Final

HEMET 30 RESIDENTIAL PROJECT
COUNTY OF RIVERSIDE, CALIFORNIA

Air Quality, Greenhouse Gas and Energy Technical Report

Prepared for
DDE, Hemet, LLC
3470 Wilshire Blvd., Suite 1020
Los Angeles, CA 90010

June 2022

ESA

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
^0C	Degrees Celsius
^0F	Degrees Fahrenheit
AB	Assembly Bill
AQMP	Air Quality Management Plan
AR4	Fourth Assessment Report
ATCM	Airborne Toxic Control Measure
BACT	Vest available control technology
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy Standard
CAPCOA	California Air Pollution Control Officers
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CNRA	California Natural Resources Agency
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
County	County of Riverside
DPM	Diesel Particulate Matter
EISA	Energy Independence and Security Act
GHG	Greenhouse Gas
GWh	Gigawatt hours
GWP	Global warming potential
HAP	Hazardous air pollutants
HFC	hydrofluorocarbons
ICT	Innovative Clean Transit Program
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
mpg	Miles per gallon
$MTCO_2e$	Metric tons carbon dioxide equivalent
MMT	Million metric tons
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards

Acronym	Description
NHTSA	National highway traffic safety administration
N_2O	Nitrous Oxide
NO	Nitric oxide
NO_2	Nitrogen dioxide
NOx	Oxides of nitrogen
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	California Office of Planning and Research
Pavley	AB 1493
Pb	lead
PFC	perfluorocarbons
PM2.5	Particulate matter of 2.5 micrometers or less
PM10	Particulate matter of 10 micrometers or less
ppb	Parts per billion
ppm	Parts per million
Project	Hemet 30 Residential Project
PVC	Polyvinyl chloride
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient vehicle rule
SAR	Second Assessment Report
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF_6	Sulfur hexafluoride
SIP	State implementation plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	Sulfur dioxide
SO_4^{2-}	sulfates
SR	State Route
SRA	Source receptor area
SWP	State Water Project
TAC	Toxic air contaminant
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
ZE	Zero Emission
ZEV	Zero-emission vehicles
$\mu g/m^3$	Microgram per meter cubed

EXECUTIVE SUMMARY

The purpose of this Air Quality, Greenhouse Gas and Energy Technical Report is to assess and discuss the impacts of potential air quality and greenhouse gas (GHG) emission and energy consumption impacts that may occur with the implementation of the proposed Hemet 30 Residential Project (Proposed Project). The Proposed Project is located on the south side of State Route (SR)-74 to the southeast of the intersection of 4 Seasons Boulevard and SR-74 in unincorporated Riverside County. The Proposed Project would construction 144 single family residential units on approximately 29 acres. Construction is anticipated to start in mid-2022 with completion in late 2024.

The analysis describes the existing air quality, GHG and energy environment in the vicinity of the project limits, estimates future air pollutant and GHG emissions along with energy consumption resulting from construction and operation of the project, and identifies the potential for significant impacts based on applicable threshold of significance. Calculation worksheets and technical data used in this analysis are provided in Appendices A through F of this report. The findings of the analyses are as follows:

- The incremental increase in regional emissions from construction of the project would not exceed the regional significance thresholds for criteria pollutants set forth by the South Coast Air Quality Management District (SCAQMD). Thus, construction of the Project would not result in a regional violation of applicable air quality standards or jeopardize the timely attainment of such standards in the South Coast Air Basin (the Air Basin).

- The increase in on-site emissions from construction of the Project would not exceed the localized significance thresholds set forth by the SCAQMD. Thus, construction of the Project would not result in a localized violation of applicable air quality standards or expose off-site receptors to substantial levels of regulated air contaminants.

- The incremental increase in regional emissions from operation of the Project would not exceed the regional significance thresholds set forth by the SCAQMD. Thus, operation of the Project would not result in a regional violation of applicable air quality standards or jeopardize the timely attainment of such standards in the Air Basin.

- The increase in on-site emissions from operation of the Project would not exceed the localized significance thresholds set forth by the SCAQMD. Thus, operation of the Project would not result in a localized violation of applicable air quality standards or expose off-site receptors to substantial levels of regulated air contaminants.

- Emissions from the increase in traffic due to operation of the Project would not have a significant impact upon 1-hour or 8-hour local carbon monoxide (CO) concentrations due

to mobile source emissions. Thus, the Project would not result in a localized violation of CO air quality standards or expose off-site receptors to substantial levels of CO emissions.

- Construction of the Project would not generate emissions of toxic air contaminants (TAC) that would exceed the SCAQMD health risk significance threshold of an incremental increase in cancer risk of 10 in one million. Thus, construction of the Project would not expose off-site receptors to substantial levels of regulated air contaminants.

- Operation of the Project would not generate TAC emissions that would exceed the SCAQMD health risk significance threshold of an incremental increase in cancer risk of 10 in one million. Thus, operation of the Project would not expose off-site receptors to substantial levels of regulated air contaminants.

- Construction and operation of the Project would not result in the generation of odors affecting a substantial number of people. Therefore, odor impacts would be less than significant.

- The Project would not conflict with applicable strategies in the SCAQMD Air Quality Management Plan and would not exceed growth projections for the area. The Project would not result in a significant cumulative air quality impact.

- The Project would not result in the generation of GHG emissions that would have a significant impact and would not conflict with applicable plans, policies and strategies to reduce GHG emissions. The Project would not result in significant GHG emission impacts.

- The Project would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

- The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

SECTION 1
Introduction

The Hemet 30 Residential Project site is currently vacant land that the Proposed Project will develop with 144 single family residential homes. Construction is anticipated to begin in mid-2022 with completion in late 2024.

This Air Quality, GHG and Energy Technical Report evaluates the Proposed Project's potential impacts from air quality and GHG emissions, and energy consumption, as well as its potential cumulative impacts. The Air Quality analysis describes and evaluates the pollutant emission and related air quality impacts that could result from construction and operation of the Proposed Project. The report contains: (1) a description of the existing land uses as they pertain to air emissions; (2) a summary of the federal, State, and local regulations related to air quality, including those set forth within the SCAQMD Air Quality Management Plan (AQMP), and applicable County of Riverside (County) plans; and (3) an analysis of the potential impacts related to air quality associated with the implementation of the Proposed Project, as well as identification of potentially feasible measures that could mitigate significant impacts.

The GHG analysis addresses the potential impacts of GHG emissions from the Proposed Project. The section contains: (1) a summary of the relationship between GHG emissions and global climate change; (2) an overview of applicable plans, policies, and regulations related to GHG emissions; (3) an assessment of current GHG emissions at the County, State, national, and global levels; (4) a quantitative analysis of future GHG emissions associated with construction and operation of the Proposed Project; and (5) an analysis of the consistency of the Proposed Project with applicable regulations, plans, and policies to reduce GHGs as set forth by the State of California, SCAQMD, Southern California Association of Governments (SCAG) and the County of Riverside.

The Project's anticipated energy use is estimated, the potential for impacts due to inefficient or unnecessary consumption, or conflicts with energy related plans are assessed, and conservation measures are considered to address significant impacts if identified.

The objectives of this technical report are to:

1. Describe the existing environment and regulatory framework for the Proposed Project;
2. Evaluate the Proposed Project's construction and operational-related emissions and energy consumption and the potential for significant impacts;
3. For identified significant impacts, provide feasible mitigation measures to reduce impacts.

The analysis was developed based on a mixture of project-specific as well as default construction and operational characteristics of the Proposed Project as discussed in the methodology portion of Section 3 and included in Appendix A. Calculations and modeling outputs are included in Appendix B through F.

1.1 Project Location

The project is located on the south side of State Route (SR) 74 to the southeast of the intersection of 4 Seasons Boulevard and SR-74 in unincorporated Riverside County, California. As shown in Figure 1, *Regional Location Map,* Perimeter Road will bound the Project on the west, and California Road is nearby to the east.

1.2 Existing Site Conditions

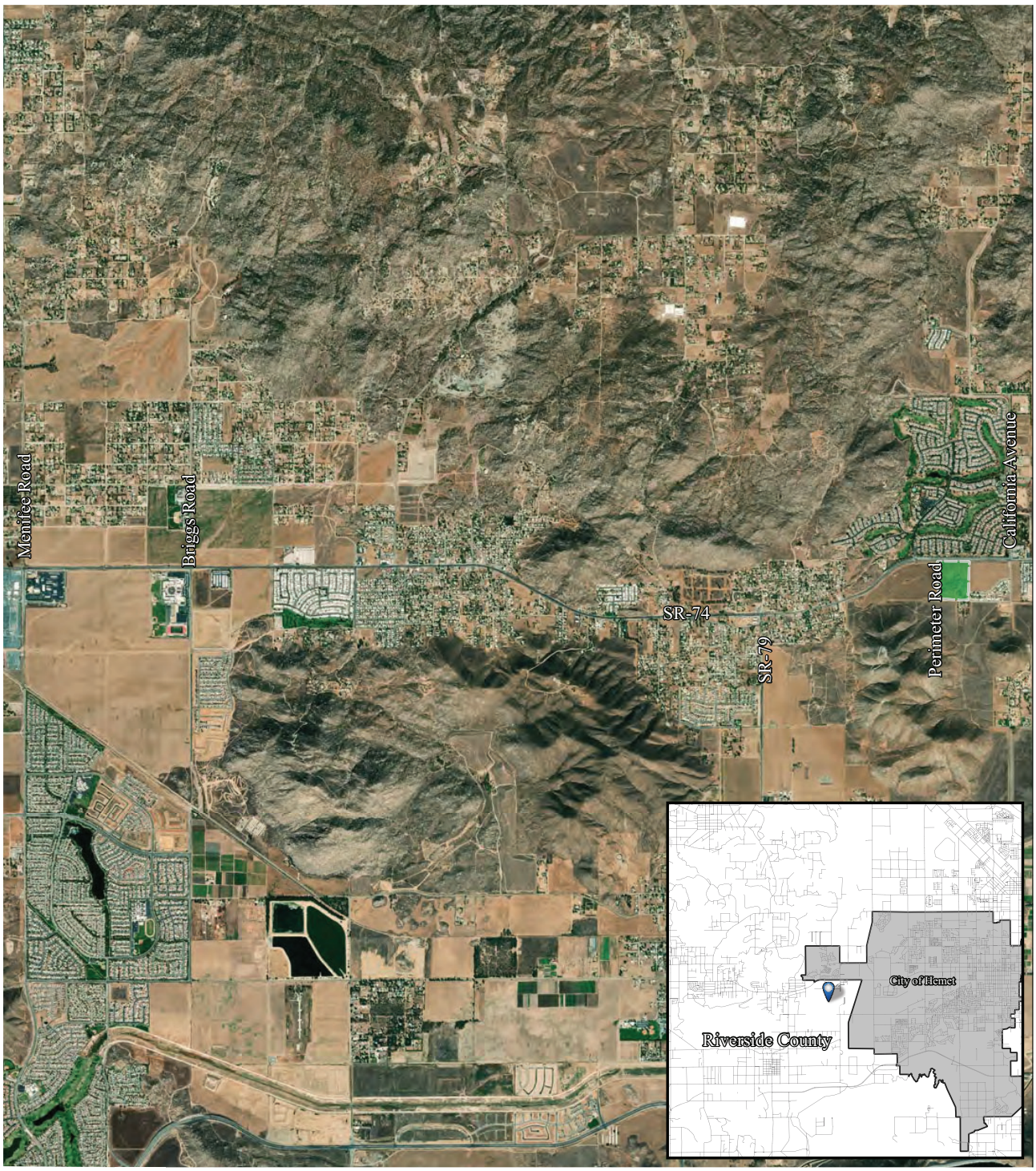
The Project Site is bordered by SR-74 to the north with residences beyond, residential neighborhood to the south and southeast, and vacant land to the west. SR-79 is planned to pass through the southern end of the project site. The Project site is currently vacant land and therefore has no current air quality or GHG emission or energy consumption.

1.3 Project Description

The project site is vacant and proposed to include 144 single-family dwelling units. Access to the project site will be provided at Perimeter Road and SR-74 and will be restricted to right-in/right out access. Access will also be provided via the west-leg of the existing intersection at Joel Drive and Donald Street. Figure 2, *Project Layout Plan,* illustrates the site access locations for the proposed project.

1.4 Project Construction

Construction of the Proposed Project is estimated to require approximately 30 months, depending on weather conditions and other variables. Construction is currently anticipated to begin in mid-2022 with completion in late 2024. Construction activities are anticipated to occur between 7:00 a.m. and 7:00 p.m. Monday through Friday. Construction of the Proposed Project would include activities implemented in phases as outlined below in **Table 1**, *Construction Schedule,* which may involve overlap. It is anticipated that building construction, architectural coating, and paving phases may overlap. This inclusion of overlap provides the most flexibility for the schedule. The provided schedule is an assumption of schedule and while phases will maintain the total number of construction days, the start and end dates may shift. The emissions were estimated using 2021 as a conservative estimation of equipment emissions. If construction were to start later than indicated, it is anticipated that emissions may actually be reduced due to the State required timed phase-in of cleaner equipment and vehicles.



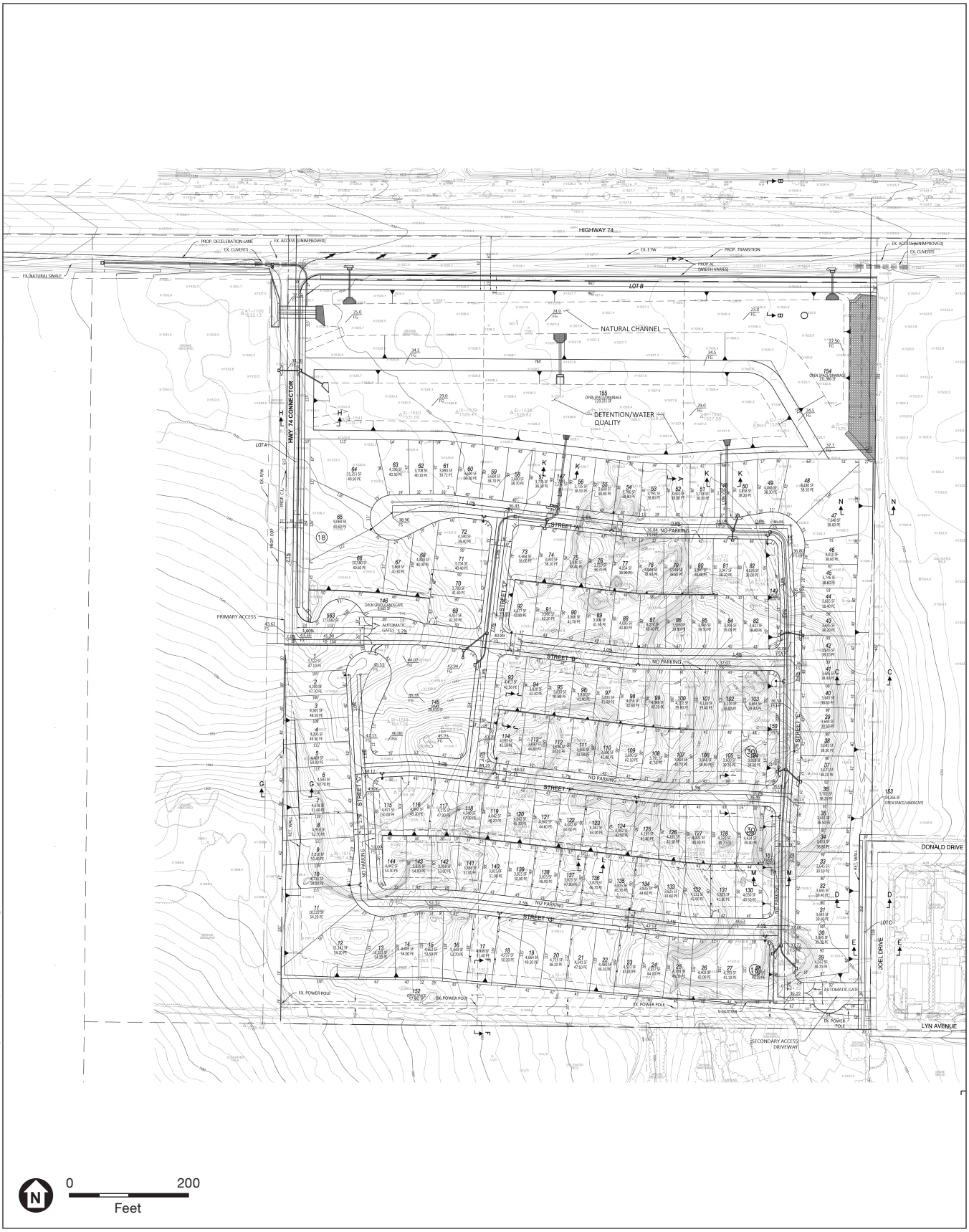
SOURCE: Translutions, 2019

Hemet 30 Residential

Figure 1
Regional Project Location Map

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SOURCE: Anderson Consulting Engineers, Inc., 2022

Hemet 30 Residential

Figure 2
Project Layout Plan

D2019015540 - Hemet 30 Residential Project\05 Graphics-GIS-Modeling

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TABLE 1
CONSTRUCTION SCHEDULE

Phases	Start Year	End Year	Days
Total	2022	2024	653
Site Preparation/Grading	2022	2022	53
Trenching/Utilities	2022	2022	82
Building Construction	2022	2024	518
Paving	2022	2023	41
Architectural Coating	2022	2024	100

Source: DDE, Hemet, LLC and ESA, 2020

1.5 Air Quality and Greenhouse Gas Fundamentals

1.5.1 Air Quality

Criteria Pollutants

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the United States Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. A description of the health effects of these criteria air pollutants are provided below.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds (VOCs) and nitrogen oxides (NO_X) in the presence of sunlight under favorable meteorological conditions, such as high temperature and stagnation episodes. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. According to the USEPA, ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath.[1] Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases, such as asthma, emphysema, and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease.[2] Long-

1 United States Environmental Protection Agency (USEPA), Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution, accessed October 1, 2020.

