2

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	44.90	39.60	-58.41	0.00	18.29	75.66	24.99	8.20	74.21	30.41	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.1114</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.1114</b>

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/1/2022	7	366	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 183****Acres of Paving: 10.97****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37

**Trips and VMT**

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	2	10.00	30.00	0.00	30.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8641	8.2861	5.6783	0.0226		0.2847	0.2847		0.2619	0.2619		2,190.585 4	2,190.585 4	0.7085		2,208.297 4
<b>Total</b>	<b>0.8641</b>	<b>8.2861</b>	<b>5.6783</b>	<b>0.0226</b>	<b>0.5303</b>	<b>0.2847</b>	<b>0.8149</b>	<b>0.0573</b>	<b>0.2619</b>	<b>0.3192</b>		<b>2,190.585 4</b>	<b>2,190.585 4</b>	<b>0.7085</b>		<b>2,208.297 4</b>



## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2911	8.3991	1.9080	0.0429	1.3874	0.0330	1.4203	0.3990	0.0315	0.4305		4,525.877 6	4,525.877 6	0.1172		4,528.807 9
Worker	0.0921	0.0639	0.6429	1.9900e-003	0.2280	1.3900e-003	0.2294	0.0605	1.2800e-003	0.0617		198.0582	198.0582	5.3100e-003		198.1909
<b>Total</b>	<b>0.3832</b>	<b>8.4630</b>	<b>2.5508</b>	<b>0.0449</b>	<b>1.6154</b>	<b>0.0343</b>	<b>1.6497</b>	<b>0.4594</b>	<b>0.0328</b>	<b>0.4922</b>		<b>4,723.935 8</b>	<b>4,723.935 8</b>	<b>0.1225</b>		<b>4,726.998 8</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1379	0.0000	0.1379	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	0.2786	1.2072	10.2149	0.0226		0.0371	0.0371		0.0371	0.0371	0.0000	2,190.585 4	2,190.585 4	0.7085		2,208.297 4
<b>Total</b>	<b>0.2786</b>	<b>1.2072</b>	<b>10.2149</b>	<b>0.0226</b>	<b>0.1379</b>	<b>0.0371</b>	<b>0.1750</b>	<b>0.0149</b>	<b>0.0371</b>	<b>0.0520</b>	<b>0.0000</b>	<b>2,190.585 4</b>	<b>2,190.585 4</b>	<b>0.7085</b>		<b>2,208.297 4</b>

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2911	8.3991	1.9080	0.0429	1.3874	0.0330	1.4203	0.3990	0.0315	0.4305		4,525.8776	4,525.8776	0.1172		4,528.8079
Worker	0.0921	0.0639	0.6429	1.9900e-003	0.2280	1.3900e-003	0.2294	0.0605	1.2800e-003	0.0617		198.0582	198.0582	5.3100e-003		198.1909
<b>Total</b>	<b>0.3832</b>	<b>8.4630</b>	<b>2.5508</b>	<b>0.0449</b>	<b>1.6154</b>	<b>0.0343</b>	<b>1.6497</b>	<b>0.4594</b>	<b>0.0328</b>	<b>0.4922</b>		<b>4,723.9358</b>	<b>4,723.9358</b>	<b>0.1225</b>		<b>4,726.9988</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7525	6.2801	5.3999	0.0227		0.2187	0.2187		0.2012	0.2012		2,192.5461	2,192.5461	0.7091		2,210.2740
<b>Total</b>	<b>0.7525</b>	<b>6.2801</b>	<b>5.3999</b>	<b>0.0227</b>	<b>0.5303</b>	<b>0.2187</b>	<b>0.7490</b>	<b>0.0573</b>	<b>0.2012</b>	<b>0.2585</b>		<b>2,192.5461</b>	<b>2,192.5461</b>	<b>0.7091</b>		<b>2,210.2740</b>

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2733	7.6035	1.7895	0.0425	1.3874	0.0280	1.4154	0.3990	0.0268	0.4258		4,487.1768	4,487.1768	0.1142		4,490.0314
Worker	0.0865	0.0575	0.5904	1.9200e-003	0.2280	1.3500e-003	0.2294	0.0605	1.2400e-003	0.0617		190.9179	190.9179	4.7700e-003		191.0371
<b>Total</b>	<b>0.3598</b>	<b>7.6610</b>	<b>2.3799</b>	<b>0.0445</b>	<b>1.6154</b>	<b>0.0294</b>	<b>1.6448</b>	<b>0.4594</b>	<b>0.0281</b>	<b>0.4875</b>		<b>4,678.0947</b>	<b>4,678.0947</b>	<b>0.1190</b>		<b>4,681.0685</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1379	0.0000	0.1379	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	0.2786	1.2072	10.2149	0.0227		0.0371	0.0371		0.0371	0.0371	0.0000	2,192.5461	2,192.5461	0.7091		2,210.2740
<b>Total</b>	<b>0.2786</b>	<b>1.2072</b>	<b>10.2149</b>	<b>0.0227</b>	<b>0.1379</b>	<b>0.0371</b>	<b>0.1750</b>	<b>0.0149</b>	<b>0.0371</b>	<b>0.0520</b>	<b>0.0000</b>	<b>2,192.5461</b>	<b>2,192.5461</b>	<b>0.7091</b>		<b>2,210.2740</b>

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2733	7.6035	1.7895	0.0425	1.3874	0.0280	1.4154	0.3990	0.0268	0.4258		4,487.1768	4,487.1768	0.1142		4,490.0314
Worker	0.0865	0.0575	0.5904	1.9200e-003	0.2280	1.3500e-003	0.2294	0.0605	1.2400e-003	0.0617		190.9179	190.9179	4.7700e-003		191.0371
<b>Total</b>	<b>0.3598</b>	<b>7.6610</b>	<b>2.3799</b>	<b>0.0445</b>	<b>1.6154</b>	<b>0.0294</b>	<b>1.6448</b>	<b>0.4594</b>	<b>0.0281</b>	<b>0.4875</b>		<b>4,678.0947</b>	<b>4,678.0947</b>	<b>0.1190</b>		<b>4,681.0685</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
Unmitigated	0.2101	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>		<b>0.1114</b>



## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0488	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1045	0.1045	2.8000e-004		0.1114
<b>Total</b>	<b>0.2101</b>	<b>4.5000e-004</b>	<b>0.0488</b>	<b>0.0000</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>1.7000e-004</b>	<b>1.7000e-004</b>		<b>0.1045</b>	<b>0.1045</b>	<b>2.8000e-004</b>		<b>0.1114</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 1 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## **APPENDIX 3.6:**

### **CALEEMOD PROJECT CATEGORY 2 CONSTRUCTION MITIGATED EMISSIONS MODEL OUTPUTS**

OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

## OBMPU - Project Category 2 (Construction - Mitigated)

### San Bernardino-South Coast County, Summer

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1,400.00	1000sqft	32.14	1,400,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes 100,000 LF of Conveyance Pipelines (Recycled and Potable Water) and 100,000 LF of Conveyance Pipelines (Surplus and Supplemental Water Supply) constructed per year

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be half an acre or less.

Construction Off-road Equipment Mitigation - All equipment operating at >150 hp are required to be equipped with Tier 4 or better engines. Increase watering to 4 times per day.