2 USEPA, Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution, accessed October 1, 2020.

term exposure to ozone is linked to aggravation of asthma, and is likely to be one of many causes of asthma development and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children.[3] According to the California Air Resources Board (CARB), inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath.[4] The USEPA states that people most at risk from breathing air containing ozone include people with asthma, children, older adults, and people, who are active outdoors, especially outdoor workers.[5] Children are at greatest risk from exposure to ozone because their lungs are still developing, and they are more likely to be active outdoors when ozone levels are high, which increases their exposure.[6] According to CARB, studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to ozone and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults.[7] Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures.[8] Further research may be able to better distinguish between health effects in children and adults.[9]

Volatile Organic Compounds (VOCs): Volatile Organic Compounds (VOCs) are organic chemical compounds of carbon and are not "criteria" pollutants themselves; however, they contribute with NO_X to form ozone, and are regulated to prevent the formation of ozone.[10] According to CARB, some VOCs are highly reactive and play a critical role in the formation of ozone, other VOCs have adverse health effects, and, in some cases, VOCs can be both highly reactive and have adverse health effects.[11] VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids, internal combustion associated with motor vehicle usage, and consumer products (e.g., architectural coatings, etc.).[12]

Nitrogen Dioxide (NO_2) and Nitrogen Oxides (NO_X): NO_X is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include nitrogen dioxide (NO_2) and nitric oxide (NO). Ambient air quality standards have been promulgated

3 USEPA, Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution, accessed October 1, 2020.

4 California Air Resources Board (CARB), Ozone & Health, Health Effects of Ozone, https://ww2.arb.ca.gov/resources/ozone-and-health, accessed October 1, 2020.

5 USEPA, Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution, accessed October 1, 2020.

6 USEPA, Health Effects of Ozone Pollution, https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution, accessed October 1, 2020.

7 CARB, Ozone & Health, Health Effects of Ozone, https://ww2.arb.ca.gov/resources/ozone-and-health, accessed October 1, 2020.

8 CARB, Ozone & Health, Health Effects of Ozone, https://ww2.arb.ca.gov/resources/ozone-and-health, accessed October 1, 2020.

9 CARB, Ozone & Health, Health Effects of Ozone, https://ww2.arb.ca.gov/resources/ozone-and-health, accessed October 1, 2020.

10 USEPA, Technical Overview of Volatile Organic Compounds, https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds, accessed October 1, 2020.

11 CARB, Air Quality and Land Use Handbook: A Community Health Perspective, page A-4.

12 CARB, Air Quality and Land Use Handbook: A Community Health Perspective, page A-4.

for NO_2, which is a reddish-brown, reactive gas.[13] The principal form of NO_X produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO_2, creating the mixture of NO and NO_2 referred to as NO_X.[14] Major sources of NO_X include emissions from cars, trucks and buses, power plants, and off-road equipment.[15] The terms NO_X and NO_2 are sometimes used interchangeably. However, the term NO_X is typically used when discussing emissions, usually from combustion-related activities, and the term NO_2 is typically used when discussing ambient air quality standards. Where NO_X emissions are discussed in the context of the thresholds of significance or impact analyses, the discussions are based on the conservative assumption that all NO_X emissions would oxidize in the atmosphere to form NO_2. According to the USEPA, short-term exposures to NO_2 can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms, while longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections.[16] According to CARB, controlled human exposure studies show that NO_2 exposure can intensify responses to allergens in allergic asthmatics.[17] In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses.[18] Infants and children are particularly at risk from exposure to NO_2 because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration, while in adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease.[19] CARB states that much of the information on distribution in air, human exposure and dose, and health effects is specifically for NO_2 and there is only limited information for NO and NO_X, as well as large uncertainty in relating health effects to NO or NO_X exposure.[20]

Carbon Monoxide (CO): Carbon monoxide (CO) is primarily emitted from combustion processes and motor vehicles due to the incomplete combustion of fuel, such as natural gas, gasoline, or wood, with the majority of outdoor CO emissions from mobile sources.[21] According to the USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported

13 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health, accessed October 1, 2020.

14 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health, accessed October 1, 2020.

15 USEPA, Nitrogen Dioxide (NO_2) Pollution, https://www.epa.gov/no2-pollution/basic-information-about-no2, accessed October 1, 2020.

16 USEPA, Nitrogen Dioxide (NO_2) Pollution, https://www.epa.gov/no2-pollution/basic-information-about-no2, accessed October 1, 2020.

17 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health, accessed October 1, 2020.

18 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health, accessed October 1, 2020.

19 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health, accessed October 1, 2020.

20 CARB, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health, accessed October 1, 2020.

21 CARB, Carbon Monoxide & Health, https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health, accessed October 1, 2020.

in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death.[22] Very high levels of CO are not likely to occur outdoors; however, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease since these people already have a reduced ability for getting oxygenated blood to their hearts and are especially vulnerable to the effects of CO when exercising or under increased stress.[23] In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina.[24] According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain.[25] For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress; inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance.[26] Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO.[27]

Sulfur Dioxide (SO_2): According to the USEPA, the largest source of sulfur dioxide (SO_2) emissions in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities, while smaller sources of SO_2 emissions include industrial processes, such as extracting metal from ore; natural sources, such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.[28] In 2006, California phased-in the ultra-low-sulfur diesel regulation limiting vehicle diesel fuel to a sulfur content not exceeding 15 parts per million, down from the previous requirement of 500 parts per million, substantially reducing emissions of sulfur from diesel combustion.[29] According to the USEPA, short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult.[30] According to CARB, health effects at levels near the State one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation, such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity, and exposure at elevated levels of SO_2 (above one part per million (ppm)) results in increased incidence of

22 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air, https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution, accessed October 1, 2020.

23 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air, https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution, accessed October 1, 2020.

24 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air, https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution, accessed October 1, 2020.

25 CARB, Carbon Monoxide & Health, https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health, accessed October 1, 2020.

26 CARB, Carbon Monoxide & Health, https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health, accessed October 1, 2020.

27 CARB, Carbon Monoxide & Health, https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health, accessed October 1, 2020.

28 USEPA, Sulfur Dioxide (SO_2) Pollution, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics, accessed October 1, 2020.

29 CARB, Final Regulation Order, Amendments to the California Diesel Fuel Regulations, Amend Section 2281, Title 13, California Code of Regulations, approved July 15, 2004.

30 USEPA, Sulfur Dioxide (SO_2) Pollution, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics, accessed October 1, 2020.

pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.[31] Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO_2.[32,33]

Particulate Matter (PM10 and PM2.5): Particulate matter air pollution is a mixture of solid particles and liquid droplets found in the air.[34] Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye, while other particles are so small they can only be detected using an electron microscope.[35] Particles are defined by their diameter for air quality regulatory purposes: inhalable particles with diameters that are generally ten micrometers (μm) and smaller (PM10); and fine inhalable particles with diameters that are generally 2.5 μm and smaller (PM2.5).[36] Thus, PM2.5 comprises a portion or a subset of PM10. Sources of PM10 emissions include dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, and wind-blown dust from open lands.[37] Sources of PM2.5 emissions include combustion of gasoline, oil, diesel fuel, or wood.[38] PM10 and PM2.5 may be either directly emitted from sources (primary particles) or formed in the atmosphere through chemical reactions of gases (secondary particles), such as SO_2, NO_X, and certain organic compounds.[39] According to CARB, both PM10 and PM2.5 can be inhaled, with some depositing throughout the airways; PM_{10} is more likely to deposit on the surfaces of the larger airways of the upper region of the lung, while PM2.5 is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage, and lung inflammation.[40] Short-term (up to 24 hours duration) exposure to PM10 has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits.[41] The effects of long-term (months or years) exposure to PM10 are less clear, although studies suggest a link between long-term PM10 exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that

31 CARB, Sulfur Dioxide & Health, https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health, accessed October 1, 2020.

32 CARB, Sulfur Dioxide & Health, https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health, accessed October 1, 2020.

33 USEPA, Sulfur Dioxide (SO_2) Pollution, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics, accessed October 1, 2020.

34 USEPA, Particulate Matter (PM) Pollution, https://www.epa.gov/pm-pollution/particulate-matter-pm-basics, accessed October 1, 2020.

35 USEPA, Particulate Matter (PM) Pollution, https://www.epa.gov/pm-pollution/particulate-matter-pm-basics, accessed October 1, 2020.

36 USEPA, Particulate Matter (PM) Pollution, https://www.epa.gov/pm-pollution/particulate-matter-pm-basics, accessed October 1, 2020.

37 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health, accessed October 1, 2020.

38 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health, accessed October 1, 2020.

39 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health, accessed October 1, 2020.

40 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health, accessed October 1, 2020.

41 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health, accessed October 1, 2020.

particulate matter in outdoor air pollution causes lung cancer.[42] Short-term exposure to PM2.5 has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days and long-term exposure to PM2.5 has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.[43] According to CARB, populations most likely to experience adverse health effects with exposure to PM10 and PM2.5 include older adults with chronic heart or lung disease, children, and asthmatics and children and infants are more susceptible to harm from inhaling pollutants such as PM10 and PM2.5 compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems.[44]

Lead (Pb): Major sources of lead emissions include ore and metals processing, piston-engine aircraft operating on leaded aviation fuel, waste incinerators, utilities, and lead-acid battery manufacturers.[45] In the past, leaded gasoline was a major source of lead emissions; however, the removal of lead from gasoline has resulted in a decrease of lead in the air by 98 percent between 1980 and 2014.[46] Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system, and affects the oxygen carrying capacity of blood.[47] The lead effects most commonly encountered in current populations are neurological effects in children, such as behavioral problems and reduced intelligence, anemia, and liver or kidney damage.[48] Excessive lead exposure in adults can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain.[49]

Other Criteria Pollutants (California Only)

The California Ambient Air Quality Standards (CAAQS) regulate the same criteria pollutants as the National Ambient Air Quality Standards (NAAQS) but, in addition, regulate State-identified criteria pollutants, including sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride.[50] A description of the health effects of the State-identified criteria air pollutants relevant to the Project is provided below. As the Project would not generate emissions of hydrogen sulfide or vinyl chloride, they are not discussed.

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42 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health, accessed October 1, 2020.

43 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health, accessed October 1, 2020.

44 CARB, Inhalable Particulate Matter and Health (PM2.5 and PM10), https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm, accessed October 1, 2020.

45 USEPA, Lead Air Pollution, https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution, accessed October 1, 2020.

46 USEPA, Lead Air Pollution, https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution, accessed October 1, 2020.

47 USEPA, Lead Air Pollution, https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution, accessed October 1, 2020.

48 CARB, Lead & Health, https://ww2.arb.ca.gov/resources/lead-and-health, accessed October 1, 2020.

49 CARB, Lead & Health, https://ww2.arb.ca.gov/resources/lead-and-health, accessed October 1, 2020.

50 CARB, California Ambient Air Quality Standards, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards, accessed October 1, 2020.

Sulfates (SO_4^{2-}): Sulfates in the environment occur as a result of SO_2 (sulfur dioxide) being converted to SO_4^{2-} compounds in the atmosphere where sulfur is first oxidized to SO_2 during the combustion process of sulfur containing, petroleum-derived fuels (e.g., gasoline and diesel fuel).[51] Exposure to SO_4^{2-}, which are part of PM2.5, results in health effects similar to those from exposure to PM2.5 including reduced lung function, aggravated asthmatic symptoms, and increased risk of emergency department visits, hospitalizations, and death in people who have chronic heart or lung diseases.[52] Population groups with higher risks of experiencing adverse health effects with exposure to SO_4^{2-} include children, asthmatics, and older adults who have chronic heart or lung diseases.[53]

Visibility-Reducing Particles: Visibility-reducing particles come from a variety of natural and manmade sources and can vary greatly in shape, size and chemical composition. Visibility reduction is caused by the absorption and scattering of light by the particles in the atmosphere before it reaches the observer. Certain visibility-reducing particles are directly emitted to the air, such as windblown dust and soot, while others are formed in the atmosphere through chemical transformations of gaseous pollutants (e.g., sulfates, nitrates, organic carbon particles), which are the major constituents of particulate matter. As the number of visibility reducing particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range.[54] Exposure to some haze-causing pollutants have been linked to adverse health impacts similar to PM10 and PM2.5 as discussed above.[55]

Air Toxics

Toxic Air Contaminants

TACs, or hazardous air pollutants (HAPs) as defined by the USEPA, are defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard.[56] For consistency within this document they will be referred to as TACs. TACs are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects. TACs are emitted by a variety of industrial processes such as petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. TACs may exist as PM10 and PM2.5 or as vapors (gases).[57] TACs include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources. The emission of a TAC does not automatically create a health hazard. Other factors, such as the amount of the TAC, its toxicity, how it is released into the air, the weather, and the terrain, all influence whether the emission could be hazardous to human health. Emissions of TACs into the air can be damaging to human health and to the environment. Human exposure to TACs at sufficient concentrations and durations can

51 CARB, Sulfate & Health, https://ww2.arb.ca.gov/resources/sulfate-and-health, accessed October 1, 2020.

52 CARB, Sulfate & Health, https://ww2.arb.ca.gov/resources/sulfate-and-health, accessed October 1, 2020.

53 CARB, Sulfate & Health, https://ww2.arb.ca.gov/resources/sulfate-and-health, accessed October 1, 2020.

54 CARB, Visibility-Reducing Particles and Health, https://ww2.arb.ca.gov/resources/visibility-reducing-particles-and-health, accessed October 1, 2020.

55 CARB, Visibility-Reducing Particles and Health, https://ww2.arb.ca.gov/resources/visibility-reducing-particles-and-health, accessed October 1, 2020.

56 USEPA, Hazardous Air Pollutants, https://www.epa.gov/haps. Accessed April 25, 2019.

57 USEPA, Hazardous Air Pollutants: Sources and Exposure, https://www.epa.gov/haps/hazardous-air-pollutants-sources-and-exposure, Accessed April 25, 2019.

result in cancer, poisoning, and rapid onset of sickness, such as nausea or difficulty in breathing. Other less measurable effects include immunological, neurological, reproductive, developmental, and respiratory problems. TACs deposited onto soil or into lakes and streams affect ecological systems and eventually human health through consumption of contaminated food. The carcinogenic potential of TACs is a particular public health concern because many scientists currently believe that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen poses some risk of contracting cancer.[58]

The public's exposure to TACs is a significant public health issue in California. The Air Toxics "Hotspots" Information and Assessment Act is a State law requiring facilities to report emissions of TACs to air districts.[59] The program is designated to quantify the amounts of potentially HAPs released, the location of the release, the concentrations to which the public is exposed, and the resulting health risks. The State Air Toxics Program (AB 2588) identified over 200 TACs, including the 188 TACs identified in the Clean Air Act (CAA).[60]

The USEPA has assessed this expansive list and identified 21 TACs as Mobile Source Air Toxics (MSATs).[61] MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. USEPA also extracted a subset of these 21 MSAT compounds that it now labels as the nine priority MSATs: 1,3-butaidene, acetaldehyde, acrolein, benzene, diesel particulate matter (DPM)/diesel exhaust organic gases, ethylbenzene, naphthalene, and polycyclic organic matter. While these nine MSATs are considered the priority transportation toxics, USEPA stresses that the lists are subject to change and may be adjusted in future rules.[62]

Diesel Exhaust

According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from the exhaust of diesel-fueled engines, i.e., DPM.[63] DPM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances.

Diesel exhaust is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of many of the urban HAPs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine diesel

58 USEPA, Hazardous Air Pollutants, https://www.epa.gov/haps, Accessed April 25, 2019.

59 California Air Resources Board. *General Information About "Hot Spots."* https://www.arb.ca.gov/ab2588/general.htm. Accessed April 2, 2019.

60 California Air Resources Board. *AB 25188 Air Toxics "Hot Spots" Program.* https://www.arb.ca.gov/ab2588/ab2588.htm. Accessed April 2, 2019.

61 USEPA. Air Toxics Risk Assessment Reference Library, Volume 1 Technical Resource Manual. April 2004. p. 2-1.

62 U.S. Department of Transportation Federal Highway Administration, 2016. Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. October 18, 2016.

63 California Air Resources Board. *The California Almanac of Emissions and Air Quality.* https://www.arb.ca.gov/aqd/almanac/almanac.htm. Accessed April 25, 2019.

particulates are of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements. Diesel exhaust is emitted from a broad range of diesel engines; the on-road diesel engines of trucks, buses and cars and the off-road diesel engines that include locomotives, marine vessels and heavy-duty equipment. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

The most common exposure to DPM is breathing air that contains diesel exhaust. The fine and ultra-fine particles are respirable (similar to PM2.5), which means that they can avoid many of the human respiratory system defense mechanisms and enter deeply into the lung. Exposure to DPM comes from both on-road and off-road engine exhaust that is either directly emitted from the engines or lingering in the atmosphere.

Diesel exhaust causes health effects from long-term chronic exposures. The type and severity of health effects depends upon several factors including the amount of chemical exposure and the duration of exposure. Individuals also react differently to different levels of exposure. There is limited information on exposure to only DPM, but there is enough evidence to indicate that inhalation exposure to diesel exhaust causes chronic health effects as well as having cancer-causing potential.

Because it is part of PM2.5, DPM also contributes to the same non-cancer health effects as PM2.5 exposure. These effects include premature death, hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies. Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.[64]

Gasoline Exhaust

Similar to diesel exhaust, gasoline is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of the same HAPs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine diesel particulates are of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements. Gasoline exhaust is primarily emitted from light-duty passenger vehicles. The compounds in the gas and particles phases can cause health effects from short- and long-term exposures.

1.5.2 Greenhouse Gases

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records

64 California Air Resources Board, Overview: Diesel Exhaust & Health. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed January 2, 2019.

indicate that global climate changes have occurred in the past due to natural phenomena; however, current data increasingly indicate that the current global conditions differ from past climate changes in rate and magnitude. Global climate change attributable to anthropogenic (human) GHG emissions is currently one of the most important and widely debated scientific, economic and political issues in the United States and the world. The extent to which increased concentrations of GHGs have caused or will cause climate change and the appropriate actions to limit and/or respond to climate change are the subject of significant and rapidly evolving regulatory efforts at the federal and state levels of government.

GHGs are those compounds in the Earth's atmosphere which play a critical role in determining temperature near the Earth's surface. More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Not all GHGs possess the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the units of equivalent mass of carbon dioxide (CO_2e). Mass emissions are calculated by converting pollutant specific emissions to CO_2e emissions by applying the proper global warming potential (GWP) value.[65] These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. By applying the GWP ratios, Project-related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The CO_2e values are calculated for construction years as well as existing and Project build-out conditions in order to generate a net change in GHG emissions for construction and operation. Compounds that are regulated as GHGs are discussed below.[66,67]

- **Carbon Dioxide (CO_2):** CO_2 is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO_2 is the reference gas (GWP of 1) for determining the GWPs of other GHGs.[68]

- **Methane (CH_4):** CH_4 is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management,

65 GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its Second Assessment Report (SAR) in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.

66 Intergovernmental Panel on Climate Change (IPCC), Second Assessment Report, Working Group I: The Science of Climate Change, 1995, https://www.ipcc.ch/pdf/climate-changes-1995/ipcc-2nd-assessment/2nd-assessment-en.pdf. Accessed December 2020.

67 IPCC, Fourth Assessment Report (AR4), Working Group I Report: The Physical Science Basis, Table 2.14, 2007, https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html. Accessed December 2020.

68 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.

and leaks in natural gas pipelines. The GWP of CH_4 is 21 in the IPCC SAR and 25 in the IPCC AR4.[69]

- **Nitrous Oxide (N_2O):** N_2O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N_2O is 310 in the IPCC SAR and 298 in the IPCC AR4.[70]

- **Hydrofluorocarbons (HFCs):** HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. The GWP of HFCs ranges from 140 for HFC-152a to 11,700 for HFC-23 in the IPCC SAR and 124 for HFC-152a to 14,800 for HFC-23 in the IPCC AR4.[71]

- **Perfluorocarbons (PFCs):** PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. The GWPs of PFCs range from 6,500 to 9,200 in the IPCC SAR and 7,390 to 17,700 in the IPCC AR4.[72]

- **Sulfur Hexafluoride (SF_6):** SF_6 is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF_6 has a GWP of 23,900 in the IPCC SAR and 22,800 in the IPCC AR4.[73]

Effects of Global Climate Change

Effects of Global Climate Change

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC's *Fifth Assessment Report, Summary for Policy Makers* states that, "it is *extremely likely* that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forces [*sic*] together."[74] A report from the National

69 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.
70 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.
71 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.
72 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.
73 IPCC, AR4, Working Group I Report: The Physical Science Basis, Table 2.14.
74 IPCC, Climate Change 2014: Synthesis Report, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policy Makers, 2014, page 5, http://ipcc.ch/report/ar5/syr/. Accessed December 2020.

Academy of Sciences concluded that 97 to 98 percent of the climate researchers most actively publishing in the field support the tenets of the IPCC in that climate change is very likely caused by human (i.e., anthropogenic) activity.[75]

According to the California EPA, the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; more large forest fires; more drought years; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation.[76] Data regarding potential future climate change impacts are available from the California Natural Resources Agency (CNRA), which in 2009 published the *California Climate Adaptation Strategy*[77] as a response to Executive Order S-13-2008. The CNRA report lists specific recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the *California Climate Adaptation Strategy*, the California Energy Commission (CEC) was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers.[78] The website, known as Cal-Adapt, became operational in 2011.[79] The information provided by the Cal-Adapt website represents a projection of potential future climate scenarios. The data are comprised of the average values from a variety of scenarios and models, and are meant to illustrate how the climate may change based on a variety of different potential social and economic factors. Below is a summary of some of the potential climate change effects and relevant Cal-Adapt data, reported by an array of studies that could be experienced in California as a result of global warming and climate change.

Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.[80]

According to the Cal-Adapt website, the portion of the County in which the Project Site is located could result in an average increase in temperature of approximately 7 degrees (from an annual

75 Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, Expert Credibility in Climate Change, Proceedings of the National Academy of Sciences of the United States of America, 2010, 107:12107-12109.

76 California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, 2006.

77 California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, 2009.

78 California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008.

79 The Cal-Adapt website address is: http://cal-adapt.org.

80 California Energy Commission, Scenarios of Climate Change in California: An Overview, February 2006, https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.169.4744&rep=rep1&type=pdf. Accessed December 2020.

average of 80.9°F to 86.9°F) by 2070-2099, compared to the baseline 1961-1990 period.[81] Data suggests that the predicted future increase in temperatures as a result of climate change could potentially interfere with efforts to control and reduce ground-level ozone in the region.

Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, "Considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change."[82] For example, some studies identify little change in total annual precipitation in projections for California while others show significantly more precipitation. [83] Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full.[84] Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.[85]

The California Department of Water Resources report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta, concludes that "climate change will likely have a significant effect on California's future water resources…[and] future water demand." It also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain." It also reports that the relationship between climate change and its potential effect on water demand is not well understood, but "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.[86] In its *Fifth Assessment Report*, the IPCC states "Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions."[87]

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81 Cal-Adapt, Annual Average Maximum Temperatures for the Project Site area of Hemet, 2020, https://cal-adapt.org/tools/annual-averages/. Accessed December 2020.

82 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003, https://pacinst.org/wp-content/uploads/2003/07/climate_change_and_california_water_resources.pdf. Accessed December 2020.

83 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature.

84 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature.

85 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature.

86 California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, July 2006, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=6454. Accessed December 2020.

87 IPCC, Fifth Assessment Report, Summary for Policy Makers, 2013, page 20.

Hydrology and Sea Level Rise

As discussed above, climate changes could potentially affect: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. Absent planning and preparation, a rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply, and increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a $30 billion agricultural industry that produces one half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; without planning and preparations. Crop-yield could be threatened by a less reliable water supply. Also, greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.[88]

Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise by 2 to 11.5°F (1.1 to 6.4°C) by 2100, with significant regional variation.[89] Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as 2 feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage.[90,91]

1.6 Regulatory Framework

This section provides a summary of pertinent federal, State, and local statutes, regulations, plans, and policies that have been adopted that address air quality.

88 California Climate Change Center, Our Changing Climate: Assessing the Risks to California, 2006.

89 National Research Council, Advancing the Science of Climate Change, 2010.

90 Parmesan, C., Ecological and Evolutionary Response to Recent Climate Change, 2004.

91 Parmesan, C and Galbraith, H, Observed Ecological Impacts of Climate Change in North America. Arlington, VA: Pew. Cent. Glob. Clim. Change, 2004.

1.6.1 Federal

Clean Air Act

The CAA of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, USEPA is responsible for implementation of certain portions of the CAA including mobile source requirements. Other portions of the CAA, such as stationary source requirements, are implemented by state and local agencies.

The CAA establishes federal air quality standards and specifies future dates for achieving compliance. The CAA also mandates that the state submit and implement a State Implementation Plan (SIP) for areas not meeting these standards. SIPs must include pollution control measures that demonstrate how the NAAQS will be met. The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA which are most applicable to the Project include Title I (Nonattainment Provisions).

Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria air pollutants: O_3; NO_2; CO; SO_2; PM10; and lead. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for PM2.5. The NAAQS were also amended in September 2006 to include an established methodology for calculating PM2.5 as well as revoking the annual PM10 threshold. **Table 2,** *Ambient Air Quality Standards,* shows the NAAQS currently in effect for each criteria air pollutant.

TABLE 2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards[a]		National Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
O_3[h]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
PM10[i]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
PM2.5[i]	24 Hour	No Separate State Standard	Gravimetric or Beta Attenuation	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3		12.0 µg/m^3 [k]	15 µg/m^3	

TABLE 2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards[a]		National Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
CO	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m^3)		9 ppm (10 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
NO_2[j]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
SO_2[k]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[j]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[j]	—	
Lead[l,m]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3(for certain areas)[m]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[n]	8 Hour	See footnote n	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates (SO_4)	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[l]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

TABLE 2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards[a]		National Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]

NOTES:

[a] 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.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

[c] 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.

[d] 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.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] 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.

[h] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[i] On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3 , as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] 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.

[k] On June 2, 2010, a new 1-hour SO2 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 SO2 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.

[l] 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.

[m] The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[n] 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.

SOURCE: CARB, Ambient Air Quality Standards (05/4/16), Available: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed December 2020.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;

- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the USEPA and National Highway Traffic Safety Administration (NHTSA) actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.[92]

Executive Order 13432

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the President signed Executive Order 13432 on May 14, 2007, directing the USEPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. Light-Duty Vehicle Greenhouse Gas and Corporate Average Fuel Economy Standards

On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards (CAFE)[93] and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010

92 A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

93 The Corporate Average Fuel Economy standards are regulations in the United States, first enacted by Congress in 1975, to improve the average fuel economy of cars and light trucks. The U.S Department of Transportation has delegated the National Highway Traffic Safety Administration as the regulatory agency for the Corporate Average Fuel Economy standards.

vehicle.[94] In 2017, the USEPA recommended no change to the GHG standards for light-duty vehicles for model years 2022-2025.

In August 2018, the USEPA and NHTSA proposed the Safer Affordable Fuel-Efficient Vehicles Rule that would, if adopted, maintain the CAFE and CO_2 standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO_2 standards for model year 2020 are 43.7 mpg and 204 grams of CO_2 per mile for passenger cars and 31.3 mpg and 284 grams of CO_2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. The proposal, if adopted, would also exclude CO_2-equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.[95]

1.6.2 State

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of air pollutants and GHGs in the atmosphere and emissions of pollutants from commercial and private activities within the state. The State also has implemented regulations governing energy consumption within the State. The major components of California's initiatives are reviewed below.

California Clean Air Act

The CCAA, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. The CAAQS are established to protect the health of the most sensitive groups and apply to the same criteria air pollutants as the federal CAA and also includes State-identified criteria air pollutants, which are sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride.[96] Table 2 provided above, shows the CAAQS currently in effect for each of the federally identified criteria air pollutants as well as state recognized pollutants, such as sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride.

Mobile Source Regulations

Mobile sources are a significant contributor to the air pollution in California. CARB has established exhaust emission standards for automobiles, which are more stringent than the federal emissions standards. Through its Mobile Sources Program, CARB has developed programs and policies to reduce emissions from on-road heavy-duty diesel vehicles. Specifically, the Truck and Bus regulation requires diesel trucks and buses that operate in the State to reduce NO_X, PM10, and PM2.5 emissions (Title 13 California Code of Regulations [CCR], Section 2025). By January 1, 2023, nearly all vehicles must have engines certified to 2010 model year engines or equivalent. The

94 United States Environmental Protection Agency, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, August 2012, https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZ7C.PDF?Dockey=P100EZ7C.PDF. Accessed December 2020.

95 National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf. Accessed December 2020.

96 California Air Resources Board, California Ambient Air Quality Standards, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed June 24, 2019.

Innovative Clean Transit Program (ICT) sets emissions reduction standards for new public transit vehicles and requires major transit agencies to only purchase zero emission (ZE) buses after 2029. The Solid Waste Collection Vehicle Regulation requires solid waste collection vehicles and heavy diesel-fueled on-road single engine cranes to be upgraded. The Rule for On-Road Heavy-Duty Diesel-Fueled Public and Utility Fleets requires fleets to install emission control devices on vehicles or purchase vehicles that run on alternative fuels or use advanced technologies to achieve emissions requirements by specified implementation dates. CARB also established an In-Use Off-Road Diesel-Fueled Fleets Regulation to impose limits on idling and require fleets to retrofit or replace older engines.

California Air Resources Board

On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to DPM and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_X, PM10, and PM2.5 emissions from existing diesel vehicles operating in California. The requirements were amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO_X and particulate matter by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_X emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance by January 1, 2014. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer

cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (e.g., engine retrofits) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts. The SIP is required for the State to take over implementation of the federal Clean Air Act. In addition, CARB also has primary responsibility for adopting and implementing California's legislative policies and programs, including the Climate Change Scoping Plan discussed below, to reduce the State's greenhouse gas emissions to meet the State's goal of reducing GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030.

Climate Change Scoping Plan

As discussed below, AB 32 and SB 32 require CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 for AB 32 and 2030 for SB 32 (Health and Safety Code section 38561 (h)). CARB developed its initial Scoping Plan, which was approved in 2008; it contained a mix of recommended strategies to achieve the 2020 emissions cap that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 Statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives.[97]

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions reduction target for 2020. The 2020 emissions reduction target was originally set at 427 million metric tons (MMT) of CO_2e using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under no-action-taken conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). Therefore, under the original projections, the state would have had to reduce its 2020 no-action-taken emissions by 28.4 percent in order to meet the 1990 target of 427 $MMTCO_2e$.

[97] Office of Governor Edmund G. Brown Jr., Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America.

First Update to the Climate Change Scoping Plan

The First Update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations.[98] In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined the 1990 GHG emissions inventory and 2020 GHG emissions limit to be 431 $MMTCO_2e$. CARB also updated the State's 2020 NAT emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that had recently been adopted for motor vehicles and renewable energy. CARB's projected Statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$.

Therefore, under the first update to the Scoping Plan, the emission reductions necessary to achieve the 2020 emissions target of 431 $MMTCO_2e$ would have been 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent.

2017 Climate Change Scoping Plan

In response to the passage of SB 32 and the identification of the 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan at a public meeting held in December 2017.[99] The 2017 Scoping Plan outlines the strategies the State will implement to achieve the 2030 GHG reduction target of 40 percent below 1990 levels, which build on the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, improved vehicle, truck and freight movement emissions standards, increasing renewable energy, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet California's energy needs. Accounting for all GHG emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32, CARB recommends statewide targets of no more than six metric tons CO_2e per capita by 2030.[100] CARB's projected Statewide 2030 emissions takes into account 2020 GHG reduction policies and programs.[101] The 2017 Scoping Plan also addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors.

CARB states that the approved Scoping Plan "is the best choice to achieve the State's climate and clean air goals."[102] Under the Scoping Plan, the majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions would be achieved from electricity sector standards (i.e., utility providers to supply 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the Low Carbon Fuel Standard (LCFS), implementing the short-lived GHG strategy (e.g.,

98 California Air Resources Board (CARB), First Update to the AB 32 Scoping Plan https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed December 2020.

99 CARB, California's 2017 Climate Change Scoping Plan, November 2017, https://ww2.arbpdf.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017. Accessed December 2020.

100 CARB, California's 2017 Climate Change Scoping Plan, November 2017, https://ww2.arbpdf.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017. Accessed December 2020.

101 CARB, California's 2017 Climate Change Scoping Plan.

102 CARB, California's 2017 Climate Change Scoping Plan.

hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. In July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030.

The 2017 Scoping Plan discusses the role of local governments in meeting the State's greenhouse gas reductions goals because local governments have jurisdiction and land use authority related to: community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations.[103] Furthermore, local governments may have the ability to incentivize renewable energy, energy efficiency, and water efficiency measures.[104]

For individual projects under California Environmental Quality Act (CEQA), the 2017 Scoping Plan states that local governments can support climate action when considering discretionary approvals and entitlements. According to the 2017 Scoping Plan, lead agencies have the discretion to develop evidence-based numeric thresholds consistent with the Scoping Plan, the State's long-term goals, and climate change science.[105]

A summary of the GHG emissions reductions required under HSC Division 25.5 is provided in **Table 3**, *Estimated Greenhouse Gas Emissions Reductions Required by HSC Division 25.5*.