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	22.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	45.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/4/2021	1/1/2022
tblGrading	AcresOfGrading	0.00	183.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	75.00	28.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	15.5074	137.7924	103.9047	0.3534	2.1215	5.1885	7.3100	0.4957	4.7741	5.2698	0.0000	34,437.0342	34,437.0342	10.1620	0.0000	34,691.0840
2022	13.5491	107.2808	98.0385	0.3531	2.1214	3.9813	6.1028	0.4957	3.6634	4.1591	0.0000	34,397.3548	34,397.3548	10.1614	0.0000	34,651.3899
Maximum	15.5074	137.7924	103.9047	0.3534	2.1215	5.1885	7.3100	0.4957	4.7741	5.2698	0.0000	34,437.0342	34,437.0342	10.1620	0.0000	34,691.0840

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4027	33.6531	156.3019	0.3534	1.7291	1.2235	2.9526	0.4534	1.1655	1.6189	0.0000	34,437.0341	34,437.0341	10.1620	0.0000	34,691.0839
2022	5.2026	31.3868	155.8728	0.3531	1.7291	1.0897	2.8187	0.4534	1.0423	1.4957	0.0000	34,397.3548	34,397.3548	10.1614	0.0000	34,651.3899
Maximum	5.4027	33.6531	156.3019	0.3534	1.7291	1.2235	2.9526	0.4534	1.1655	1.6189	0.0000	34,437.0341	34,437.0341	10.1620	0.0000	34,691.0839

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	63.50	73.46	-54.59	0.00	18.50	74.77	56.97	8.54	73.83	66.97	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>0.3266</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>0.3266</b>



## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

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

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/1/2022	7	366	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 183

Acres of Paving: 32.14

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	22	8.00	402	0.38
Grading	Pavers	2	8.00	130	0.42
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	30	28.00	20.00	0.00	40.00	40.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	15.0342	132.9310	99.9303	0.3218		5.1658	5.1658		4.7525	4.7525		31,147.98 95	31,147.98 95	10.0739		31,399.83 67
<b>Total</b>	<b>15.0342</b>	<b>132.9310</b>	<b>99.9303</b>	<b>0.3218</b>	<b>0.5303</b>	<b>5.1658</b>	<b>5.6961</b>	<b>0.0573</b>	<b>4.7525</b>	<b>4.8098</b>		<b>31,147.98 95</b>	<b>31,147.98 95</b>	<b>10.0739</b>		<b>31,399.83 67</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1578	4.6373	1.0191	0.0234	0.7401	0.0176	0.7576	0.2128	0.0168	0.2296		2,466.2321	2,466.2321	0.0654		2,467.8679
Worker	0.3154	0.2240	2.9553	8.2600e-003	0.8512	5.1400e-003	0.8563	0.2257	4.7300e-003	0.2304		822.8126	822.8126	0.0227		823.3793
<b>Total</b>	<b>0.4732</b>	<b>4.8614</b>	<b>3.9745</b>	<b>0.0317</b>	<b>1.5912</b>	<b>0.0227</b>	<b>1.6139</b>	<b>0.4385</b>	<b>0.0215</b>	<b>0.4600</b>		<b>3,289.0447</b>	<b>3,289.0447</b>	<b>0.0881</b>		<b>3,291.2472</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1379	0.0000	0.1379	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	4.9295	28.7918	152.3275	0.3218		1.2008	1.2008		1.1440	1.1440	0.0000	31,147.9894	31,147.9894	10.0739		31,399.8367
<b>Total</b>	<b>4.9295</b>	<b>28.7918</b>	<b>152.3275</b>	<b>0.3218</b>	<b>0.1379</b>	<b>1.2008</b>	<b>1.3386</b>	<b>0.0149</b>	<b>1.1440</b>	<b>1.1589</b>	<b>0.0000</b>	<b>31,147.9894</b>	<b>31,147.9894</b>	<b>10.0739</b>		<b>31,399.8367</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1578	4.6373	1.0191	0.0234	0.7401	0.0176	0.7576	0.2128	0.0168	0.2296		2,466.232 1	2,466.232 1	0.0654		2,467.867 9
Worker	0.3154	0.2240	2.9553	8.2600e-003	0.8512	5.1400e-003	0.8563	0.2257	4.7300e-003	0.2304		822.8126	822.8126	0.0227		823.3793
<b>Total</b>	<b>0.4732</b>	<b>4.8614</b>	<b>3.9745</b>	<b>0.0317</b>	<b>1.5912</b>	<b>0.0227</b>	<b>1.6139</b>	<b>0.4385</b>	<b>0.0215</b>	<b>0.4600</b>		<b>3,289.044 7</b>	<b>3,289.044 7</b>	<b>0.0881</b>		<b>3,291.247 2</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	13.1057	102.8564	94.3667	0.3219		3.9614	3.9614		3.6445	3.6445		31,158.90 84	31,158.90 84	10.0774		31,410.84 40
<b>Total</b>	<b>13.1057</b>	<b>102.8564</b>	<b>94.3667</b>	<b>0.3219</b>	<b>0.5303</b>	<b>3.9614</b>	<b>4.4917</b>	<b>0.0573</b>	<b>3.6445</b>	<b>3.7018</b>		<b>31,158.90 84</b>	<b>31,158.90 84</b>	<b>10.0774</b>		<b>31,410.84 40</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1480	4.2227	0.9536	0.0232	0.7400	0.0149	0.7550	0.2128	0.0143	0.2271		2,445.3546	2,445.3546	0.0636		2,446.9455
Worker	0.2953	0.2017	2.7182	7.9600e-003	0.8512	4.9800e-003	0.8561	0.2257	4.5900e-003	0.2303		793.0918	793.0918	0.0204		793.6004
<b>Total</b>	<b>0.4434</b>	<b>4.4244</b>	<b>3.6718</b>	<b>0.0311</b>	<b>1.5912</b>	<b>0.0199</b>	<b>1.6111</b>	<b>0.4385</b>	<b>0.0189</b>	<b>0.4574</b>		<b>3,238.4464</b>	<b>3,238.4464</b>	<b>0.0840</b>		<b>3,240.5459</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1379	0.0000	0.1379	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	4.7592	26.9625	152.2009	0.3219		1.0697	1.0697		1.0235	1.0235	0.0000	31,158.9084	31,158.9084	10.0774		31,410.8439
<b>Total</b>	<b>4.7592</b>	<b>26.9625</b>	<b>152.2009</b>	<b>0.3219</b>	<b>0.1379</b>	<b>1.0697</b>	<b>1.2076</b>	<b>0.0149</b>	<b>1.0235</b>	<b>1.0383</b>	<b>0.0000</b>	<b>31,158.9084</b>	<b>31,158.9084</b>	<b>10.0774</b>		<b>31,410.8439</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1480	4.2227	0.9536	0.0232	0.7400	0.0149	0.7550	0.2128	0.0143	0.2271		2,445.3546	2,445.3546	0.0636		2,446.9455
Worker	0.2953	0.2017	2.7182	7.9600e-003	0.8512	4.9800e-003	0.8561	0.2257	4.5900e-003	0.2303		793.0918	793.0918	0.0204		793.6004
<b>Total</b>	<b>0.4434</b>	<b>4.4244</b>	<b>3.6718</b>	<b>0.0311</b>	<b>1.5912</b>	<b>0.0199</b>	<b>1.6111</b>	<b>0.4385</b>	<b>0.0189</b>	<b>0.4574</b>		<b>3,238.4464</b>	<b>3,238.4464</b>	<b>0.0840</b>		<b>3,240.5459</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## 5.0 Energy Detail

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Historical Energy Use: N

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>



## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Unmitigated	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4959					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0133	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>		<b>0.3266</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4959					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0133	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>		<b>0.3266</b>

**7.0 Water Detail**

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

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**7.1 Mitigation Measures Water**

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**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

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**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

## OBMPU - Project Category 2 (Construction - Mitigated)

### San Bernardino-South Coast County, Winter

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1,400.00	1000sqft	32.14	1,400,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes 100,000 LF of Conveyance Pipelines (Recycled and Potable Water) and 100,000 LF of Conveyance Pipelines (Surplus and Supplemental Water Supply) constructed per year

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be half an acre or less.

Construction Off-road Equipment Mitigation - All equipment operating at >150 hp are required to be equipped with Tier 4 or better engines. Increase watering to 4 times per day.