Under the Scoping Plan Scenario, continuation of the Cap-and-Trade regulation (or carbon tax) is expected to cover approximately 34 to 79 $MMTCO_2$ of the 2030 reduction obligation.[106] The State's short-lived climate pollutants strategy, which is for GHGs that remain in the atmosphere for shorter periods of time compared to longer-lived GHGs like CO_2, is expected to cover approximately 17 to 35 $MMTCO_2e$. The Renewables Portfolio Standard with 50 percent renewable electricity by 2030 is expected to cover approximately 3 $MMTCO_2$. The mobile source strategy and sustainable freight action plan includes maintaining the existing vehicle GHG emissions standards, increasing the number of zero emission vehicles and improving the freight system efficiency, and is expected to cover approximately 11 to 13 $MMTCO_2$. Under the Scoping Plan Scenario, CARB expects that the reduction in GHGs from doubling of the energy efficiency savings in natural gas and electricity end uses in the CEC 2015 Integrated Energy Policy Report by 2030 would cover approximately 7 to 9 $MMTCO_2$ of the 2030 reduction obligation. The other strategies would be expected to cover the remaining 2030 reduction obligations.

[103] CARB, California's 2017 Climate Change Scoping Plan, page 97.
[104] CARB, California's 2017 Climate Change Scoping Plan, page 97.
[105] CARB, California's 2017 Climate Change Scoping Plan, page 100.
[106] CARB, California's 2017 Climate Change Scoping Plan, Appendix G, November 2017, https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2030sp_appg_alt-ab197aq-health_final.pdf. Accessed December 2020.

TABLE 3
ESTIMATED GREENHOUSE GAS EMISSIONS REDUCTIONS REQUIRED BY HSC DIVISION 25.5

Emissions Scenario	GHG Emissions ($MMTCO_2e$)
2008 Scoping Plan (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	427
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	169 (28.4%) [a]
2011 Scoping Plan (IPCC AR4)	
2020 BAU Forecast (CARB 2011 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	431
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	78.4 (15.4%) [b]
2017 Scoping Plan Update	
2030 BAU Forecast ("Reference Scenario" which includes 2020 GHG reduction policies and programs)	389
2030 Emissions Target Set by HSC Division 25.5 (i.e., 40% below 1990 Level)	260
Reduction below Business-As-Usual Necessary to Achieve 40% below 1990 Level by 2030	129 (33.2%) [c]

$MMTCO_2e$ = million metric tons of carbon dioxide equivalents

a 596 – 427 = 169 / 596 = 28.4%
b 509.4 – 431 = 78.4 / 509.4 = 15.4%
c 389 – 260 = 129 / 389 = 33.2%

SOURCE: CARB, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011; CARB, 2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition, 2017, https://ww2.arb.ca.gov/ghg-bau. Accessed December 2020; CARB, California's 2017 Climate Change Scoping Plan, November 2017, https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf. Accessed December 2020.

CARB's Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations.[107] The program requires a greater number of ZEV models for years 2015 through 2025 to control smog, soot and GHG emissions. This program includes the Low-Emissions Vehicle regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the ZEV regulations to require manufactures to produce an increasing number of pure ZEV's (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles between 2018 and 2025.

California Air Toxics Program

The California Air Toxics Program was established in 1983, when the California Legislature adopted AB 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification

107 CARB, Clean Car Standards – Pavley, Assembly Bill 1493.

step, CARB and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed", as a TAC in California. Since inception of the program, a number of such substances have been listed.[108] In 1993, the California Legislature amended the program to identify the 189 federal HAPs as TACs. The SCAQMD has not adopted guidance applicable to land use projects that requires a quantitative health risk assessment be performed for construction exposures to TAC emissions.[109]

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on the results of that review, CARB has promulgated a number of ATCMs, both for mobile and stationary sources. As discussed above, in 2004, CARB adopted an ATCM to limit idling of heavy-duty diesel motor vehicles weighing greater than 10,000 pounds to no more than 5 minutes at any location in order to reduce public exposure to DPM and other TACs.

The AB 1807 program is supplemented by the AB 2588 Air Toxics "Hot Spots" program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

Executive Order S-3-05, Executive Order B-30-15, and Executive Order B-55-18

In June, 2005, through Executive Order S-3-05,[110] the following GHG emission reduction targets were established:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In April, 2015, Governor Brown issued Executive Order B-30-15 that:[111]

- Established a new interim Statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.

[108] California Air Resources Board, CARB Identified Toxic Air Contaminants. Available at https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants. Accessed on December 1, 2020.

[109] South Coast Air Quality Management District (SCAQMD), Final Environmental Assessment for Proposed Amended Rule 307.1 – Alternative Fees for Air Toxics Emissions Inventory; Proposed Amended Rule 1401 – New Source Review of Toxic Air Contaminants; Proposed Amended Rule 1402 – Control of Toxic Air Contaminants from Existing Sources; SCAQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402.

[110] The Center for Climate Strategies, Executive Order S-3-05 http://www.climatestrategies.us/library/library/view/294. Accessed December 2020.

[111] Office of Governor Edmund G. Brown Jr., Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America, 2015, https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html Accessed: December 2020.

- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

In September 2018, Governor Brown issued Executive Order B-55-18, which establishes a statewide goal of achieving carbon neutrality as soon as possible and no later than 2045.[112]

Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006 (AB 32) and Emissions Limit (SB 32 / AB 197)

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code (HSC), Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines regulated GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable Statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 Statewide levels by 2020.

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5, establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure that the benefits of state climate policies reach into disadvantaged communities.

California Assembly Bill No. 1493 (AB 1493, Pavley) (Chapter 200, Statutes of 2002)

In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers.[113] As discussed previously, the USEPA and United States Department of Transportation (USDOT) have adopted federal standards for model year 2012 through 2016 light-duty vehicles. In light of the USEPA and USDOT standards, California - and states adopting California emissions standards - have agreed to defer to the proposed national standard through model year 2016. The 2016 endpoint of the federal and state standards is similar, although the federal standard ramps up slightly more slowly than required under the state standard. The state standards (called the Pavley standards) require additional

[112] California State Government, Executive Order B-55-18 to Achieve Carbon Neutrality, https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf Accessed December 2020.

[113] CARB, Regulations to Control Greenhouse Gas Emissions from Motor Vehicles, Final Statement of Reasons, 2005, https://ww3.arb.ca.gov/regact/grnhsgas/fsor.pdf. Accessed December 2020.

reductions in CO_2 emissions beyond model year 2016 (referred to as Pavley Phase II standards).[114] As noted above, the USEPA and USDOT have adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the Pavley Phase II standards, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly lower reductions in California, it would achieve greater reductions nationally and is stringent enough to meet state GHG emission reduction goals.[115] On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017-2025 national standards to meet state law.

Executive Order S-01-07

Executive Order S-01-07 was enacted on January 18, 2007.[116] The order mandates the following: (1) that a Statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a LCFS for transportation fuels be established in California. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.[117] In the proposed 2017 Climate Change Scoping Plan Update, CARB's preferred recommendation includes increasing the stringency of the LCFS by reducing the carbon intensity of transportation fuels by 18 percent by 2030, up from the current target of 10 percent by 2020.[118] In April 2017, the LCFS was brought before the Court of Appeal challenging the analysis of potential nitrogen dioxide impacts from biodiesel fuels. The Court directed CARB to conduct an analysis of nitrogen dioxide impacts from biodiesel fuels and froze the carbon intensity targets for diesel and biodiesel fuel provisions at 2017 levels until CARB has completed this analysis. On March 6, 2018 CARB issued its *Draft Supplemental Disclosure Discussion of Oxides of Nitrogen Potentially Caused by the Low Carbon Fuel Standard Regulation*.[119] CARB posted modifications to the amendments on August 13, 2018, with a public comment period through August 30, 2018. Final approval of regulatory changes from CARB's analysis of nitrogen dioxide impacts from biodiesel fuels was made on January 4, 2019.[120]

Senate Bill 97 (SB 97, Dutton) (Chapter 185, Statutes of 2007)

Senate Bill (SB) 97 (Chapter 185, Statutes of 2007), enacted in 2007, amended CEQA to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA

[114] On March 24, 2017, CARB voted unanimously to uphold the State's model year 2017-2025 cars and light truck emissions standards. See: CARB, CARB finds vehicle standards are achievable and cost-effective, March 24, 2017, https://ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective. Accessed December 2020.

[115] CARB, Advanced Clean Cars Summary, https://ww2.arb.ca.gov/sites/default/files/2019-12/acc%20summary-final_ac.pdf. Accessed December 2020.

[116] Office of the Governor Arnold Schwarzenegger, Executive Order S-01-07, 2007 https://web.archive.org/web/20081026081001/http://gov.ca.gov/executive-order/5172/. Accessed December 2020.

[117] CARB, Low Carbon Fuel Standard, 2018, https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard. Accessed December 2020.

[118] CARB, AB 32 Scoping Plan, 2017, https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan. Accessed December 2020.

[119] CARB, Low Carbon Fuel Standard and Alternative Diesel Fuels Regulation 2018, https://ww2.arb.ca.gov/rulemaking/2018/low-carbon-fuel-standard-and-alternative-diesel-fuels-regulation-2018. Accessed December 2020.

[120] California Air Resources Board, Low Carbon Fuel Standard and Alternative Diesel Fuels Regulation 2019.

analysis. It directed the California Office of Planning and Research (OPR) to develop revisions to the State CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the Resources Agency to certify and adopt these revised State CEQA Guidelines by January 2010. The revisions were completed in March 2010 and codified into the California Code of Regulations and became effective within 120 days pursuant to CEQA. The amendments provide regulatory guidance for the analysis and mitigation of the potential effects of GHG emissions. The CEQA Guidelines require:

- Inclusion of GHG analyses in CEQA documents;
- Determination of significance of GHG emissions; and
- If significant GHG emissions would occur, adoption of mitigation to address significant emissions.

Senate Bill 375 (SB 375, Steinberg) (Chapter 728, Statutes of 2008)

SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions, was adopted by the State on September 30, 2008. SB 375 finds that the "transportation sector is the single largest contributor of greenhouse gases of any sector."[121] Under SB 375, CARB is required, in consultation with the Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. In February 2011, CARB adopted GHG emissions reduction targets for the SCAG, which is the Metropolitan Planning Organization for the region in which the County of Riverside is located.[122]

In March 2018, the CARB updated the SB 375 targets to require an 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions.[123] As these reduction targets were updated after the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS) was adopted, it is expected that the next iteration of the RTP/SCS will be updated to meet them.

Meeting SB 375 goals and targets is crucial for the State to meet its climate goals and to reduce GHG emissions as it supports coordinated transportation and land use planning with the goal of more sustainable communities.[124] Under SB 375, the target must be incorporated within that region's RTP, which is used for long-term transportation planning, in a SCS. Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plans) are not required to be consistent with either the RTP or SCS.

[121] State of California, Senate Bill No. 375, September 30, 2008, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375. Accessed December 2020.

[122] CARB, Sustainable Communities, March 28, 2017, https://ww2.arb.ca.gov/our-work/topics/sustainable-communities. Accessed December 2020.

[123] CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets, https://ww3.arb.ca.gov/cc/sb375/finaltargets2018.pdf. Accessed December 2020.

[124] CARB, Sustainable Communities, https://ww2.arb.ca.gov/our-work/topics/sustainable-communities. Accessed December 2020.

Title 24, Building Standards Code and CALGreen Code

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[125] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.[126] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.[127] The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2020.

Renewables Portfolio Standard

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Executive Order S-14-08 was signed, which expands the State's Renewables Portfolio Standard (RPS) to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the RPS with a Renewable Energy Standard that would result in a total renewable energy requirement for utilities of 33 percent by 2020. On April 12, 2011, SB X1-2 was signed to increase California's RPS to 33 percent by 2020. SB 350 (Chapter 547, Statues of 2015) further increased the RPS to 50 percent by

[125] California Building Standards Commission, 2010 California Green Building Standards Code, 2010.

[126] California Building Standards Commission, 2010 California Green Building Standards Code.

127 California Building Standards Commission, 2010 California Green Building Standards Code, 2010.

2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 was signed into law on October 7, 2015.

On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased California's Renewables Portfolio Standard and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.[128]

Senate Bill 1389

SB 1389 (Public Resources Code Sections [PRC] 25300–25323; SB 1389) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (PRC Section 25301[a]). The 2019 Integrated Energy Policy Report provides the results of the CEC's assessments related to energy sector trends, building decarbonization and energy efficiency, zero-emission vehicles (ZEV), energy equity, climate change adaptation, electricity reliability in Southern California, natural gas assessment, and electricity, natural gas, and transportation energy demand forecasts.

California Building Standards Code (Title 24)

California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020.[129] The 2019 Title 24 standards include efficiency improvements to the residential and non-residential standards.[130]

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality.[131] Most changes to the

128 California Legislative Information, SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases.

129 California Energy Commission (CEC), 2019 Building Energy Efficiency Standards, 2020. Available at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency, accessed December 2020.

130 CEC, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency

131 California Building Standards Commission, Guide to the 2016 California Green Building Standards Code Nonresidential, January 2017.

mandatory measure, compared to the previously 2016 CALGreen Code, included requirements for solar photovoltaic (PV) systems in all new homes (low-rise and single-family), requirements for newly constructed healthcare facilities that were previously not included, the encouragement of demand response and light-emitting diode (LED) technology for both residential and nonresidential buildings, and the use of more efficient air filters to trap hazardous particulates.[132] For new multifamily dwelling units, the residential mandatory measures were revised to provide additional electric vehicles (EV) charging requirements, including quantity, location, size, single EV space, multiple EV spaces, and identification. For non-residential mandatory measures, Table 5.106.5.3.3 of the CALGreen Code, identifying the number of required EV charging spaces, has been revised in its entirety. Refer to Section 4.5, *Greenhouse Gas Emissions*, of this Draft EIR for additional details regarding these standards.

Senate Bill 350

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of Executive Order B-30-15. Building off of AB 32, SB 350 established California's 2030 greenhouse gas reduction target of 40 percent below 1990 levels. To achieve this goal, SB 350 set ambitious 2030 targets for energy efficiency and renewable electricity, among other actions aimed at reducing greenhouse gas emissions. SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030.

1.6.3 Regional

South Coast Air Quality Management District

The SCAQMD is primarily responsible for planning, implementing, and enforcing air quality standards for the South Coast Air Basin (Air Basin), which includes all of Orange County; Los Angeles County (excluding the Antelope Valley portion); the western, non-desert portion of San Bernardino County; and the western Coachella Valley and San Gorgonio Pass portions of Riverside County. The Air Basin is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin is a subregion within the western portion of the SCAQMD jurisdiction. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

Air Quality Management Plan

The SCAQMD has adopted Air Quality Management Plans (AQMPs) to meet the CAAQS and NAAQS. The SCAQMD Governing Board adopted the 2016 AQMP on March 3, 2017.[133] CARB

[132] CEC, 2019 Building Energy Efficiency Standards, 2020. Available at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency, accessed October 14, 2020.
[133] SCAQMD, 2016 AQMP, March 2017.

approved the 2016 AQMP on March 23, 2017.[134] Key elements of the 2016 AQMP include implementing fair-share emissions reductions strategies at the federal, State, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of zero and near-zero-emissions technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation and other planning efforts.[135] The strategies included in the 2016 AQMP build on the strategies from the previous 2012 AQMP and are intended to demonstrate attainment of the NAAQS, which are set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including against decreased visibility and damage to animals, crops, vegetation, and buildings,[136] for the federal non-attainment pollutants ozone and PM2.5 while accounting for regional growth, increasing development, and maintaining a healthy economy.[137] In general, SCAQMD's criteria for evaluating control strategies for stationary and mobile sources is based on the following: (1) cost-effectiveness; (2) emissions reduction potential; (3) enforceability; (4) legal authority; (5) public acceptability; (6) rate of emission reduction; and (7) technological feasibility. Control strategies in the AQMP with potential applicability to reducing short-term emissions from construction activities associated with the Project include strategies denoted in the 2016 AQMP as MOB-08 and MOB-10, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment.[138] Descriptions of measures MOB-08 and MOB-10 are provided below:

MOB-08 – Accelerated Retirement of Older On-Road Heavy-Duty Vehicles: This measure seeks to replace up to 2,000 heavy-duty vehicles per year with newer or new vehicles that at a minimum, meet the 2010 on-road heavy-duty NO_X exhaust emissions standard of 0.2 grams per brake horsepower-hour (g/bhp-hr).

MOB-10 – Extension of the SOON Provision for Construction/Industrial Equipment: This measure continues the Surplus Off-Road Option for NO_X (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation through the 2031 timeframe.

The 2016 AQMP is used in the analyses in this section, since it has been adopted by both SCAQMD and CARB.

SCAQMD CEQA Guidelines

SCAQMD's CEQA guidelines are voluntary initiatives recommended for consideration by local planning agencies. The *CEQA Air Quality Handbook* (Handbook) published by SCAQMD provides local governments with guidance for analyzing and mitigating project-specific air quality impacts.[139] SCAQMD is currently updating some of the information and methods in the Handbook, such as the screening tables for determining the air quality significance of a project and the on-road

[134] CARB, News Release - CARB establishes next generation of emission controls needed to improve state's air quality**,** https://ww2.arb.ca.gov/news/carb-establishes-next-generation-emission-controls-needed-improve-states-air-quality. Accessed February 25, 2020.

[135] SCAQMD, 2016 AQMP, March 2017.

[136] USEPA, NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed February 25, 2020.

[137] SCAQMD, NAAQS/CAAQS and Attainment Status for South Coast Air Basin, 2016.

[138] SCAQMD, 2016 AQMP, March 2017.

[139] South Coast Air Quality Management District, 1993. *CEQA Air Quality Handbook*. November 1993.

mobile source emission factors. While this process is underway, SCAQMD recommends using other approved models to calculate emissions from land use projects, such as CalEEMod.[140]

The SCAQMD *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* considers impacts to air quality sensitive receptors from TAC-emitting facilities.[141] SCAQMD's siting distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for air quality sensitive receptors proposed in proximity to freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities).

The SCAQMD Final Localized Significance Threshold Methodology and Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds provides guidance when evaluating the localized effects of emissions in the CEQA evaluation.[142,143] These guidance documents were promulgated by the SCAQMD Governing Board as a tool to assist lead agencies to analyzed localized impacts associated with project-specific level proposed projects. The guidance documents establish mass emission rate "look up tables" as significance thresholds for projects that are five acres or less. For projects that are larger than five acres it is recommended that project-specific air quality dispersion modeling is completed to determine localized air quality.

SCAQMD Rules and Regulations

Several SCAQMD rules adopted to implement portions of the AQMP may apply to the Project. The Project may be subject to the following SCAQMD rules and regulations:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which may apply to the Project:

Rule 401 – Visible Emissions: This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.

Rule 402 – Nuisance: This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

[140] South Coast Air Quality Management District, Air Quality Modeling, https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-modeling. Accessed June 24, 2019.

[141] South Coast Air Quality Management District, 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 06, 2005.

[142] South Coast Air Quality Management District, 2008. *Final Localized Significance Threshold Methodology*. June 2003, Revised July 2008.

[143] South Coast Air Quality Management District, 2006. Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds. October 2006.

Rule 403 – Fugitive Dust: This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM10 emissions to less than 50 micrograms per cubic meter (µg/m3) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for specific sources. The following is a list of rules which may apply to the Project:

Rule 1113 – Architectural Coatings: This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Rule 1121 – Control of Nitrogen Oxides from Residential Type, Natural Gas-Fired Water Heaters: This rule specifies NO_X emission limits for natural gas-fired water heaters, with heat input rates less than 75,000 British thermal units (BTUs) per hour.

Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters: This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.

Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations: This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XIV sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other non-criteria pollutants. The following is a list of rules which may apply to the Project:

Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities: This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

SCAQMD Global Warming and Stratospheric Ozone Depletion

SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990.[144] The policy commits SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:[145]

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[146] On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where SCAQMD is the Lead Agency. However, SCAQMD has not adopted a GHG significance threshold for land use development projects (e.g., mixed-use/commercial projects). A GHG Significance Threshold Working Group was formed to further evaluate potential GHG significance thresholds.[147] The aforementioned Working Group has been inactive since 2011, however, and SCAQMD has not formally adopted any GHG significance threshold for land use development projects.

Southern California Association of Governments

On September 3, 2020, the SCAG's Regional Council formally adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) also known as the Connect SoCal, which is an update to the previous 2012-2035 RTP/SCS and 2016-2040 RTP/SCS. [148] Using growth forecasts and economic trends, both the 2016-2040 RTP/SCS and 2020–2045 RTP/SCS provide a vision for transportation throughout the region for the next several decades by considering the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. Both the 2016-2040 RTP/SCS and 2020-2045 RTP/SCS describe how the region can attain the GHG emission-reduction targets set by CARB by achieving an 8 percent reduction in per capita transportation GHG emissions by 2020 and a 19 percent reduction in per capita transportation

[144] South Coast Air Quality Management District (SCAQMD), SCAQMD's Historical Activity on Climate Change, 2014, http://www.aqmd.gov/nav/about/initiatives/climate-change. Accessed December 2020.

[145] SCAQMD, CEQA Air Quality Handbook, April 1993, pages 3-7.

[146] SCAQMD, Board Meeting, December 5, 2008, Agenda No. 31, http://www3.aqmd.gov/hb/2008/December/0812ag.html. Accessed December 2020.

[147] SCAQMD, Greenhouse Gases CEQA Significance Thresholds, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds. Accessed December 2020.

[148] Southern California Association of Governments (SCAG), 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), September 2020.

emissions by 2035 compared to the 2005 level on a per capita basis.[149] Compliance with and implementation of the 2016-2040 RTP/SCS and 2020-2045 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions (e.g. nitrogen dioxide, carbon monoxide, etc.) associated with reduced per capita vehicle miles traveled (VMT).

The 2020-2045 RTP/SCS states that the SCAG region was home to approximately 18.8 million people in 2016 and included approximately 6.0 million homes and 8.4 million jobs.[150] By 2045, the integrated growth forecast projects that these figures will increase by 3.7 million people, with approximately 1.6 million more homes and 1.7 million more jobs. High Quality Transit Areas (HQTAs), which are defined by the 2020-2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours, will account for 2.4 percent of regional total land, but are projected to accommodate 51 percent and 60 percent of future household growth respectively between 2016 and 2045.[151,152] Like the 2016-2040 RTP/SCS, the 2020-2045 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's HQTAs. HQTAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

SCAG's 2016-2040 RTP/SCS and 2020-2045 RTP/SCS provide specific strategies for implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and cultures and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.[153]

In addition, both the 2016-2040 RTP/SCS and the 2020-2045 RTP/SCS include strategies to promote active transportation, support local planning and projects that serve short trips, promote transportation investments, investments in active transportation, more walkable and bikeable communities, that will result in improved air quality and public health, and reduced greenhouse gas emissions, and supports building physical infrastructure, regional greenways and first-last mile connections to transit, including to light rail and bus stations. The 2016-2040 RTP/SCS and 2020-2045 RTP/SCS align active transportation investments with land use and transportation strategies, increase competitiveness of local agencies for federal and state funding, and to expand the potential

149 SCAG, 2020-2045 RTP/SCS, September 2020.

150 SCAG, 2020-2045 RTP/SCS Demographics and Growth Forecast Technical Report, September 2020.

151 SCAG, 2016-2040 RTP/SCS, April 2016, pp. 20, 75-77.

152 The Project Site is also located in a Transit Priority Area (TPA), which is defined as an area within 0.5-mile of a major transit stop that is existing or planned. A "major transit stop" is defined as a site containing an existing rail transit station or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

153 SCAG, 2016-2040 RTP/SCS, April 2016, pp. 170-181.

for all people to use active transportation. CARB has accepted the SCAG GHG quantification determinations in the 2016-2040 RTP/SCS and the 2020-2045 RTP/SCS and both demonstrate achievement of the GHG emission reduction targets established by CARB.[154,155]

Although there are GHG emission reduction targets for passenger vehicles set by CARB for 2045, the 2020-2045 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2045. By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an additional 4.1-percent reduction in GHG from transportation-related sources in the ten years between 2035 and 2045, the 2020-2045 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the State's GHG emission reduction goals.[156]

1.6.4 Local

Local jurisdictions, such as County of Riverside (County) have the authority and responsibility to reduce air pollution and GHG emissions through their land use decision-making authority.

Riverside County General Plan

The County is responsible for the assessment and mitigation of pollutant emissions resulting from its land use decisions. The County's General Plan Air Quality Element sets forth the goals, objectives, and policies which guide the County in its implementation of its air quality improvement programs and strategies. In addition, the Air Quality Element introduced policies that address GHG emissions as well as energy consumption. A number of these goals, objectives, and policies are relevant to the Proposed Project, and relate to minimizing particulate emissions from construction activities, managing traffic congestion during peak hours, and increasing energy efficiency in private developments.

The Air Quality Element establishes policies that directly pertaining to the Proposed Project:[157]

AQ 2.1: The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible.

AQ 2.2: Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

AQ 2.3: Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.

154 SCAG, 2025-2040 RTP/SCS, September 2020, pp. 48-86.

155 CARB, Southern California Association of Governments' (SCAG) 2016 Sustainable Communities Strategy (SCS) ARB Acceptance of GHG Quantification Determination, June 2016.

156 SCAG, 2020-2045 RTP/SCS Public Health Technical Report, September 2020, pp. 53.

157 Riverside County 2018. *Air Quality Element*. July 17. https://planning.rctlma.org/Portals/14/genplan/general_plan_2018/elements/Ch09_AQE_071718.pdf

AQ 4.1: Require the use of all feasible building materials/methods which reduce emissions.

AQ 4.2: Require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

AQ 4.4: Require residential building construction to comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Code of Regulations.

AQ 4.7: To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency and the California Air Resources Board.

AQ 4.9: Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

AQ 5.1 Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

AQ 5.2: Adopt incentives and/or regulations to enact energy conservation requirements for private and public developments.

AQ 5.4: Encourage the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

AQ 17.1: Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles to the extent possible.

AQ 20.5: Reduce emissions from standard gasoline vehicles, through VMT, by requiring all new residential units to install circuits and provide capacity for electric vehicle charging stations.

Q 20.10: Reduce energy consumption of the new developments (residential, commercial and industrial) through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design.

AQ 20.11: Increase energy efficiency of the new developments through efficient use of utilities (water, electricity, natural gas) and infrastructure design. Also, increase energy efficiency through use of energy efficient mechanical systems and equipment.

AQ 20.13: Reduce water use and wastewater generation in both new and existing housing, commercial and industrial uses. Encourage increased efficiency of water use for agricultural activities.

AQ 20.14: Reduce the amount of water used for landscaping irrigation through implementation of County Ordinance 859 and increase use of non-potable water.

AQ 20.18: Encourage the installation of solar panels and other energy efficient improvements and facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.).

AQ 20.21: Provide homeowner education programs on the various voluntary ways in which they may reduce their homes' GHG emissions, e.g., improving home insulation, adding solar energy capabilities, and providing information on energy saving landscaping techniques.

Riverside County Climate Action Plan

The Riverside County Climate Action Plan documents the County's plans and policies to reduce GHG emissions in line with Executive Order B-30-15 and SB 32's goals of achieving a 40 percent reduction below 1990 levels by 2030 and an 80 percent reduction below 1990 levels by 2050. To that end the goals and policies set within the Riverside County Climate Action Plan provide a blueprint for the County to meet these goals. The County's goals show a needed reduction from 2017 emissions of 9 percent by 2020, 16.3 percent by 2030, and 14.8 percent reduction by 2050. In addition, the CAP identified 3,000 MTCO2e/yr as a threshold for the greenhouse gas emissions to be considered having a significant impact. Projects that emit less than 3,000 MTCO2e per year would have a less than significant impact on greenhouse gas emissions.

Riverside County Climate Action Plan Update 2019 Addendum, R2-CE1, regarding Clean Energy, has the following update: Increase Clean Energy Use.

- All 2015 CAP measures.
- Require solar panel installation on new residential and commercial buildings.
- Require energy storage system installation as feasible.

1.7 Environmental Setting

1.7.1 Regional Air Quality

The Project Site is located within the South Coast Air Basin (Air Basin), which is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Air Basin, as it is a coastal plain with connecting broad valleys and low hills.

The Air Basin lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. The usually mild climatological pattern is interrupted by periods of hot weather, winter storms, or Santa

Ana winds. The extent and severity of pollutant concentrations in the Air Basin is a function of the area's natural physical characteristics (weather and topography) and man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential. The Air Basin's meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone, which is a secondary pollutant that forms through photochemical reactions in the atmosphere. Thus, the greatest air pollution impacts throughout the Air Basin typically occur from June through September. This condition is generally attributed to the emissions occurring in the Air Basin, light winds, and shallow vertical atmospheric mixing. These factors reduce the potential for pollutant dispersion causing elevated air pollutant levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of ozone, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert.

The Air Basin's meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of ozone, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert.[158] The worst air pollution conditions throughout the Air Basin typically occur from June through September.

Attainment Status

California Health and Safety Code section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table 4,** *South Coast Air Basin Attainment Status,* provides a summary of the attainment status of the Riverside County portion of the Air Basin with respect to the federal and State standards. As shown in Table 4, the Air Basin is designated under federal or State ambient air quality standards as nonattainment for ozone, PM10, and fine particulate matter PM2.5. It is noteworthy to mention that air quality in the Air Basin has improved substantially over the years, primarily due to the impacts of air quality control programs at the federal, State and local levels. The ozone and particulate matter levels have fallen significantly compared to the worst years and are expected to continue to trend downward in the future despite increases in the economy and population in the Air Basin.[159]

With respect to the State-identified criteria air pollutants (sulfates, hydrogen sulfide, visibility reducing particles, and vinyl chloride) present in Table 4, the Proposed Project would either not use these pollutants in the day to day operations or during construction and therefore would not have emissions of those pollutants (hydrogen sulfide, vinyl chloride, and lead), or such emissions would be accounted for as part of the pollutants estimated in this analysis (visibility reducing particles are associated with particulate matter emissions, and sulfates are associated with SO_2). Vinyl chloride is used in the process of making polyvinyl chloride (PVC) plastic and

[158] South Coast Air Quality Management District, 2017. *Final 2016 Air Quality Management Plan*. March 2017.

[159] South Coast Air Quality Management District, 2017. *Final 2016 Air Quality Management Plan*. March 2017, p. 1-6.

TABLE 4
SOUTH COAST AIR BASIN ATTAINMENT STATUS

Pollutant	Federal Standards	California Standards
O_3 (1-hour standard)	N/A[a]	Non-attainment
O_3 (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM10	Attainment	Non-attainment
PM2.5	Non-attainment	Non-attainment
Lead	Non-attainment (Partial, Los Angeles County)[b]	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	N/A[c]

NOTES:
N/A = not applicable
[a] The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.
[b] Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.
[c] In 1990, CARB identified vinyl chloride as a TAC and determined that it does not have an identifiable threshold. Therefore, CARB does not monitor or make status designations for this pollutant.
SOURCE: USEPA, The Green Book Non-Attainment Areas for Criteria Air Pollutants, https://www.epa.gov/green-book; CARB, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm. Accessed December 2020.

vinyl products and is primarily emitted from industrial processes.[160] Vinyl chloride would not be emitted directly during operations or during construction; therefore, there would be no project emissions of vinyl chloride. In addition, CARB determined there is not sufficient scientific evidence available to support the identification of a threshold exposure level for vinyl chloride, therefore, CARB does not monitor or make status designations for this pollutant.[161]

Sources of Emissions

As detailed in the AQMP, the major sources of air pollution in the Air Basin are divided into four major source classifications: point stationary sources, area stationary sources, on-road mobile sources, and off-road mobile sources. Point and area sources are the two major subcategories of stationary sources.[162] Point sources are permitted facilities that contain one or more emission sources at an identified location (e.g., power plants, refineries, emergency generator exhaust stacks). Area sources consist of many small emission sources (e.g., residential water heaters, architectural coatings, and consumer products,), which are distributed across the region. Mobile sources consist

[160] California Air Resources Board, Vinyl Chloride & Health, https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health. Accessed September 24, 2020.
[161] California Air Toxics Board, Toxic Air Contaminant Board, Toxic Air Contaminant Identification List, https://www.arb.ca.gov/toxics/id/taclist.htm, last reviewed July 18, 2011. Accessed April 3, 2019.
[162] South Coast Air Quality Management District, 2017. *Final 2016 Air Quality Management Plan*, p. 3-32. March 2017.

of two main subcategories: On-road sources (such as cars and trucks) and off-road sources (such as heavy construction equipment).

1.7.2 Local Air Quality

Local Air Quality

Existing Criteria Pollutants Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The Project Site is located in SCAQMD Source Receptor Area (SRA) 28; therefore, the monitoring station most representative of the Project Site is the Perris Valley monitoring station. Criteria pollutants monitored at this station include ozone, and PM10. The Lake Elsinore monitoring station, southwest of the Project Site was used to report data for CO and NO_2. The Metropolitan Riverside County monitoring station, located northeast of the Project Site, was used for SO_2 andPM2.5 monitoring data. The most recent data available from the SCAQMD for these monitoring stations are from years 2016 to 2019. The pollutant concentration data for these years are summarized in **Table 5**, *Ambient Air Quality Data.*

Toxic Air Contaminants

To date, the most comprehensive study on air toxics in the Air Basin is the Multiple Air Toxics Exposure Study (MATES-IV), conducted by the SCAQMD. The monitoring program measured more than 30 air pollutants, including both gases and particulates. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-IV found that the average background cancer risk from carcinogenic air pollutants is approximately 365 in 1 million at the Project Site, compared to an average Air Basin-wide risk of approximately 1,023 in 1 million. Approximately 90 percent of the risk is from DPM.[163,164] The risk levels determined in the MATES-IV is approximately 65 percent lower than the risk levels in the previous MATES-III study, with DPM showing a reduction of approximately 70 percent.[165] The reductions were attributed to air quality control regulations and improved emission control technologies.

[163] SCAQMD. 2015a. Final Report – Multiple Air Toxics Exposure Study in the South Coast SCAB, ES-2, 2-11, 6-1. Available at: http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv. Accessed December 2020.