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	22.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	45.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/4/2021	1/1/2022
tblGrading	AcresOfGrading	0.00	183.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	75.00	28.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	15.5294	137.9096	103.3607	0.3523	2.1215	5.1886	7.3101	0.4957	4.7742	5.2699	0.0000	34,329.51 50	34,329.51 50	10.1627	0.0000	34,583.58 35
2022	13.5706	107.3807	97.5378	0.3520	2.1214	3.9814	6.1029	0.4957	3.6635	4.1592	0.0000	34,292.97 18	34,292.97 18	10.1624	0.0000	34,547.03 24
Maximum	15.5294	137.9096	103.3607	0.3523	2.1215	5.1886	7.3101	0.4957	4.7742	5.2699	0.0000	34,329.51 50	34,329.51 50	10.1627	0.0000	34,583.58 35

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4246	33.7703	155.7579	0.3523	1.7291	1.2236	2.9526	0.4534	1.1656	1.6190	0.0000	34,329.51 50	34,329.51 50	10.1627	0.0000	34,583.58 35
2022	5.2241	31.4867	155.3721	0.3520	1.7291	1.0897	2.8188	0.4534	1.0424	1.4958	0.0000	34,292.97 18	34,292.97 18	10.1624	0.0000	34,547.03 24
Maximum	5.4246	33.7703	155.7579	0.3523	1.7291	1.2236	2.9526	0.4534	1.1656	1.6190	0.0000	34,329.51 50	34,329.51 50	10.1627	0.0000	34,583.58 35

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	63.41	73.40	-54.87	0.00	18.50	74.77	56.97	8.54	73.83	66.97	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>0.3266</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>0.3266</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	1/1/2022	7	366	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 183****Acres of Paving: 32.14****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	22	8.00	402	0.38
Grading	Pavers	2	8.00	130	0.42
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37



## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	30	28.00	20.00	0.00	40.00	40.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	15.0342	132.9310	99.9303	0.3218		5.1658	5.1658		4.7525	4.7525		31,147.98 95	31,147.98 95	10.0739		31,399.83 67
<b>Total</b>	<b>15.0342</b>	<b>132.9310</b>	<b>99.9303</b>	<b>0.3218</b>	<b>0.5303</b>	<b>5.1658</b>	<b>5.6961</b>	<b>0.0573</b>	<b>4.7525</b>	<b>4.8098</b>		<b>31,147.98 95</b>	<b>31,147.98 95</b>	<b>10.0739</b>		<b>31,399.83 67</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1618	4.7430	1.0754	0.0232	0.7401	0.0177	0.7577	0.2128	0.0169	0.2297		2,444.1238	2,444.1238	0.0693		2,445.8553
Worker	0.3334	0.2355	2.3551	7.4000e-003	0.8512	5.1400e-003	0.8563	0.2257	4.7300e-003	0.2304		737.4018	737.4018	0.0196		737.8915
<b>Total</b>	<b>0.4952</b>	<b>4.9785</b>	<b>3.4304</b>	<b>0.0306</b>	<b>1.5912</b>	<b>0.0228</b>	<b>1.6140</b>	<b>0.4385</b>	<b>0.0216</b>	<b>0.4601</b>		<b>3,181.5256</b>	<b>3,181.5256</b>	<b>0.0889</b>		<b>3,183.7468</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1379	0.0000	0.1379	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	4.9295	28.7918	152.3275	0.3218		1.2008	1.2008		1.1440	1.1440	0.0000	31,147.9894	31,147.9894	10.0739		31,399.8367
<b>Total</b>	<b>4.9295</b>	<b>28.7918</b>	<b>152.3275</b>	<b>0.3218</b>	<b>0.1379</b>	<b>1.2008</b>	<b>1.3386</b>	<b>0.0149</b>	<b>1.1440</b>	<b>1.1589</b>	<b>0.0000</b>	<b>31,147.9894</b>	<b>31,147.9894</b>	<b>10.0739</b>		<b>31,399.8367</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1618	4.7430	1.0754	0.0232	0.7401	0.0177	0.7577	0.2128	0.0169	0.2297		2,444.1238	2,444.1238	0.0693		2,445.8553
Worker	0.3334	0.2355	2.3551	7.4000e-003	0.8512	5.1400e-003	0.8563	0.2257	4.7300e-003	0.2304		737.4018	737.4018	0.0196		737.8915
<b>Total</b>	<b>0.4952</b>	<b>4.9785</b>	<b>3.4304</b>	<b>0.0306</b>	<b>1.5912</b>	<b>0.0228</b>	<b>1.6140</b>	<b>0.4385</b>	<b>0.0216</b>	<b>0.4601</b>		<b>3,181.5256</b>	<b>3,181.5256</b>	<b>0.0889</b>		<b>3,183.7468</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	13.1057	102.8564	94.3667	0.3219		3.9614	3.9614		3.6445	3.6445		31,158.9084	31,158.9084	10.0774		31,410.8440
<b>Total</b>	<b>13.1057</b>	<b>102.8564</b>	<b>94.3667</b>	<b>0.3219</b>	<b>0.5303</b>	<b>3.9614</b>	<b>4.4917</b>	<b>0.0573</b>	<b>3.6445</b>	<b>3.7018</b>		<b>31,158.9084</b>	<b>31,158.9084</b>	<b>10.0774</b>		<b>31,410.8440</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1518	4.3124	1.0077	0.0230	0.7400	0.0150	0.7551	0.2128	0.0144	0.2272		2,423.2520	2,423.2520	0.0674		2,424.9371
Worker	0.3131	0.2119	2.1635	7.1300e-003	0.8512	4.9800e-003	0.8561	0.2257	4.5900e-003	0.2303		710.8114	710.8114	0.0176		711.2514
<b>Total</b>	<b>0.4649</b>	<b>4.5243</b>	<b>3.1711</b>	<b>0.0301</b>	<b>1.5912</b>	<b>0.0200</b>	<b>1.6112</b>	<b>0.4385</b>	<b>0.0190</b>	<b>0.4574</b>		<b>3,134.0634</b>	<b>3,134.0634</b>	<b>0.0850</b>		<b>3,136.1884</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1379	0.0000	0.1379	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	4.7592	26.9625	152.2009	0.3219		1.0697	1.0697		1.0235	1.0235	0.0000	31,158.9084	31,158.9084	10.0774		31,410.8439
<b>Total</b>	<b>4.7592</b>	<b>26.9625</b>	<b>152.2009</b>	<b>0.3219</b>	<b>0.1379</b>	<b>1.0697</b>	<b>1.2076</b>	<b>0.0149</b>	<b>1.0235</b>	<b>1.0383</b>	<b>0.0000</b>	<b>31,158.9084</b>	<b>31,158.9084</b>	<b>10.0774</b>		<b>31,410.8439</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1518	4.3124	1.0077	0.0230	0.7400	0.0150	0.7551	0.2128	0.0144	0.2272		2,423.2520	2,423.2520	0.0674		2,424.9371
Worker	0.3131	0.2119	2.1635	7.1300e-003	0.8512	4.9800e-003	0.8561	0.2257	4.5900e-003	0.2303		710.8114	710.8114	0.0176		711.2514
<b>Total</b>	<b>0.4649</b>	<b>4.5243</b>	<b>3.1711</b>	<b>0.0301</b>	<b>1.5912</b>	<b>0.0200</b>	<b>1.6112</b>	<b>0.4385</b>	<b>0.0190</b>	<b>0.4574</b>		<b>3,134.0634</b>	<b>3,134.0634</b>	<b>0.0850</b>		<b>3,136.1884</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## 5.0 Energy Detail

Historical Energy Use: N

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
Unmitigated	0.6159	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266



## OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4959					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0133	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>		<b>0.3266</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4959					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0133	1.3100e-003	0.1432	1.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		0.3064	0.3064	8.1000e-004		0.3266
<b>Total</b>	<b>0.6159</b>	<b>1.3100e-003</b>	<b>0.1432</b>	<b>1.0000e-005</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>5.1000e-004</b>	<b>5.1000e-004</b>		<b>0.3064</b>	<b>0.3064</b>	<b>8.1000e-004</b>		<b>0.3266</b>

**7.0 Water Detail**

OBMPU - Project Category 2 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

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**7.1 Mitigation Measures Water****8.0 Waste Detail**

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**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## **APPENDIX 3.7:**

### **CALEEMOD PROJECT CATEGORY 3 CONSTRUCTION MITIGATED EMISSIONS MODEL OUTPUTS**

OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

## OBMPU - Project Category 3 (Construction - Mitigated)

### San Bernardino-South Coast County, Summer

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	100.00	Acre	100.00	4,356,000.00	0
Other Non-Asphalt Surfaces	420.00	1000sqft	9.64	420,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Non-Asphalt Surfaces = Conveyance; Other Asphalt Surfaces = Storage Basin

Construction Phase - As a conservative measure, analysis assumes the construction of one New Storage Basin (Chino Institute for Men + the associated pipeline)

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be 2 acres on any given day.

Construction Off-road Equipment Mitigation - All equipment operating at >150 hp are required to be equipped with Tier 4 or better engines. Increase watering to 4 times per day.

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	310.00	550.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	3,850.00	1,100.00
tblGrading	MaterialExported	0.00	333,333.33
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	41,667.00	370.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	48.00	6.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	13.1875	138.1734	90.7701	0.2285	14.6625	5.5774	20.2399	6.9786	5.1314	12.1099	0.0000	22,197.26 33	22,197.26 33	6.8856	0.0000	22,369.40 36
2022	11.4263	112.6650	83.8332	0.2286	14.6821	4.5125	19.1946	6.9834	4.1517	11.1350	0.0000	22,202.88 64	22,202.88 64	6.8907	0.0000	22,375.15 37
Maximum	13.1875	138.1734	90.7701	0.2286	14.6821	5.5774	20.2399	6.9834	5.1314	12.1099	0.0000	22,202.88 64	22,202.88 64	6.8907	0.0000	22,375.15 37

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1058	16.7387	104.4056	0.2285	4.1296	0.5787	4.7083	1.9023	0.5605	2.4627	0.0000	22,197.26 33	22,197.26 33	6.8856	0.0000	22,369.40 36
2022	3.0532	16.1513	104.2896	0.2286	4.1491	0.5345	4.6836	1.9071	0.5197	2.4268	0.0000	22,202.88 64	22,202.88 64	6.8907	0.0000	22,375.15 37
Maximum	3.1058	16.7387	104.4056	0.2286	4.1491	0.5787	4.7083	1.9071	0.5605	2.4627	0.0000	22,202.88 64	22,202.88 64	6.8907	0.0000	22,375.15 37

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	74.98	86.89	-19.53	0.00	71.79	88.97	76.18	72.72	88.36	78.97	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.1213</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.1213</b>



## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	7/4/2022	7	550	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 1100****Acres of Paving: 109.64****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	6	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	7	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

**Trips and VMT**

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	19	6.00	6.00	370.00	40.00	40.00	30.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.2337	0.0000	14.2337	6.8599	0.0000	6.8599			0.0000			0.0000
Off-Road	13.0673	136.5407	89.7986	0.2190		5.5703	5.5703		5.1247	5.1247		21,203.4071	21,203.4071	6.8576		21,374.8474
<b>Total</b>	<b>13.0673</b>	<b>136.5407</b>	<b>89.7986</b>	<b>0.2190</b>	<b>14.2337</b>	<b>5.5703</b>	<b>19.8041</b>	<b>6.8599</b>	<b>5.1247</b>	<b>11.9846</b>		<b>21,203.4071</b>	<b>21,203.4071</b>	<b>6.8576</b>		<b>21,374.8474</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.3200e-003	0.1935	0.0324	7.3000e-004	0.0244	6.4000e-004	0.0251	6.5000e-003	6.1000e-004	7.1100e-003		77.6696	77.6696	3.5100e-003		77.7574
Vendor	0.0473	1.3912	0.3057	7.0200e-003	0.2220	5.2700e-003	0.2273	0.0639	5.0400e-003	0.0689		739.8696	739.8696	0.0196		740.3604
Worker	0.0676	0.0480	0.6333	1.7700e-003	0.1824	1.1000e-003	0.1835	0.0484	1.0100e-003	0.0494		176.3170	176.3170	4.8600e-003		176.4384
<b>Total</b>	<b>0.1203</b>	<b>1.6327</b>	<b>0.9714</b>	<b>9.5200e-003</b>	<b>0.4288</b>	<b>7.0100e-003</b>	<b>0.4358</b>	<b>0.1187</b>	<b>6.6600e-003</b>	<b>0.1254</b>		<b>993.8563</b>	<b>993.8563</b>	<b>0.0280</b>		<b>994.5562</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7008	0.0000	3.7008	1.7836	0.0000	1.7836			0.0000			0.0000
Off-Road	2.9856	15.1060	103.4342	0.2190		0.5717	0.5717		0.5538	0.5538	0.0000	21,203.4071	21,203.4071	6.8576		21,374.8474
<b>Total</b>	<b>2.9856</b>	<b>15.1060</b>	<b>103.4342</b>	<b>0.2190</b>	<b>3.7008</b>	<b>0.5717</b>	<b>4.2725</b>	<b>1.7836</b>	<b>0.5538</b>	<b>2.3374</b>	<b>0.0000</b>	<b>21,203.4071</b>	<b>21,203.4071</b>	<b>6.8576</b>		<b>21,374.8474</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.3200e-003	0.1935	0.0324	7.3000e-004	0.0244	6.4000e-004	0.0251	6.5000e-003	6.1000e-004	7.1100e-003		77.6696	77.6696	3.5100e-003		77.7574
Vendor	0.0473	1.3912	0.3057	7.0200e-003	0.2220	5.2700e-003	0.2273	0.0639	5.0400e-003	0.0689		739.8696	739.8696	0.0196		740.3604
Worker	0.0676	0.0480	0.6333	1.7700e-003	0.1824	1.1000e-003	0.1835	0.0484	1.0100e-003	0.0494		176.3170	176.3170	4.8600e-003		176.4384
<b>Total</b>	<b>0.1203</b>	<b>1.6327</b>	<b>0.9714</b>	<b>9.5200e-003</b>	<b>0.4288</b>	<b>7.0100e-003</b>	<b>0.4358</b>	<b>0.1187</b>	<b>6.6600e-003</b>	<b>0.1254</b>		<b>993.8563</b>	<b>993.8563</b>	<b>0.0280</b>		<b>994.5562</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.2337	0.0000	14.2337	6.8599	0.0000	6.8599			0.0000			0.0000
Off-Road	11.3136	111.1793	82.9331	0.2192		4.5064	4.5064		4.1459	4.1459		21,222.5482	21,222.5482	6.8638		21,394.1433
<b>Total</b>	<b>11.3136</b>	<b>111.1793</b>	<b>82.9331</b>	<b>0.2192</b>	<b>14.2337</b>	<b>4.5064</b>	<b>18.7401</b>	<b>6.8599</b>	<b>4.1459</b>	<b>11.0057</b>		<b>21,222.5482</b>	<b>21,222.5482</b>	<b>6.8638</b>		<b>21,394.1433</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0300e-003	0.1757	0.0315	7.2000e-004	0.0440	5.3000e-004	0.0445	0.0113	5.1000e-004	0.0118		76.7835	76.7835	3.4400e-003		76.8695
Vendor	0.0444	1.2668	0.2861	6.9500e-003	0.2220	4.4800e-003	0.2265	0.0638	4.2800e-003	0.0681		733.6064	733.6064	0.0191		734.0837
Worker	0.0633	0.0432	0.5825	1.7100e-003	0.1824	1.0700e-003	0.1835	0.0484	9.8000e-004	0.0493		169.9482	169.9482	4.3600e-003		170.0572
<b>Total</b>	<b>0.1127</b>	<b>1.4857</b>	<b>0.9000</b>	<b>9.3800e-003</b>	<b>0.4484</b>	<b>6.0800e-003</b>	<b>0.4545</b>	<b>0.1235</b>	<b>5.7700e-003</b>	<b>0.1293</b>		<b>980.3382</b>	<b>980.3382</b>	<b>0.0269</b>		<b>981.0104</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7008	0.0000	3.7008	1.7836	0.0000	1.7836			0.0000			0.0000
Off-Road	2.9404	14.6656	103.3896	0.2192		0.5284	0.5284		0.5140	0.5140	0.0000	21,222.5482	21,222.5482	6.8638		21,394.1433
<b>Total</b>	<b>2.9404</b>	<b>14.6656</b>	<b>103.3896</b>	<b>0.2192</b>	<b>3.7008</b>	<b>0.5284</b>	<b>4.2291</b>	<b>1.7836</b>	<b>0.5140</b>	<b>2.2975</b>	<b>0.0000</b>	<b>21,222.5482</b>	<b>21,222.5482</b>	<b>6.8638</b>		<b>21,394.1433</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0300e-003	0.1757	0.0315	7.2000e-004	0.0440	5.3000e-004	0.0445	0.0113	5.1000e-004	0.0118		76.7835	76.7835	3.4400e-003		76.8695
Vendor	0.0444	1.2668	0.2861	6.9500e-003	0.2220	4.4800e-003	0.2265	0.0638	4.2800e-003	0.0681		733.6064	733.6064	0.0191		734.0837
Worker	0.0633	0.0432	0.5825	1.7100e-003	0.1824	1.0700e-003	0.1835	0.0484	9.8000e-004	0.0493		169.9482	169.9482	4.3600e-003		170.0572
<b>Total</b>	<b>0.1127</b>	<b>1.4857</b>	<b>0.9000</b>	<b>9.3800e-003</b>	<b>0.4484</b>	<b>6.0800e-003</b>	<b>0.4545</b>	<b>0.1235</b>	<b>5.7700e-003</b>	<b>0.1293</b>		<b>980.3382</b>	<b>980.3382</b>	<b>0.0269</b>		<b>981.0104</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000



## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Unmitigated	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6917					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9500e-003	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>		<b>0.1213</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6917					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9500e-003	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>		<b>0.1213</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

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

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

Equipment Type	Number
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**11.0 Vegetation**

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OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**OBMPU - Project Category 3 (Construction - Mitigated)**  
**San Bernardino-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	100.00	Acre	100.00	4,356,000.00	0
Other Non-Asphalt Surfaces	420.00	1000sqft	9.64	420,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Other Non-Asphalt Surfaces = Conveyance; Other Asphalt Surfaces = Storage Basin

Construction Phase - As a conservative measure, analysis assumes the construction of one New Storage Basin (Chino Institute for Men + the associated pipeline)

Off-road Equipment - Equipment based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be 2 acres on any given day.

Construction Off-road Equipment Mitigation - All equipment operating at >150 hp are required to be equipped with Tier 4 or better engines. Increase watering to 4 times per day.

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	310.00	550.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	3,850.00	1,100.00
tblGrading	MaterialExported	0.00	333,333.33
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	41,667.00	370.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	48.00	6.00

## 2.0 Emissions Summary

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## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	13.1927	138.2100	90.6616	0.2282	14.6625	5.5774	20.2399	6.9786	5.1314	12.1100	0.0000	22,170.87 37	22,170.87 37	6.8864	0.0000	22,343.03 25
2022	11.4315	112.6959	83.7337	0.2283	14.6821	4.5125	19.1946	6.9834	4.1517	11.1350	0.0000	22,177.17 00	22,177.17 00	6.8915	0.0000	22,349.45 71
Maximum	13.1927	138.2100	90.6616	0.2283	14.6821	5.5774	20.2399	6.9834	5.1314	12.1100	0.0000	22,177.17 00	22,177.17 00	6.8915	0.0000	22,349.45 71

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1110	16.7753	104.2972	0.2282	4.1296	0.5787	4.7083	1.9023	0.5605	2.4628	0.0000	22,170.87 37	22,170.87 37	6.8864	0.0000	22,343.03 25
2022	3.0583	16.1823	104.1902	0.2283	4.1491	0.5345	4.6836	1.9071	0.5198	2.4268	0.0000	22,177.17 00	22,177.17 00	6.8915	0.0000	22,349.45 71
Maximum	3.1110	16.7753	104.2972	0.2283	4.1491	0.5787	4.7083	1.9071	0.5605	2.4628	0.0000	22,177.17 00	22,177.17 00	6.8915	0.0000	22,349.45 71

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	74.95	86.86	-19.55	0.00	71.79	88.97	76.18	72.72	88.36	78.97	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.1213</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.1213</b>



## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	7/4/2022	7	550	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 1100****Acres of Paving: 109.64****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	6	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	7	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

**Trips and VMT**

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	19	6.00	6.00	370.00	40.00	40.00	30.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.2337	0.0000	14.2337	6.8599	0.0000	6.8599			0.0000			0.0000
Off-Road	13.0673	136.5407	89.7986	0.2190		5.5703	5.5703		5.1247	5.1247		21,203.4071	21,203.4071	6.8576		21,374.8474
<b>Total</b>	<b>13.0673</b>	<b>136.5407</b>	<b>89.7986</b>	<b>0.2190</b>	<b>14.2337</b>	<b>5.5703</b>	<b>19.8041</b>	<b>6.8599</b>	<b>5.1247</b>	<b>11.9846</b>		<b>21,203.4071</b>	<b>21,203.4071</b>	<b>6.8576</b>		<b>21,374.8474</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5000e-003	0.1959	0.0357	7.2000e-004	0.0244	6.5000e-004	0.0251	6.5000e-003	6.2000e-004	7.1200e-003		76.2148	76.2148	3.7700e-003		76.3090
Vendor	0.0485	1.4229	0.3226	6.9500e-003	0.2220	5.3000e-003	0.2273	0.0639	5.0700e-003	0.0689		733.2371	733.2371	0.0208		733.7566
Worker	0.0714	0.0505	0.5047	1.5900e-003	0.1824	1.1000e-003	0.1835	0.0484	1.0100e-003	0.0494		158.0147	158.0147	4.2000e-003		158.1196
<b>Total</b>	<b>0.1255</b>	<b>1.6693</b>	<b>0.8630</b>	<b>9.2600e-003</b>	<b>0.4288</b>	<b>7.0500e-003</b>	<b>0.4359</b>	<b>0.1187</b>	<b>6.7000e-003</b>	<b>0.1254</b>		<b>967.4666</b>	<b>967.4666</b>	<b>0.0288</b>		<b>968.1852</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7008	0.0000	3.7008	1.7836	0.0000	1.7836			0.0000			0.0000
Off-Road	2.9856	15.1060	103.4342	0.2190		0.5717	0.5717		0.5538	0.5538	0.0000	21,203.4071	21,203.4071	6.8576		21,374.8474
<b>Total</b>	<b>2.9856</b>	<b>15.1060</b>	<b>103.4342</b>	<b>0.2190</b>	<b>3.7008</b>	<b>0.5717</b>	<b>4.2725</b>	<b>1.7836</b>	<b>0.5538</b>	<b>2.3374</b>	<b>0.0000</b>	<b>21,203.4071</b>	<b>21,203.4071</b>	<b>6.8576</b>		<b>21,374.8474</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5000e-003	0.1959	0.0357	7.2000e-004	0.0244	6.5000e-004	0.0251	6.5000e-003	6.2000e-004	7.1200e-003		76.2148	76.2148	3.7700e-003		76.3090
Vendor	0.0485	1.4229	0.3226	6.9500e-003	0.2220	5.3000e-003	0.2273	0.0639	5.0700e-003	0.0689		733.2371	733.2371	0.0208		733.7566
Worker	0.0714	0.0505	0.5047	1.5900e-003	0.1824	1.1000e-003	0.1835	0.0484	1.0100e-003	0.0494		158.0147	158.0147	4.2000e-003		158.1196
<b>Total</b>	<b>0.1255</b>	<b>1.6693</b>	<b>0.8630</b>	<b>9.2600e-003</b>	<b>0.4288</b>	<b>7.0500e-003</b>	<b>0.4359</b>	<b>0.1187</b>	<b>6.7000e-003</b>	<b>0.1254</b>		<b>967.4666</b>	<b>967.4666</b>	<b>0.0288</b>		<b>968.1852</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.2337	0.0000	14.2337	6.8599	0.0000	6.8599			0.0000			0.0000
Off-Road	11.3136	111.1793	82.9331	0.2192		4.5064	4.5064		4.1459	4.1459		21,222.5482	21,222.5482	6.8638		21,394.1433
<b>Total</b>	<b>11.3136</b>	<b>111.1793</b>	<b>82.9331</b>	<b>0.2192</b>	<b>14.2337</b>	<b>4.5064</b>	<b>18.7401</b>	<b>6.8599</b>	<b>4.1459</b>	<b>11.0057</b>		<b>21,222.5482</b>	<b>21,222.5482</b>	<b>6.8638</b>		<b>21,394.1433</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.2100e-003	0.1775	0.0347	7.1000e-004	0.0440	5.4000e-004	0.0445	0.0113	5.1000e-004	0.0118		75.3295	75.3295	3.6900e-003		75.4217
Vendor	0.0455	1.2937	0.3023	6.8900e-003	0.2220	4.5000e-003	0.2265	0.0638	4.3100e-003	0.0682		726.9756	726.9756	0.0202		727.4811
Worker	0.0671	0.0454	0.4636	1.5300e-003	0.1824	1.0700e-003	0.1835	0.0484	9.8000e-004	0.0493		152.3167	152.3167	3.7700e-003		152.4110
<b>Total</b>	<b>0.1179</b>	<b>1.5166</b>	<b>0.8006</b>	<b>9.1300e-003</b>	<b>0.4484</b>	<b>6.1100e-003</b>	<b>0.4545</b>	<b>0.1235</b>	<b>5.8000e-003</b>	<b>0.1293</b>		<b>954.6218</b>	<b>954.6218</b>	<b>0.0277</b>		<b>955.3139</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7008	0.0000	3.7008	1.7836	0.0000	1.7836			0.0000			0.0000
Off-Road	2.9404	14.6656	103.3896	0.2192		0.5284	0.5284		0.5140	0.5140	0.0000	21,222.5482	21,222.5482	6.8638		21,394.1433
<b>Total</b>	<b>2.9404</b>	<b>14.6656</b>	<b>103.3896</b>	<b>0.2192</b>	<b>3.7008</b>	<b>0.5284</b>	<b>4.2291</b>	<b>1.7836</b>	<b>0.5140</b>	<b>2.2975</b>	<b>0.0000</b>	<b>21,222.5482</b>	<b>21,222.5482</b>	<b>6.8638</b>		<b>21,394.1433</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.2100e-003	0.1775	0.0347	7.1000e-004	0.0440	5.4000e-004	0.0445	0.0113	5.1000e-004	0.0118		75.3295	75.3295	3.6900e-003		75.4217
Vendor	0.0455	1.2937	0.3023	6.8900e-003	0.2220	4.5000e-003	0.2265	0.0638	4.3100e-003	0.0682		726.9756	726.9756	0.0202		727.4811
Worker	0.0671	0.0454	0.4636	1.5300e-003	0.1824	1.0700e-003	0.1835	0.0484	9.8000e-004	0.0493		152.3167	152.3167	3.7700e-003		152.4110
<b>Total</b>	<b>0.1179</b>	<b>1.5166</b>	<b>0.8006</b>	<b>9.1300e-003</b>	<b>0.4484</b>	<b>6.1100e-003</b>	<b>0.4545</b>	<b>0.1235</b>	<b>5.8000e-003</b>	<b>0.1293</b>		<b>954.6218</b>	<b>954.6218</b>	<b>0.0277</b>		<b>955.3139</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000



## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
Unmitigated	2.0605	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6917					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9500e-003	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>		<b>0.1213</b>

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3639					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6917					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9500e-003	4.9000e-004	0.0532	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1138	0.1138	3.0000e-004		0.1213
<b>Total</b>	<b>2.0605</b>	<b>4.9000e-004</b>	<b>0.0532</b>	<b>0.0000</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>1.9000e-004</b>	<b>1.9000e-004</b>		<b>0.1138</b>	<b>0.1138</b>	<b>3.0000e-004</b>		<b>0.1213</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 3 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## **APPENDIX 3.8:**

### **CALEEMOD PROJECT CATEGORY 4 CONSTRUCTION MITIGATED EMISSIONS MODEL OUTPUTS**

OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**OBMPU - Project Category 4 (Construction - Mitigated)**  
**San Bernardino-South Coast County, Summer**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	871.20	1000sqft	20.00	871,200.00	0
Other Non-Asphalt Surfaces	420.00	1000sqft	9.64	420,000.00	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

### 1.3 User Entered Comments & Non-Default Data

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

## Project Characteristics -

Land Use - General Light Industry = Water Treatment and Regional Water Treatment Facility; Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes construction of a single Water Treatment and Regional Water Treatment Facility and Pipelines that would be constructed within an 18-month period

Off-road Equipment - Based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be 2 acres on any given day.

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - All equipment operating at >150 hp are required to be equipped with Tier 3 or better engines. Increase watering to 4 times per day.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	45.00	547.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/4/2021	7/1/2022
tblEnergyUse	LightingElect	2.93	0.00
tblEnergyUse	NT24E	5.02	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	T24E	2.20	0.00



## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

tblEnergyUse	T24NG	15.36	0.00
tblGrading	AcresOfGrading	273.50	1,092.00
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblSolidWaste	SolidWasteGenerationRate	1,080.29	0.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	15.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	70.00	30.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	201,465,000.00	0.00

## 2.0 Emissions Summary

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	12.4805	115.2699	79.9046	0.2685	3.5841	4.3929	7.9770	0.6300	4.0443	4.6743	0.0000	26,135.84 30	26,135.84 30	7.6202	0.0000	26,326.34 70
2022	10.9962	92.2069	75.4663	0.2682	3.5841	3.4643	7.0484	0.6300	3.1899	3.8199	0.0000	26,097.17 84	26,097.17 84	7.6192	0.0000	26,287.65 80
Maximum	12.4805	115.2699	79.9046	0.2685	3.5841	4.3929	7.9770	0.6300	4.0443	4.6743	0.0000	26,135.84 30	26,135.84 30	7.6202	0.0000	26,326.34 70

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.4189	27.6274	117.8058	0.2685	2.0174	1.0811	3.0985	0.4609	1.0265	1.4873	0.0000	26,135.84 30	26,135.84 30	7.6202	0.0000	26,326.34 70
2022	4.2546	25.9715	117.3689	0.2682	2.0174	0.9490	2.9665	0.4608	0.9049	1.3657	0.0000	26,097.17 84	26,097.17 84	7.6192	0.0000	26,287.65 80
Maximum	4.4189	27.6274	117.8058	0.2685	2.0174	1.0811	3.0985	0.4609	1.0265	1.4873	0.0000	26,135.84 30	26,135.84 30	7.6202	0.0000	26,326.34 70

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	63.05	74.17	-51.36	0.00	43.71	74.16	59.63	26.85	73.30	66.41	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>0.3012</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>0.3012</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

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

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	7/1/2022	7	547	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1092

Acres of Paving: 9.64

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Off-Highway Trucks	15	8.00	402	0.38
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Cranes	3	8.00	231	0.29
Grading	Plate Compactors	3	8.00	8	0.43
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	6	8.00	97	0.37