[164] Mates IV Estimated Risk (arcgis.com) https://scaqmd-online.maps.arcgis.com/apps/webappviewer/index.html?id=470c30bc6daf4ef6a43f0082973ff45f

[165] SCAQMD. 2015a. Final Report – Multiple Air Toxics Exposure Study in the South Coast SCAB, ES-2, 2-11, 6-1. Available at: http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv. Accessed December 2020

TABLE 5
AMBIENT AIR QUALITY DATA

Pollutant/Standard	2016	2017	2018	2019
O_3 (1-hour)				
Maximum Concentration (ppm)	0.131	0.120	0.117	0.118
Days > CAAQS (0.09 ppm)	23	33	31	26
O_3 (8-hour)				
Maximum Concentration (ppm)	0.098	0.105	0.103	0.095
4th High 8-hour Concentration (ppm)	0.092	0.094	0.095	0.090
Days > CAAQS (0.070 ppm)	56	80	67	64
Days > NAAQS (0.075 ppm)	55	80	67	64
NO_2 (1-hour)				
Maximum Concentration (ppm)	0.051	0.049	0.041	0.038
98th Percentile Concentration (ppm)	0.036	0.038	0.036	0.033
NO_2 (Annual)				
Annual Arithmetic Mean (0.030 ppm)	0.0081	0.008	0.009	0.007
CO (1-hour)				
Maximum Concentration (ppm)	1.2	1.2	1.1	1.6
CO (8-hour)				
Maximum Concentration (ppm)	0.6	0.8	0.8	0.7
SO_2 (1-hour)				
Maximum Concentration (ppm)	0.006	0.003	0.002	0.008
99th Percentile Concentration (ppm)	0.002	0.002	0.002	0.001
PM10 (24-hour)				
Maximum Concentration (µg/m^3)	76	75	64	97
Samples > CAAQS (50 µg/m^3)	5	11	3	4
Samples > NAAQS (150 µg/m^3)	0	0	0	0
PM10 (Annual Average)				
Annual Arithmetic Mean (20 µg/m^3)	32.2	32.2	29.7	25.3
PM2.5 (24-hour)				
Maximum Concentration (µg/m^3)	45.64	62.2	64.8	46.7
98th Percentile Concentration (µg/m^3)	31.14	39.8	32.8	36.2
Samples > NAAQS (35 µg/m^3)	6	9	4	9
PM2.5 (Annual)				
Annual Arithmetic Mean (12 µg/m^3)	14.02	13.4	13.87	12.53

NOTE:

[a] ppm = parts per million; µg/m^3 = micrograms per cubic meter

[b] The monitoring station most representative of the Project Site is the LAX-Hastings Monitoring Station, which is used to establish ambient NO_2, CO, SO_2, and PM10 levels. Since PM2.5 data are not available at the LAX-Hastings station, the monitoring data collected at the station Long Beach North monitoring station are used. The most recent data available from SCAQMD for these two monitoring stations are from years 2015 to 2017.

[c] CAAQS are based on a not to exceed standard. NAAQS are based on a 3-year average of the annual 4th highest daily maximum 8-hour concentration for ozone; 98th percentile of 1-hour daily maximum concentrations averaged over 3 years for 1-hr NO_2; and not to be exceeded more than once per year on average over 3 years for 24-hr PM.

[d] State annual average (AAM) PM10 standard is > 20 µg/m^3. Federal annual PM10 standard (AAM > 50 µg/m3) was revoked in 2006.

[e] Both Federal and State standards are annual average (AAM) > 12.0 µg/m^3.

SOURCE: South Coast Air Quality Management District, Historical Data by Year, www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year; Accessed December 2020.

Sensitive Receptors and Locations

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. As a result, certain land uses that are occupied by these population groups, such as residences, hospitals and schools, are considered to be air quality-sensitive land uses. The nearest sensitive receptors are the residential neighborhoods directly to the east and south of the site and north of the site across SR-74. These residences are approximately 100 feet from the project boundaries. All other air quality-sensitive uses are located at greater distances from the Proposed Project site and would experience lower air pollutant impacts from potential sources of pollutants from the Proposed Project site due to atmospheric dispersion effects.

1.7.3 Greenhouse Gases

Global Emissions Inventory

Global GHG estimates are based on country inventories developed as part of programs of the United Nations Framework Convention on Climate Change (UNFCCC). Worldwide man-made emissions of GHGs were approximately 49 billion metric tons CO_2e in 2010, including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation). Emissions of CO_2, primarily from fossil fuel use and industrial processes, account for 76 percent of total GHG (CO_2e) emissions. Methane emissions account for 16 percent and N_2O emissions for 6.2 percent. For comparison, worldwide emissions of GHGs in 1970 were 27 billion metric tons of CO_2e per year (IPCC 2014).

United States Emissions Inventory

In 2018, the United States emitted about 6,677 million metric tons (MMT) of CO_2e, with 75.4 percent of those emissions coming from fossil fuel combustion. Of the major sectors nationwide, transportation accounts for the highest amount of GHG emissions (approximately 28 percent), followed by electricity (27 percent), industry (22 percent), agriculture (10 percent), commercial and residential buildings (12 percent) (. Between 1990 and 2018, total US GHG emissions rose by 3.7 percent, but emissions have generally decreased since peaking in 2005. GHG emissions in 2018 are approximately 10 percent below 2005 levels. Since 1990, US emissions have increased at an average annual rate of 0.2 percent, however have been decreasing at an average annual rate of 0.7 percent since 2005 (USEPA 2020b).

California Greenhouse Gas Emissions Inventory

CARB compiles GHG inventories for the State of California. Based on the year 2018 GHG inventory data (the latest year for which data are available), California emitted 425.3 million metric tons of CO_2e ($MMTCO_2e$) which includes emissions resulting from imported electrical power.[166] Between 1990 and 2018, the population of California grew by approximately 9.7 million (from 29.8 to 39.5 million).[167,168] This represents an increase of approximately 33 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from $773 billion in 1990 to $2.99 trillion in 2018, representing an increase of almost four times the 1990 gross state product.[169] Despite the population and economic growth, California's net GHG emissions were reduced to below 1990 levels in 2016. According to CARB, the declining trend coupled with the state's GHG reduction programs (such as the Renewables Portfolio Standard, LCFS, vehicle efficiency standards, and declining caps under the Cap and Trade Program) demonstrate that California is on track to meet the 2020 GHG reduction target codified in HSC, Division 25.5, also known as AB 32 and amended by SB 32.[170] **Table 6**, *State of California Greenhouse Gas Emissions,* identifies and quantifies Statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2017 (i.e., the most recent year in which data are available from CARB). As shown in Table 6, the transportation sector is the largest contributor to Statewide GHG emissions at approximately 40 percent in 2018.

1.7.4 Energy

Existing Electricity Sales

Electricity, as a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, the capacity of a generator is typically rated in megawatts (MW), which is 1 million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

166 CARB, Current California GHG Emission Inventory Data - 2000-2018 GHG Inventory (2020 Edition).

167 United States Census Bureau, National and State Population Estimates: 1990-1994, 1995; 2019 National and State Population Estimates.

168 California Department of Finance, American Community Survey, 2017, http://www.dof.ca.gov/Reports/Demographic_Reports/American_Community_Survey/documents/Web_ACS2017_Pop-Race.xlsx. Accessed May 27, 2020.

169 California Department of Finance, Gross State Product, http://www.dof.ca.gov/Forecasting/Economics/Indicators/Gross_State_Product/documents/CA_GDP.xlsx. Accessed February 27, 2020. Amounts are based on current dollars as of the date of the report (May 2019).

170 CARB, Frequently Asked Questions for the 2016 Edition California Greenhouse Gas Emission Inventory, 2016.

TABLE 6
STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS

Category	Total 1990 Emissions using IPCC SAR ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2018 Emissions using IPCC AR4 ($MMTCO_2e$)*	Percent of Total 2018 Emissions*
Transportation	150.7	35%	169.5	40%
Electric Power	110.6	26%	63.1	15%
Commercial	14.4	3%	25.7	4%
Residential	29.7	7%	15.6	6%
Industrial	103.0	24%	89.2	21%
Recycling and Waste [a]	–	–	9.1	2%
High GWP/Non-Specified [b]	1.3	<1%	20.5	5%
Agriculture/Forestry	23.6	6%	32.6	8%
Forestry Sinks	-6.7	--	-- [c]	--
Net Total (IPCC SAR)	**426.6**	**100%**	--	--
Net Total (IPCC AR4) [d]	**431**	**100%**	**425.3**	**100%**

* Totals may not add up exactly due to rounding.

a Included in other categories for the 1990 emissions inventory.

b High GWP gases are not specifically called out in the 1990 emissions inventory.

c Revised methodology under development (not reported for 2015).

d CARB revised the State's 1990 level GHG emissions using GWPs from the IPCC AR4.

SOURCES: CARB, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, 2007; CARB, 2000-2017 Trends Figure Data, Figure 4.

Southern California Edison

Southern California Edison (SCE) provides electrical services to approximately 15 million people, 15 counties, 180 incorporated cities, 5,000 large businesses, and 280,000 small businesses throughout its 50,000-square-mile service area, across central, coastal and southern California, an area bounded by Mono County to the North, Ventura County to the West, San Bernardino County to the East, and Orange County to the South.[171] SCE produces and purchases energy from a mix of conventional and renewable generating sources.

SCE generates power from a variety of energy sources, including large hydropower (greater than 30 MW), coal, gas, nuclear sources, and renewable resources, such as wind, solar, small hydropower (less than 30 MW), and geothermal sources. In 2019, the SCE power system experienced a peak

[171] Southern California Edison, Who We Are, https://www.sce.com/about-us/who-we-are. Accessed December 15, 2020.

demand of 22,009 MW.[172] Approximately 36 percent of the SCE 2018 electricity purchases were from renewable sources, which is similar to the 31 percent statewide percentage of electricity purchases from renewable sources.[173] The annual electricity sale to customers in 2019 was approximately 87,143,000 MWh.[174] See **Table 7,** *Existing Annual Regional Energy Use,* for a summary of SCE 2019 electricity use.

TABLE 7
EXISTING ANNUAL REGIONAL ENERGY USE

Source	Amount
Electricity (SCE)[a]	87,143,000 MWh
Natural Gas (SoCalGas)[b]	1,201,753,375 MMBtu
Gasoline (Riverside County)[c]	921,000,000 gallons
Diesel (Riverside County)[c]	108,000,000 gallons

SOURCES:
[a] Southern California Edison, 2019. 2019 Annual Report, p. 2.
[b] California Gas and Electric Utilities, 2020 California Gas Report, p. 144.
[c] California Energy Commission, 2019. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results.

4.3.2.2 Existing Natural Gas Supply

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs and delivered through high-pressure transmission pipelines. Natural gas provides almost one-third of the State's total energy requirements. Natural gas is measured in terms of both cubic feet (cf) or British thermal units (Btu).

Natural gas is used for cooking, space heating, water heating, electricity generation, and as an alternative transportation fuel. The Project Site is served by the Southern California Gas Company (SoCalGas), which is the principal distributor of natural gas in Southern California, serving residential, commercial, and industrial markets. SoCalGas serves approximately 21.8 million customers in more than 500 communities encompassing approximately 24,000 square miles throughout central and southern California, from the City of Visalia to the US/Mexican border.[175]

SoCalGas, along with five other California utility providers, released the *2020 California Gas Report*, presenting a forecast of natural gas supplies and requirements for California through the year 2035. This report predicts gas demand for all sectors (residential, commercial, industrial, energy generation and wholesale exports) and presents best estimates, as well as scenarios for hot and cold years. Overall, SoCalGas predicts a decrease in natural gas demand in future years due to

[172] Southern California Edison, 2019. 2019 Annual Report, p. 2. Available: eix-sce-2019-annual-report.pdf (edison.com). Accessed December 2020
[173] California Energy Commission, 2019. Utility Annual Power Content Labels for 2018, Southern California Edison. July 2019. Available: https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_Southern_California_Edison.pdf Accessed December 2020.
[174] Southern California Edison, 2019. 2019 Annual Report, p. 2.
[175] SoCalGas, 2020. Company Profile, https://www.socalgas.com/about-us/company-profile. Accessed December 2020.

a decrease in per capita usage, energy efficiency policies, and the State's transition to renewable energy displacing fossil fuels including natural gas.[176]

SoCalGas receives gas supplies from several sedimentary basins in the western United States (US) and Canada, including supply basins located in New Mexico (San Juan Basin), west Texas (Permian Basin), the Rocky Mountains, and western Canada as well as local California supplies.[177] Sources of natural gas in the southwestern US will continue to supply most of SoCalGas' natural gas demand. The Rocky Mountain supply is available but is used as an alternative supplementary supply source, and Canadian sources provide only a small share of SoCalGas supplies due to the high cost of transport.[178] Gas supply available to SoCalGas from California sources averaged 3,175 million cf per day or 3,292,475 million Btu (MMBtu) in 2020. This equates to an annual average of 1,158,875 million cf per year or 1,201,753,375 MMBtu per year.[179]

4.3.2.3 Existing Transportation Energy

The annual transportation fuel consumption of diesel and gasoline in 2019 in California (the most recent year for which statewide data is available) is 1,756 million gallons and 13,473 million gallons respectively. Transportation fuel consumption of diesel and gasoline for Riverside County in 2019 is 108 million gallons and 921 million gallons respectively. The estimated Riverside County and Statewide transportation fuel consumption is based on retail sale data from the California Energy Commission (CEC).[180] See Table 7 for a summary of Statewide fossil fuel consumption in 2019.

The State is now working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and greenhouse gas emissions (GHGs) from the transportation sector, and reduce vehicle miles traveled (VMT). Accordingly, gasoline consumption in California has declined. The CEC predicts that the demand for gasoline will continue to decline over the next 10 years, and there will be an increase in the use of alternative fuels.[181]

1.7.5 Existing Site Emissions

The site is currently vacant. Therefore, the Proposed Project site would not emit criteria pollutants or GHGs, nor would it consume energy.

[176] California Gas and Electric Utilities, 2020. 2020 California Gas Report, https://www.socalgas.com/regulatory/cgr. Accessed December 2020.

[177] Ibid

[178] Ibid.

[179] California Gas and Electric Utilities, 2020. 2020 California Gas Report. Available: https://www.socalgas.com/regulatory/cgr. Accessed December 2020.

[180] California Energy Commission, 2019. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting. Accessed December 2020.

[181] California Energy Commission, 2019. 2019 Integrated Energy Policy Report, p. 228. February 2020.

SECTION 2
Thresholds of Significance

The significance thresholds below are derived from the Environmental Checklist questions in Appendix G of the State CEQA Guidelines. Accordingly, a significant impact associated with air quality would occur based on the following thresholds described below:

AIR-1: Conflict with or obstruct implementation of the applicable air quality plan;

AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;

AIR-3: Expose sensitive receptors to substantial pollutant concentrations; or

AIR-4: Result in other emissions (such as those leading to odors) affecting a substantial number of people.

A significant impact associated with GHG emissions would occur based on the following thresholds described below:

GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

A significant impact associated with energy consumption would occur based on the following thresholds described below:

ENE-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

ENE-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In addition to the Appendix G significant impacts listed above, cumulative impacts with respect to air quality, GHGs, and Energy are also addressed as part of the analysis.

Pursuant to the CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, significance thresholds established by the applicable air quality management district or air pollution control district when making determinations of significance. For purposes of this analysis, the potential air quality impacts of the project are assessed in accordance with the most

recent thresholds adopted by the SCAQMD in connection with its CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent SCAQMD guidance, as discussed below.[182]

2.1 Regional Criteria Air Pollutant Emissions Thresholds

SCAQMD has established numerical significance thresholds for regional emissions during construction and operation. The numerical significance thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[183]

Given that construction impacts are temporary, SCAQMD has established significance thresholds specific to construction activity. Based on the indicators in the SCAQMD CEQA Air Quality Analysis Handbook,[184] the Proposed Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

Regional construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily emissions thresholds:[185]

75 pounds a day for VOC

100 pounds per day for NO_X

550 pounds per day for CO

150 pounds per day for SO_X

150 pounds per day for PM10

55 pounds per day for PM2.5

SCAQMD has also established numeric significance thresholds for operations. SCAQMD has established significance thresholds in part based on CAA section 182(e), which identifies 10 tons per year of VOC and NO_X as a significance level for stationary source emissions in extreme non-attainment areas for ozone. The numeric significance thresholds for other pollutants are also based on federal major source thresholds, which vary depending on regional attainment status. For example, the Air Basin is in attainment for carbon monoxide, which yields a corresponding major source threshold of 100 tons per year, or 550 pounds per day.[186] These "major source" significance

[182] While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, project construction and operation would not include sources of lead emissions and would not exceed the significance thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from projects. As a result, lead emissions are not further evaluated.

[183] South Coast Air Quality Management District, 1993. CEQA Air Quality Handbook, November 1993.

[184] South Coast Air Quality Management District, Air Quality Analysis Handbook. www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook. Accessed April 16, 2019.

[185] South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf, revised April 2019. Accessed July 2019.

[186] USEPA, Title V Operating Permits, https://www.epa.gov/title-v-operating-permits/who-has-obtain-title-v-permit. Accessed June 25, 2019.

thresholds were developed under the Federal Title V Operating Permit Program.[187] SCAQMD converted these significance levels to pounds per day. The attainment status designation is based on the healthfulness of air quality and the corresponding significance thresholds are intended to be health protective.[188]

A similar approach is applied to PM2.5, where the daily limit of 55 pounds per day is based on the USEPA proposed rule to implement a PM2.5 NAAQS, with a significant emission rate of 10 tons per year.[189]

The Proposed Project would potentially cause or contribute to an exceedance of an ambient air quality standard if regional operational emissions exceed any of the following SCAQMD prescribed daily emissions thresholds:[190]

55 pounds a day for VOC,

55 pounds per day for NO_X,

550 pounds per day for CO,

150 pounds per day for SO_X,

150 pounds per day for PM10, and

55 pounds per day for PM2.5.