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	28	30.00	15.00	0.00	40.00	40.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1171	0.0000	2.1171	0.2286	0.0000	0.2286			0.0000			0.0000
Off-Road	12.0241	111.5518	75.9738	0.2421		4.3742	4.3742		4.0266	4.0266		23,404.58 40	23,404.58 40	7.5468		23,593.25 40
<b>Total</b>	<b>12.0241</b>	<b>111.5518</b>	<b>75.9738</b>	<b>0.2421</b>	<b>2.1171</b>	<b>4.3742</b>	<b>6.4913</b>	<b>0.2286</b>	<b>4.0266</b>	<b>4.2552</b>		<b>23,404.58 40</b>	<b>23,404.58 40</b>	<b>7.5468</b>		<b>23,593.25 40</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1184	3.4780	0.7643	0.0175	0.5550	0.0132	0.5682	0.1596	0.0126	0.1722		1,849.674 1	1,849.674 1	0.0491		1,850.901 0
Worker	0.3380	0.2400	3.1664	8.8500e-003	0.9120	5.5000e-003	0.9175	0.2418	5.0700e-003	0.2469		881.5849	881.5849	0.0243		882.1921
<b>Total</b>	<b>0.4563</b>	<b>3.7180</b>	<b>3.9308</b>	<b>0.0264</b>	<b>1.4670</b>	<b>0.0187</b>	<b>1.4857</b>	<b>0.4014</b>	<b>0.0177</b>	<b>0.4191</b>		<b>2,731.259 0</b>	<b>2,731.259 0</b>	<b>0.0734</b>		<b>2,733.093 0</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5505	0.0000	0.5505	0.0594	0.0000	0.0594			0.0000			0.0000
Off-Road	3.9626	23.9094	113.8751	0.2421		1.0624	1.0624		1.0088	1.0088	0.0000	23,404.58 39	23,404.58 39	7.5468		23,593.25 40
<b>Total</b>	<b>3.9626</b>	<b>23.9094</b>	<b>113.8751</b>	<b>0.2421</b>	<b>0.5505</b>	<b>1.0624</b>	<b>1.6129</b>	<b>0.0594</b>	<b>1.0088</b>	<b>1.0682</b>	<b>0.0000</b>	<b>23,404.58 39</b>	<b>23,404.58 39</b>	<b>7.5468</b>		<b>23,593.25 40</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1184	3.4780	0.7643	0.0175	0.5550	0.0132	0.5682	0.1596	0.0126	0.1722		1,849.674 1	1,849.674 1	0.0491		1,850.901 0
Worker	0.3380	0.2400	3.1664	8.8500e-003	0.9120	5.5000e-003	0.9175	0.2418	5.0700e-003	0.2469		881.5849	881.5849	0.0243		882.1921
<b>Total</b>	<b>0.4563</b>	<b>3.7180</b>	<b>3.9308</b>	<b>0.0264</b>	<b>1.4670</b>	<b>0.0187</b>	<b>1.4857</b>	<b>0.4014</b>	<b>0.0177</b>	<b>0.4191</b>		<b>2,731.259 0</b>	<b>2,731.259 0</b>	<b>0.0734</b>		<b>2,733.093 0</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1171	0.0000	2.1171	0.2286	0.0000	0.2286			0.0000			0.0000
Off-Road	10.5687	88.8238	71.8388	0.2423		3.4477	3.4477		3.1743	3.1743		23,413.42 12	23,413.42 12	7.5497		23,602.16 27
<b>Total</b>	<b>10.5687</b>	<b>88.8238</b>	<b>71.8388</b>	<b>0.2423</b>	<b>2.1171</b>	<b>3.4477</b>	<b>5.5648</b>	<b>0.2286</b>	<b>3.1743</b>	<b>3.4029</b>		<b>23,413.42 12</b>	<b>23,413.42 12</b>	<b>7.5497</b>		<b>23,602.16 27</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1110	3.1670	0.7152	0.0174	0.5550	0.0112	0.5662	0.1596	0.0107	0.1703		1,834.016 0	1,834.016 0	0.0477		1,835.209 1
Worker	0.3164	0.2161	2.9124	8.5300e-003	0.9120	5.3400e-003	0.9173	0.2418	4.9200e-003	0.2467		849.7412	849.7412	0.0218		850.2862
<b>Total</b>	<b>0.4275</b>	<b>3.3831</b>	<b>3.6276</b>	<b>0.0259</b>	<b>1.4670</b>	<b>0.0165</b>	<b>1.4835</b>	<b>0.4014</b>	<b>0.0156</b>	<b>0.4170</b>		<b>2,683.757 1</b>	<b>2,683.757 1</b>	<b>0.0695</b>		<b>2,685.495 3</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5505	0.0000	0.5505	0.0594	0.0000	0.0594			0.0000			0.0000
Off-Road	3.8272	22.5884	113.7413	0.2423		0.9325	0.9325		0.8892	0.8892	0.0000	23,413.42 12	23,413.42 12	7.5497		23,602.16 27
<b>Total</b>	<b>3.8272</b>	<b>22.5884</b>	<b>113.7413</b>	<b>0.2423</b>	<b>0.5505</b>	<b>0.9325</b>	<b>1.4830</b>	<b>0.0594</b>	<b>0.8892</b>	<b>0.9487</b>	<b>0.0000</b>	<b>23,413.42 12</b>	<b>23,413.42 12</b>	<b>7.5497</b>		<b>23,602.16 27</b>



## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1110	3.1670	0.7152	0.0174	0.5550	0.0112	0.5662	0.1596	0.0107	0.1703		1,834.016 0	1,834.016 0	0.0477		1,835.209 1
Worker	0.3164	0.2161	2.9124	8.5300e-003	0.9120	5.3400e-003	0.9173	0.2418	4.9200e-003	0.2467		849.7412	849.7412	0.0218		850.2862
<b>Total</b>	<b>0.4275</b>	<b>3.3831</b>	<b>3.6276</b>	<b>0.0259</b>	<b>1.4670</b>	<b>0.0165</b>	<b>1.4835</b>	<b>0.4014</b>	<b>0.0156</b>	<b>0.4170</b>		<b>2,683.757 1</b>	<b>2,683.757 1</b>	<b>0.0695</b>		<b>2,685.495 3</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Unmitigated	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.3985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0123	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>		<b>0.3012</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.3985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0123	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>		<b>0.3012</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Summer

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

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

Equipment Type	Number
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**11.0 Vegetation**

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OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**OBMPU - Project Category 4 (Construction - Mitigated)**  
**San Bernardino-South Coast County, Winter**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	871.20	1000sqft	20.00	871,200.00	0
Other Non-Asphalt Surfaces	420.00	1000sqft	9.64	420,000.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data



## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

## Project Characteristics -

Land Use - General Light Industry = Water Treatment and Regional Water Treatment Facility; Other Non-Asphalt Surfaces = Conveyance

Construction Phase - Analysis assumes construction of a single Water Treatment and Regional Water Treatment Facility and Pipelines that would be constructed within an 18-month period

Off-road Equipment - Based on information provided in the Project Description

Trips and VMT - Based on information provided in the Project Description

Grading - Based on the Project Description, the average area of disturbance of each site is anticipated to be 2 acres on any given day.

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - All equipment operating at >150 hp are required to be equipped with Tier 3 or better engines. Increase watering to 4 times per day.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	45.00	547.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	3/4/2021	7/1/2022
tblEnergyUse	LightingElect	2.93	0.00
tblEnergyUse	NT24E	5.02	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	T24E	2.20	0.00

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

tblEnergyUse	T24NG	15.36	0.00
tblGrading	AcresOfGrading	273.50	1,092.00
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblSolidWaste	SolidWasteGenerationRate	1,080.29	0.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	0.00	15.00
tblTripsAndVMT	WorkerTripLength	14.70	40.00
tblTripsAndVMT	WorkerTripNumber	70.00	30.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	201,465,000.00	0.00

## 2.0 Emissions Summary

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	12.5027	115.3614	79.3036	0.2674	3.5841	4.3929	7.9770	0.6300	4.0443	4.6743	0.0000	26,027.75 01	26,027.75 01	7.6197	0.0000	26,218.24 35
2022	11.0180	92.2851	74.9125	0.2671	3.5841	3.4643	7.0484	0.6300	3.1899	3.8199	0.0000	25,992.44 39	25,992.44 39	7.6191	0.0000	26,182.92 06
Maximum	12.5027	115.3614	79.3036	0.2674	3.5841	4.3929	7.9770	0.6300	4.0443	4.6743	0.0000	26,027.75 01	26,027.75 01	7.6197	0.0000	26,218.24 35