SCAQMD has set its CEQA significance threshold for NO_X and VOC at 10 tons per year (expressed as 55 lb/day). because the federal CAA defines a major stationary source for extreme ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year.[191] Under the federal CAA, such sources are subject to enhanced control requirements,[192] so SCAQMD determined that 55 lb/day was an appropriate threshold for making a CEQA significance finding and requiring feasible mitigation. As, SCAQMD has stated:

> *"... a project source that emits 10 tons/year of NO_X or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_X with specific health impacts from ozone."*[193]

[187] South Coast Air Quality Management District, What is Title V?, http://www.aqmd.gov/home/permits/title-v/what-is-title-v-. Accessed June 24, 2019.

[188] California Air Resources Board, Air Quality Standards and Area Designations, https://www.arb.ca.gov/desig/desig.htm. Accessed June 25, 2019.

[189] South Coast Air Quality Management District, 2006. Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds, October 2006.

[190] South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf, revised April 2019. Accessed July 2019.

[191] 42 U.S.C. §§ 75lla(e), 7511a(f); CAA §§ 182(e), 182(f)

[192] 42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173

[193] South Coast Air Quality Management District, Amicus Brief in Support of Neither Party, *Sierra Club v. County of Fresno*, 2015.

Therefore, lead agencies that use SCAQMD thresholds of significance may determine that projects have a significant air quality impact and correspondingly are required to implement all feasible mitigation measures, yet are not able to correlate the project impact to quantifiable health effects.

2.2 Localized Significance Thresholds

SCAQMD published its Final Localized Significance Threshold Methodology in June 2003, (revised July 2008) and Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds in October 2006, recommending that all air quality analyses include a localized assessment of both construction and operational impacts on the air quality of nearby air quality sensitive receptors.[194,195] LSTs represent the maximum emissions from a project site that are not expected to result in an exceedance of a NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the SRA where a project is located and the distance to the nearest air quality sensitive receptor. LSTs are only applicable to the following criteria air pollutants: NO_X, CO, PM10, and PM2.5. As previously stated, the Project Site is located in the central portion of SRA 28 (Hemet/San Jacinto Valley).[196]

The Basin is in attainment for NO_2 and CO, meaning their ambient concentrations are below their respective air quality standards. When evaluating localized impacts for NO_2 and CO, the local ambient concentrations and the Proposed Project related concentrations are summed and then compared to the NAAQS and CAAQS. If the sum of the ambient concentrations and Proposed Project concentrations are greater than the air quality standard, this would result in a significant impact.

The Basin is in nonattainment for PM10 and PM2.5, meaning their ambient concentrations are above their respective air quality standards. If ambient levels already exceed a NAAQS or CAAQS, then project impacts may be considered significant if they increase ambient concentrations in excess of the allowable increase established by SCAQMD. This would apply to PM10 and PM2.5, both of which are nonattainment pollutants in the Basin. For these latter two pollutants, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 $\mu g/m^3$ applies to construction emissions (and may apply to operational emissions at aggregate handling facilities). The Rule 1301 threshold of 2.5 $\mu g/m^3$ applies to non-aggregate handling operational activities.

SCAQMD recommends that sites larger than 5 acres perform air dispersion modeling to determine localized air quality (SCAQMD 2008b). While the Proposed Project site is greater than 5 acres, the individual phases of construction are localized to smaller portions of the site on any given day. Based on the daily areas of disturbance, the screening level LSTs are used to determine significance. As the screening thresholds for a 5-acre site would be lower than those of a 29-acre site, the use of the screening table would be conservative. **Table 8,** *Localized Screening Levels,*

[194] South Coast Air Quality Management District, 2008. *Final Localized Significance Threshold Methodology*. June 2003, revised July 2008.

[195] South Coast Air Quality Management District, 2008. *Final Localized Significance Threshold Methodology*. June 2003, revised July 2008.

[196] South Coast Air Quality Management District, Map of Monitoring Areas, http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf. Accessed November 2020.

shows the threshold levels used for a five-acre site located within 25 meters of the nearest sensitive receptor.

TABLE 8
LOCALIZED SCREENING LEVELS

Source	NO_X	CO	PM10[b]	PM2.5[b]
Construction - 5-acre site at 25 meters	206	1,965	13	8
Operational – 5-acre site at 25 meters	206	1,965	4	2

SOURCE: South Coast Air Quality Management District, 2008. *Final Localized Significance Threshold Methodology*. June 2003, revised July 2008

2.3 Toxic Air Contaminants

Based on criteria set forth by the SCAQMD, the project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following were to occur:[197]

- The Project would emit carcinogenic materials or TACs that exceed the maximum incremental cancer risk of 10 in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0.

As discussed in the methodology, construction and operational impacts from TACs are evaluated qualitatively in this analysis.

2.4 CO Hotspots

Emissions of CO are generated in greatest quantities from motor vehicle combustion of fossil fuels, and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO hotspots. The potential for the Project to cause or contribute to the formation of offsite CO hotspots are evaluated based on prior dispersion modeling of the four busiest intersections in the SCAB that has been conducted by SCAQMD for its CO Attainment Demonstration Plan in the AQMP. SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the SCAB that include: Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; La Cienega Boulevard and Century Boulevard; and Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County, with an average daily traffic volume of approximately 100,000 vehicles per day. This intersection is located near the on- and off-ramps to Interstate (I) 405 in Westwood. The evidence provided in Table 4-10 of Appendix V of the 2003

[197] South Coast Air Quality Management District, CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants), (1993); SCAQMD Air Quality Significance Thresholds, (March 2011), http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed June 2017.

AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (1-hour average) and 3.2 (8-hour average) at Wilshire Boulevard and Veteran Avenue. When added to the existing background CO concentrations, the screening values would be 7.6 ppm (1-hour average) and 5.6 ppm (8-hour average). Project-impacted intersections with peak-hour traffic volumes that are lower than the intersections modeled by SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations compared to the SCAQMD modeled values in its AQMP.

With respect to the formation of CO hotspots, the Project would be considered significant if the following would occur:

- The Project would cause or contribute to an exceedance of the CAAQS one-hour or eight-hour CO standards of 20 or 9.0 parts per million (ppm), respectively.

Based on the SCAQMD's 2003 AQMP CO hotspot analysis as discussed above, a screening level of 100,000 vehicles per day through an intersection would result in less than significant localized CO impacts. Therefore, any intersection that does not exceed 100,000 vehicles per day would not have the potential to exceed the CAAQS.

2.5 Health Impacts

In Sierra Club v. County of Fresno (S219783) (Sierra Club) the Supreme Court held that CEQA requires lead agencies to either (i) make a "reasonable effort" to substantively connect the estimated amount of a given air pollutant a project will produce and the health effects associated with that pollutant, or (ii) explain why such an analysis is infeasible (6 Cal.5th at 1165-66). However, the Court also clarified that that CEQA "does not mandate" that EIRs include "an in-depth risk assessment" that provides "a detailed comprehensive analysis … to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population wide health risks associated with those levels of exposure (Sierra Club v. County of Fresno. 6 Cal.5th 502, 517-522 (2018))."

USEPA and CARB have established AAQS at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety. Further, California air districts, like SCAQMD, have established emission-based thresholds that provide project-level estimates of criteria air pollutant quantities that air basins can accommodate without affecting the attainment dates for the AAQS, and therefore, providing thresholds of significance for regional and localized air quality impacts from both construction and operation of projects. SCAQMD thresholds take into account that the Air Basin is a distinct geographic area that has critical air pollution problems for which AAQS have been established to protect human health and welfare. [198]

198 SCAQMD. 2019. SCAQMD Air Quality Significance Thresholds. Revised April. Available oline at: www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. Accessed June 2020.

Typically, the health effect of a particular criteria pollutant is analyzed by air districts on a regional scale based on how close the area is to attaining the NAAQS. As shown by the attainment plan emissions data, it takes a large amount of additional precursor emissions to demonstrate a modeled increase in ambient levels over an entire region. Because air districts' attainment plans and supporting air model tools are regional in nature, they are not typically used to evaluate the impacts to ambient concentrations of criteria air pollutants, or to correlate those impacts to the potential resultant impacts to public health effects, from an individual project. The complex nature of criteria air pollutant dispersion and the complex atmospheric chemistry that occurs (especially in the case of ozone and fine particulate matter) limits the usefulness of applying the available models to predict health effects at a project-level. Therefore, correlating a project's criteria air pollutant emissions to specific health effects, particularly with respect to ozone, is speculative.

Generally, models that correlate criteria air pollutant concentrations with specific health effects focus on regulatory decision-making that will apply throughout an entire air basin or region. These models focus on the region-wide health effects of pollutants so that regulators can assess the costs and benefits of adopting a proposed regulation that applies to an entire category of air pollutant sources, rather than the health effects related to emissions from a specific Proposed Project or source. Because of the scale of these analyses, any one project is likely to have only very small incremental effects which may be difficult to differentiate from the effects of air pollutant concentrations in an entire air basin. In addition, such modeling efforts are costly, and the value of a project-specific analysis may be modest in relation to that cost. Furthermore, the results, while costly to produce, may not be particularly useful. For regional pollutants, it is difficult to trace a particular project's criteria air pollutant emissions to a specific health effect. Moreover, the modeled results may be misleading because the margin of error in such modeling is large enough that, even if the modeled results report a given health effect, the model is sufficiently imprecise that the actual effect may differ from the reported results; that is, the modeled results suggest precision, when in fact available models cannot be that precise on a project level.

Writing as amicus curiae in Sierra Club, the SJVAPCD explained that "[r]unning the photochemical grid model used for predicting ozone attainment with emissions solely from one project would thus not be likely to yield valid information given the relative scale involved".[199] Ozone is not directly emitted into the air, but is instead formed as ozone precursors undergo complex chemical reactions through sunlight exposure.[200] Given the complex nature of this process, and the fact that ozone can be transported by wind over long distances, "a specific tonnage amount of NOx or VOCs emitted in a particular area does not equate to a particular concentration

199 SJVAPCD. 2015. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

200 SJVAPCD. 2015. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

of ozone in that area".[201] For this reason, the photochemical analysis for ozone is done on a regional scale, and it is inappropriate to analyze ozone impacts at a local or project-level basis because a localized analysis would at most be speculative, and at worst be misleading.

Speculative analysis is not required by CEQA. The SJVAPCD stated that even a project with criteria pollutant emissions above its CEQA thresholds does not necessarily cause localized human health effects as, even with relatively high levels of emissions, the SJVAPCD cannot determine "whether and to what extent emissions from an individual project directly impact human health in a particular area".[202] The SCAQMD also, as amicus curiae in Sierra Club, made similar points, reiterating that "an agency should not be required to perform analyses that do not produce reliable or meaningful results".[203] With regard to particulate matter, the SCAQMD noted that while the CARB has created a methodology to predict expected mortality from large amount of PM2.5, the primary author of the methodology has reported that it "may yield unreliable results due to various uncertainties" and CARB staff has been directed by its Governing Board to reassess and improve it, which factor "also counsels against setting any hard-and-fast rule" about conducting this type of analysis.[204] SCAQMD agrees that it is very difficult to quantify health effects, opining that the only possible means of successfully doing so is for a project so large that emissions would essentially equate to levels comparable to all combined regional emission increases.[205] Because the Proposed Project would not emit that magnitude of daily emissions, the usage of photochemical modeling to determine specific health effects of this individual project is not warranted.

The mass emissions thresholds developed by the SCAQMD and used by CEQA lead agencies throughout the SCAQMD to determine potential significance of project-related regional changes in the environment are not directly indicative of exceedances of applicable ambient air standards. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. The effects on ground-level ambient concentrations of pollutants that may be breathed by people are also influenced by the spatial and temporal patterns of the emission sources. In other words, the effect on ozone and PM concentrations from a given mass of pollutants emitted in one location may vary from the effect if that same mass of pollutants was emitted in an entirely different location in the Air Basin. The same

201 SJVAPCD. 2015. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

202 SJVAPCD. 2015. Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party In Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

203 SCAQMD. 2015. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

204 SCAQMD. 2015. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

205 SCAQMD. 2015. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno.

effect may be observed when the daily and seasonal variation of emissions is taken into account. Regional-scale photochemical modeling, typically performed only for NAAQS attainment demonstration and rule promulgation, account for these changes in the spatial, temporal, and chemical nature of regional emissions.

As an example of the relationship between modeled regional mass emissions and modeled air basin pollutant concentrations, the most recent EPA-approved SCAQMD basin-wide emissions inventory shows VOC emissions at 162.4 tons per day and NOx emissions at 293.1 tons per day for the baseline year of 2012.[206] SCAQMD's AQMP shows that reducing the baseline 2008 NO_X and VOC emissions by 432 tons per day and 187 tons per day respectively, would only reduce ozone levels at the monitor stations with the greatest ozone concentrations by 9 parts per billion (ppb).[207] Additionally, SCAQMD modeling that accounts for increases in emissions due to new or modified sources within the SCAQMD between 2010 and 2030 show an increase of 6,620 pounds per day of NOx and 89,947 pounds per day of VOC. The results of this analysis show that this level of daily pollutant increase would only increase ozone concentrations in the Air Basin by 2.6 ppb and less than 1 ppb of NO_2.[208]

Currently, the health impact of a particular criteria air pollutant is analyzed by air districts on a regional scale based on how close the area is to attaining the NAAQS. Such an analysis has generally not been performed at the project level. The SCAQMD states that an exceedance of the significance thresholds does not necessarily cause localized human health effects as, even with relatively high levels of emissions. However, the Air Basin is a distinct geographic area that has critical air pollution problems for which AAQS have been established to protect human health and welfare. Therefore, analyzing a project against these thresholds conservatively assesses whether these emissions directly contribute to regional or local exceedances of AAQS and assesses their potential to be harmful to human health. Thus, in order to determine the potential for adverse health effects, project emissions are compared to the SCAQMD's regional emissions thresholds of significance.

2.6 Greenhouse Gas

Amendments to Section 15064.4 of the State CEQA Guidelines were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. If a qualitative analysis is used, in addition to quantification, this section recommends certain qualitative factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements

206 SCAQMD. 2017. *Final 2016 Air Quality Management Plan*. March 2017. Available online at: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/aqmp-archive. Accessed June 2020

207 SCAQMD. 2013. Final 2012 Air Quality Management Plan. February 2013. Available online at: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/aqmp-archive. Accessed June 2020.

208 SCAQMD. 2011. Final Program Environmental Assessment for Re-Adoption of Proposed Rule 1315, (pg 1-11). Available online at: https://www.aqmd.gov/home/research/documents-reports/lead-agency-scaqmd-projects/aqmd-projects---year-2011/re-adoption-of-proposed-rule-1315. Accessed June 2020.

adopted to implement a reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (see Section 15064.7(c)). The California Natural Resources Agency has also clarified that the State CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see Section 15064(h)(3)).

Although GHG emissions can be quantified as discussed under Methodology above, CARB, SCAQMD, and the County of Riverside have not adopted project-level significance thresholds for GHG emissions that would be applicable to the Project. The Governor's Office of Planning and Research (OPR) released a technical advisory on CEQA and climate change that provided some guidance on assessing the significance of GHG emissions, and states that "lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice," and that while "climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment." Furthermore, the technical advisory states that "CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project."

Per State CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions." Thus, State CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of non-significance for GHG emissions if a project complies with a program and/or other regulatory schemes to reduce GHG emissions.

The Project would not have a significant effect on the environment if the Project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS and 2020-2045 RTP/SCS, and County of Riverside polices established for the purpose of increasing energy efficiency and reducing GHG emissions for new developments. This includes a reduction from 2017 BAU of 16.30 percent by 2030 (or 12.65 percent by 2025) from a 2017 business-as-usual (BAU) scenario as outlined in the County's CAP.

The Riverside County Climate Action Plan documents the County's plans and policies to reduce GHG emissions in line with Executive Order B-30-15 and SB 32's goals of achieving a 40 percent reduction below 1990 levels by 2030 and an 80 percent reduction below 1990 levels by 2050. To that end the goals and policies set within the Riverside County Climate Action Plan provide a blueprint for the County to meet these goals. The County's goals show a needed reduction from 2017 emissions of 9 percent by 2020, 16.3 percent by 2030, and 14.8 percent reduction by 2050. In addition, the CAP identified 3,000 MTCO2e/yr as a threshold for the greenhouse gas emissions to be considered having a significant impact. Projects that emit less than 3,000 MTCO2e per year would have a less than significant impact on greenhouse gas emissions.

SECTION 3
Impact Analysis

3.1 Methodology

The evaluation of potential impacts to regional and local air quality that may result from the construction and long-term operations of the Proposed Project is discussed below.

3.1.1 Construction Impacts

Regional Construction Emissions

Project construction activities that would have the potential to create regional air quality impacts including vehicle trips generated by construction workers, vendor trucks, and haul trucks traveling to and from the Proposed Project site and building activities such as the application of paint and other surface coatings. The Proposed Project's daily regional criteria pollutant emissions during construction have been estimated by assuming a conservative scenario for construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors.