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.4411	27.7190	117.2049	0.2674	2.0174	1.0812	3.0986	0.4609	1.0265	1.4874	0.0000	26,027.75 01	26,027.75 01	7.6197	0.0000	26,218.24 35
2022	4.2765	26.0497	116.8151	0.2671	2.0174	0.9491	2.9665	0.4608	0.9049	1.3658	0.0000	25,992.44 39	25,992.44 39	7.6191	0.0000	26,182.92 06
Maximum	4.4411	27.7190	117.2049	0.2674	2.0174	1.0812	3.0986	0.4609	1.0265	1.4874	0.0000	26,027.75 01	26,027.75 01	7.6197	0.0000	26,218.24 35

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	62.94	74.11	-51.75	0.00	43.71	74.16	59.63	26.85	73.30	66.41	0.00	0.00	0.00	0.00	0.00	0.00

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>0.3012</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>0.3012</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

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

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2021	7/1/2022	7	547	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 1092****Acres of Paving: 9.64****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Off-Highway Trucks	15	8.00	402	0.38
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Cranes	3	8.00	231	0.29
Grading	Plate Compactors	3	8.00	8	0.43
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	6	8.00	97	0.37

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	28	30.00	15.00	0.00	40.00	40.00	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Grading - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1171	0.0000	2.1171	0.2286	0.0000	0.2286			0.0000			0.0000
Off-Road	12.0241	111.5518	75.9738	0.2421		4.3742	4.3742		4.0266	4.0266		23,404.58 40	23,404.58 40	7.5468		23,593.25 40
<b>Total</b>	<b>12.0241</b>	<b>111.5518</b>	<b>75.9738</b>	<b>0.2421</b>	<b>2.1171</b>	<b>4.3742</b>	<b>6.4913</b>	<b>0.2286</b>	<b>4.0266</b>	<b>4.2552</b>		<b>23,404.58 40</b>	<b>23,404.58 40</b>	<b>7.5468</b>		<b>23,593.25 40</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1213	3.5572	0.8065	0.0174	0.5550	0.0132	0.5683	0.1596	0.0127	0.1723		1,833.0928	1,833.0928	0.0520		1,834.3915
Worker	0.3572	0.2524	2.5233	7.9300e-003	0.9120	5.5000e-003	0.9175	0.2418	5.0700e-003	0.2469		790.0733	790.0733	0.0210		790.5980
<b>Total</b>	<b>0.4786</b>	<b>3.8096</b>	<b>3.3298</b>	<b>0.0253</b>	<b>1.4670</b>	<b>0.0187</b>	<b>1.4857</b>	<b>0.4014</b>	<b>0.0177</b>	<b>0.4191</b>		<b>2,623.1662</b>	<b>2,623.1662</b>	<b>0.0729</b>		<b>2,624.9895</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5505	0.0000	0.5505	0.0594	0.0000	0.0594			0.0000			0.0000
Off-Road	3.9626	23.9094	113.8751	0.2421		1.0624	1.0624		1.0088	1.0088	0.0000	23,404.5839	23,404.5839	7.5468		23,593.2540
<b>Total</b>	<b>3.9626</b>	<b>23.9094</b>	<b>113.8751</b>	<b>0.2421</b>	<b>0.5505</b>	<b>1.0624</b>	<b>1.6129</b>	<b>0.0594</b>	<b>1.0088</b>	<b>1.0682</b>	<b>0.0000</b>	<b>23,404.5839</b>	<b>23,404.5839</b>	<b>7.5468</b>		<b>23,593.2540</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1213	3.5572	0.8065	0.0174	0.5550	0.0132	0.5683	0.1596	0.0127	0.1723		1,833.0928	1,833.0928	0.0520		1,834.3915
Worker	0.3572	0.2524	2.5233	7.9300e-003	0.9120	5.5000e-003	0.9175	0.2418	5.0700e-003	0.2469		790.0733	790.0733	0.0210		790.5980
<b>Total</b>	<b>0.4786</b>	<b>3.8096</b>	<b>3.3298</b>	<b>0.0253</b>	<b>1.4670</b>	<b>0.0187</b>	<b>1.4857</b>	<b>0.4014</b>	<b>0.0177</b>	<b>0.4191</b>		<b>2,623.1662</b>	<b>2,623.1662</b>	<b>0.0729</b>		<b>2,624.9895</b>

**3.2 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1171	0.0000	2.1171	0.2286	0.0000	0.2286			0.0000			0.0000
Off-Road	10.5687	88.8238	71.8388	0.2423		3.4477	3.4477		3.1743	3.1743		23,413.4212	23,413.4212	7.5497		23,602.1627
<b>Total</b>	<b>10.5687</b>	<b>88.8238</b>	<b>71.8388</b>	<b>0.2423</b>	<b>2.1171</b>	<b>3.4477</b>	<b>5.5648</b>	<b>0.2286</b>	<b>3.1743</b>	<b>3.4029</b>		<b>23,413.4212</b>	<b>23,413.4212</b>	<b>7.5497</b>		<b>23,602.1627</b>



## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1139	3.2343	0.7557	0.0172	0.5550	0.0113	0.5663	0.1596	0.0108	0.1704		1,817.4390	1,817.4390	0.0506		1,818.7028
Worker	0.3355	0.2271	2.3180	7.6400e-003	0.9120	5.3400e-003	0.9173	0.2418	4.9200e-003	0.2467		761.5837	761.5837	0.0189		762.0550
<b>Total</b>	<b>0.4493</b>	<b>3.4613</b>	<b>3.0738</b>	<b>0.0249</b>	<b>1.4670</b>	<b>0.0166</b>	<b>1.4836</b>	<b>0.4014</b>	<b>0.0157</b>	<b>0.4171</b>		<b>2,579.0227</b>	<b>2,579.0227</b>	<b>0.0694</b>		<b>2,580.7579</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5505	0.0000	0.5505	0.0594	0.0000	0.0594			0.0000			0.0000
Off-Road	3.8272	22.5884	113.7413	0.2423		0.9325	0.9325		0.8892	0.8892	0.0000	23,413.4212	23,413.4212	7.5497		23,602.1627
<b>Total</b>	<b>3.8272</b>	<b>22.5884</b>	<b>113.7413</b>	<b>0.2423</b>	<b>0.5505</b>	<b>0.9325</b>	<b>1.4830</b>	<b>0.0594</b>	<b>0.8892</b>	<b>0.9487</b>	<b>0.0000</b>	<b>23,413.4212</b>	<b>23,413.4212</b>	<b>7.5497</b>		<b>23,602.1627</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**3.2 Grading - 2022****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1139	3.2343	0.7557	0.0172	0.5550	0.0113	0.5663	0.1596	0.0108	0.1704		1,817.439 0	1,817.439 0	0.0506		1,818.702 8
Worker	0.3355	0.2271	2.3180	7.6400e-003	0.9120	5.3400e-003	0.9173	0.2418	4.9200e-003	0.2467		761.5837	761.5837	0.0189		762.0550
<b>Total</b>	<b>0.4493</b>	<b>3.4613</b>	<b>3.0738</b>	<b>0.0249</b>	<b>1.4670</b>	<b>0.0166</b>	<b>1.4836</b>	<b>0.4014</b>	<b>0.0157</b>	<b>0.4171</b>		<b>2,579.022 7</b>	<b>2,579.022 7</b>	<b>0.0694</b>		<b>2,580.757 9</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
Unmitigated	19.6554	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.3985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0123	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>		<b>0.3012</b>

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2446					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.3985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0123	1.2100e-003	0.1320	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2826	0.2826	7.5000e-004		0.3012
<b>Total</b>	<b>19.6554</b>	<b>1.2100e-003</b>	<b>0.1320</b>	<b>1.0000e-005</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>4.7000e-004</b>	<b>4.7000e-004</b>		<b>0.2826</b>	<b>0.2826</b>	<b>7.5000e-004</b>		<b>0.3012</b>

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## OBMPU - Project Category 4 (Construction - Mitigated) - San Bernardino-South Coast County, Winter

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

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

Equipment Type	Number
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**11.0 Vegetation**

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