The emissions have been estimated using the CalEEMod software, an emissions inventory software program recommended by the SCAQMD for off-road construction equipment emissions.[209] On-road mobile source emissions were estimated using the 2017 CARB on-road vehicle emissions factor model (EMFAC) and incorporating the adjustment factors for the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part I: One National Program (SAFE Rule Part I).

Project construction is estimated to start in 2022 and continue for approximately 30 months, ending in 2024. Construction phasing would include site preparation and grading, excavation and utilities installation, building construction, paving, and architectural coating. The Proposed Project is anticipated to balance all soils onsite. Worker and vendor deliveries vary by phase with a maximum of 54 worker vehicles and 8 vendor trucks accessing the site daily.

[209] CalEEMod was developed in collaboration with the air districts of California and is recommended by SCAQMD for evaluating GHG emissions for projects under CEQA. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. According to the California Air Pollution Control Officers Association, the model is an established, accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.

The input values used in this analysis are based on CalEEMod default information and is consistent with additional equipment as provided in the Noise Technical Report.[210] Haul, vendor and worker trips are based on CalEEMod default estimates based on equipment use.

Emissions from Proposed Project construction activities were estimated based on the construction phase in which the activity would be occurring. The maximum daily emissions estimate the worst-case day and do not represent the emissions that would occur for every day of Proposed Project construction. The maximum daily emissions are compared to SCAQMD daily regional thresholds of significance. A detailed discussion of the Proposed Project's construction phasing and equipment list is available in Appendix A of this technical report. Emissions calculations and modeling output are included in Appendices B, E and F of this technical report.

Localized Construction Emissions

Proposed project construction activities that would have the potential to create local air quality impacts including fugitive dust from grading, and building activities such as the application of paint and other surface coatings. The localized effects from the on-site portion of the Proposed Project's construction emissions were evaluated at the nearby sensitive receptor locations that would be potentially impacted by Proposed Project construction in accordance with the SCAQMD's *Final Localized Significance Threshold Methodology* (June 2003, revised July 2008). The localized significance thresholds only address NO_X, CO, PM10, and PM2.5 emissions. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without the need for Proposed Project-specific dispersion modeling. The localized analysis for the Proposed Project is based on this SCAQMD screening criteria. The maximum daily onsite emissions from construction of the Proposed Project were compared to these screening criteria. The SCAQMD LST screening criteria applicable to a 5-acre site in SRA 28 with sensitive receptors located within 25 meters was used. Emissions calculations and modeling output are included in Appendices B, E, and F of this technical report.

Health Impact Assessment

Health impacts from criteria pollutants associated with the Proposed Project are assessed based on the estimated project's regional emissions. The potential for adverse health impacts for local residences is based on the SCAQMD's regional thresholds as discussed under Section 2.5 *Health Impacts*.

Toxic Air Contaminants

The greatest potential for TAC emissions during construction would be related to DPM emissions associated with heavy-duty equipment during excavation and grading activities. Construction activities associated with the Project would be sporadic, transitory, and short-term in nature (approximately 2.5 years). The SCAQMD has not adopted guidance that requires that quantitative

[210] ESA 2020. *Hemet 30 Residential Project County of Riverside, California. Noise and Vibration Impact Study.* March.

health risk assessments be performed for short-term exposures to TAC emissions. The SCAQMD also has not adopted guidance that establishes a methodology or that requires Lead Agencies to use the 2015 OEHHA guidance manual when assessing short-term TAC exposures from construction emissions for CEQA analyses. Specifically, the SCAQMD states that "SCAQMD currently does not have guidance on construction Health Risk Assessments" and does not apply the 2015 OEHHA update to construction.[211] Therefore, the analysis assess potential impacts from short-term TAC exposures in accordance with the methodology supported by the SCAQMD prior to the 2015 OEHHA update. Thus, a qualitative assessment of the impacts associated with the Project's short-term construction TAC emissions is provided in the analysis section below.

Greenhouse Gas Emissions

The evaluation of potential impacts to GHG emissions that may result from the construction of the Proposed Project is consistent with CEQA Guidelines section 15064.4(a) and recent related guidance from OPR. This analysis considered GHG emissions resulting from construction activities associated with the Proposed Project as detailed under Regional Construction Emissions above. Because potential impacts resulting from GHG emissions would be long-term rather than acute, GHG emissions were calculated on an annual basis. In accordance with SCAQMD guidance, GHG emissions from construction have been amortized (i.e., averaged annually) over the lifetime of the project. SCAQMD defines the lifetime of a project as 30 years. Therefore, the project's total construction GHG emissions are divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

GHG quantification methods rely on guidance from State and regional agencies with scientific expertise in quantifying GHG emissions, including CARB and SCAQMD. Along with the air quality emissions, GHG emissions were estimated using CalEEMod Version 2020.4.0 for off-road construction equipment and Safe Rule 1 adjusted EMFAC2017 emissions for on-road vehicles as detailed above. Emissions calculations and modeling output are included in Appendices C, E and F this technical report.

Energy

Construction of the Project would consume energy, including transportation fuels (i.e. diesel and gasoline), as a result of the use of heavy-duty construction equipment, on-road trucks, and construction workers commuting to and from the Project Site. Electricity consumption would be limited to the use of electrically powered equipment, hand tools and/or small equipment, nighttime lighting, and potentially for construction trailers that could be located on-site.

Based on the proposed development program and engineering estimates that form the basis of the construction-related impact analyses, heavy-duty construction equipment would be primarily

[211] SCAQMD, Final Environmental Assessment for: Proposed Amended Rule 307.1 – Alternative Fees for Air Toxics Emissions Inventory; Proposed Amended Rule 1401 – New Source Review of Toxic Air Contaminants; Proposed Amended Rule 1402 – Control of Toxic Air Contaminants from Existing Sources; SCAQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402; and, SCAQMD Guidelines for Participating in the Rule 1402 Voluntary Risk, page 2-23, September 2016, http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2016/final-ea_par-307-1_1401_1402.pdf?sfvrsn=4. Accessed January 2019.

diesel-fueled. This assumption that diesel fuel would be used for all additional equipment represents the most conservative scenario for maximum potential energy use during construction. Energy demand (specifically fuel consumption) from heavy-duty construction equipment is estimated based on the equipment analyzed in the CalEEMod, consistent with the air quality analysis, and fuel consumption data from CARB OFFROAD2011 model. Calculation details are provided in Appendix D of this report.

3.1.2 Operational Impacts

Regional Operational Emissions

Operation of the Project would generate criteria pollutant emissions from Project-generated vehicles trips traveling to and from the Project Site, energy sources on-site such as natural gas combustion, area sources such as landscaping equipment and use of consumer products including solvents used in non-industrial applications which emit VOCs during their product use, such as cleaning supplies and kitchen aerosols. Operational impacts were assessed for the first full Project buildout year (i.e., as early as 2025 assuming construction begins at the earliest possible time in the mid-2022).

The operational emissions are also estimated using the CalEEMod software. CalEEMod was used to forecast the Project's daily regional emissions from area sources that would occur during long-term Project operations. Mobile source emissions are estimated based on EMFAC2017 model. Mobile source emissions are based on the trip generation rates provided in the Project Specific Traffic information, which accounts for trip reductions from public transportation.[212] In calculating mobile-source emissions, the trip length values were based on the distances provided in the traffic information request of 7.98 miles per one-way trip.

Area source emissions are based on natural gas (building heating and water heaters), landscaping equipment, and consumer product usage rates provided in CalEEMod. Natural gas usage factors in CalEEMod were based on the California Energy Commission California Commercial End Use Survey (CEUS) data set, which provides energy demand by building type and climate zone. However, since the data from the CEUS is from 2002, correction factors were incorporated into CalEEMod to account for the most recent 2019 Title 24 Building Energy Efficiency Standards that would be applicable to the Project.

Localized Operational Emissions

The localized effects from the onsite portion of the operational emissions are evaluated at nearby sensitive receptor locations potentially impacted by the Project according to the SCAQMD's LST methodology, which relies on on-site mass emission rate screening tables and project-specific dispersion modeling, where appropriate. Similar to construction, the SCAQMD LST screening criteria applicable to a 5-acre site in SRA 28 with sensitive receptors located within 25 meters was used.[213]

[212] Traffic Data Needs for Air Quality/GHG/Noise Analysis Information Request. Provided 12/11/2020.

[213] Because the receptor distance (~30 meters) falls between the 25 meter and 50 meter screening level distances used in the SCAQMD's LST look-up tables, the lookup values for 25 meters is used as a conservative estimate.

Carbon Monoxide Hotspots

The greatest quantities of CO are produced from motor vehicle combustion and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed State and/or federal standards are termed "CO hotspots."

As shown previously in Table 5, CO levels in the Project area are substantially below the federal and state standards. Maximum CO levels in recent years are 1.6 ppm or less (one-hour average) and 0.08 ppm or less (eight-hour average) compared to the thresholds of 20 ppm (one-hour average) and 9.0 ppm (eight-hour average). CO levels decreased dramatically in the Air Basin with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Air Basin for some time and the Air Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. Thus, it is not expected that CO levels at Project-impacted intersections would rise to the level of an exceedance of these standards.

Additionally, SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin: (1) Wilshire Boulevard and Veteran Avenue; (2) Sunset Boulevard and Highland Avenue; (3) La Cienega Boulevard and Century Boulevard; and (4) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County, with an average daily traffic volume of approximately 100,000 vehicles per day. This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in the 2003 AQMP (Table 4-10 of Appendix V) shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue. When added to the existing background CO concentrations, the screening values would be 6.6 ppm (one-hour average) and 4.6 ppm (eight-hour average).

Average daily traffic counts were provided for the Project area. Significance is determined by comparing the average daily traffic counts at each intersection from the cumulative plus project scenario to the 100,000 vehicle per day screening level identified above. If the Project results in less than 100,000 vehicles per day at any intersection, it is assumed the Project would not result in a CO hotspot.

Toxic Air Contaminants

During long-term operations, TACs could be emitted as part of periodic maintenance operations, routine cleaning, periodic painting, etc., and from periodic visits from delivery trucks and service vehicles. However, these events are expected to be occasional and result in minimal emissions exposure to off-site sensitive receptors. As the Project consists of residential uses, the Project would not include sources of substantial TAC emissions identified by the SCAQMD or CARB siting

recommendations.[214, 215] Thus, a qualitative analysis is appropriate for assessing the Project's operational emissions.

Greenhouse Gas Emissions

Operation of the Project would generate GHG emissions from on-site operations such as natural gas combustion for heating/cooking, landscaping equipment and the use of consumer products. CalEEMod was used to estimate operational GHG emissions from electricity, natural gas, solid waste, water and wastewater, and landscaping equipment. GHG emissions would also be generated by Project-generated vehicle trips. Operational impacts were assessed for the full Project buildout year of 2025 and, as a conservative emissions estimate, assumes full occupancy in 2025.

With regard to energy demand, the consumption of fossil fuels to generate electricity and to provide heating and hot water generates GHG emissions. Energy demand rates were estimated based on specific square footage of the new commercial uses, as well as predicted water supply needs for these uses. The Project electricity demands are supplied by SCE. CalEEMod provides default intensity factors for CO_2, CH_4, and N_2O for SCE and calculates an overall CO_2e intensity factor. The default CO_2 intensity factor was adjusted to reflect an intensity factor that represents a 2025 scenario. Also, as described above, SB 100 requires local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024. Therefore, since the Project's first operational year is anticipated to be 2025, the default CO_2 intensity factor in CalEEMod for SCE was linearly adjusted to account for 46.7 percent renewable energy for 2025 based on the required renewables from year 2024 under SB 100. For 2017, SCE had 32 percent renewables and this was used to back calculate a CO_2 intensity factor where SCE had zero percent renewable. This value was then adjusted to reflect a CO_2 intensity factor with 46.7 percent renewables. Building electricity and natural gas usage rates were adjusted to account for the 2019 Title 24 Building Energy Efficiency Standards.

Mobile emissions were estimated based on emission factors from EMFAC along with VMT daily trip values taken from the provided traffic information to estimate on-road mobile source GHG emissions, as described in detail under the Air Quality discussion above.

GHG emissions from solid waste disposal are also calculated using CalEEMod. Emissions are based on solid waste calculated for the Project and the GHG emission factors for solid waste decomposition. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery) are statewide averages and are used in this assessment. In addition, it was conservatively assumed 44 percent of solid waste will be diverted from landfills based on because while AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a Statewide goal for 75 percent disposal reduction by the year 2020, the latest

[214] SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, 2005, Table 2-3.

[215] CARB, Air Quality and Land Use Handbook: A Community Health Perspective, 2005, Table 1-1.

CalRecycle data for year 2016 (the latest year for which data are available) states the State has only reached a 44 percent diversion rate.

Emissions of GHGs from water and wastewater result from the required energy to supply and distribute the water and treat the wastewater. Wastewater also results in emissions of GHGs from wastewater treatment systems. Emissions were calculated using CalEEMod and were based on the water usage rate for the land uses, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the emission factors for the wastewater treatment process. Water consumption and wastewater generation were based on CalEEMod defaults.

Other sources of GHG emissions from operation of the Project include equipment used to maintain landscaping, such as lawnmowers and trimmers. The CalEEMod software uses landscaping equipment GHG emission factors from the CARB OFFROAD model and the CARB Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003). CalEEMod default emission rates were used in calculating GHG emissions from these additional sources.

Operational GHG impacts are assessed based on the Project-related incremental increase in GHG emissions compared to baseline conditions. Under CEQA, the baseline environmental setting is established as the time the Notice of Preparation for this EIR circulated (November 17, 2016).

Comparison to Project without GHG Reduction Characteristics, Features, and Measures

In order to evaluate the efficacy of the GHG reduction characteristics, features, and measures that would be implemented as part of the Project, this analysis compares the Project's GHG emissions to the emissions that would be generated by the Project without implementation of GHG reduction characteristics, features, and measures. This approach mirrors the concepts used in CARB's Climate Change Scoping Plan, which demonstrates GHG reductions compared to a BAU scenario. The Riverside County Climate Action Plan Update uses 2017 as a BAU year for comparison.[216] Therefore, the analysis also uses 2017 as a comparison year. The Project's GHG emissions in comparison to the emissions that would be generated by the Project without implementation of GHG reduction characteristics, features, and measures is consistent with CARB's approach in the Scoping Plan. The emissions are estimated using the CalEEMod software, and the model inputs are adjusted to account for the specific and defined circumstances and described above. The analysis assumes the Project without implementation of GHG reduction characteristics, features, and measures would incorporate the same land uses and building square footage as the proposed Project.

Consistency with Greenhouse Gas Reduction Plan, Policies, and Actions

The Project's GHG emissions are also evaluated by assessing the Project's consistency with applicable GHG reduction strategies and local actions adopted by the County of Riverside. As

[216] County of Riverside. *Climate Action Plan Update*. November 2019. Available: https://planning.rctlma.org/Portals/14/CAP/2019/2019_CAP_Update_Full.pdf. Accessed December 2020.

discussed previously, the County has adopted a Climate Action Plan which shows a reduction of 16.30 percent from 2017 baseline by 2030. The Project would be consistent with the Climate Action Plan provided the Project's comparison with 2017 baseline meets or exceeds 12.65 percent by 2025 (buildout year).

In addition, the California CAT Report provides recommendations for specific emission reduction strategies for reducing GHG emissions and reaching the targets established in AB 32 and Executive Order S-3-05. Thus, if the Project is designed in accordance with these policies and regulations, it would result in a less than significant impact, because it would be consistent with the overarching State regulations on GHG reduction (AB 32).

Energy

Operation of the Project would consume energy in the form of electricity and natural gas for building heating, cooling, cooking, lighting, water demand and wastewater treatment, consumer electronics, electric vehicle charging, and other energy needs; transportation-fuels, primarily gasoline, for vehicles traveling to and from the Project; and diesel consumption for the maintenance and testing of emergency generator.

Annual electricity and natural gas usage for the Project's buildings were estimated using CalEEMod. Building energy consumption was based on the size of the proposed development, energy use factors, and energy demand factors for water use (purification and transportation). The energy usage takes into account building energy standards pursuant to the 2019 Title 24 Building Standards Code, CALGreen Code, and the Green Building Standards. Physical and operational Project characteristics, such as compliance with Title 24 building.

Gasoline and diesel consumption for transportation from residents, employees, and visitors to the Project Site was estimated based on the predicted number of trips to and from the Project Site as detailed above in the Air Quality section. The estimated fuel economy for vehicles is based on fuel consumption factors from CARB EMission FACtors model (EMFAC) model (specifically EMFAC 2017 was incorporated into CalEEMod and used for the analysis). Fuel consumption factors were based on the Project's buildout year of 2025. As discussed above, EMFAC is incorporated into CalEEMod, which is a state-approved emissions model used for the Project's air quality and GHG emissions assessment. Calculation details are provided in Appendix D of this EIR.

3.1.4 Cumulative Impacts

Air Quality

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or California non-attainment pollutant. Because the Riverside County portion of the Air Basin is currently in non-attainment for ozone, PM10, and PM2.5, cumulative projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, Section 15064(h)(3) of the CEQA Guidelines provides guidance in determining the significance of cumulative impacts as detailed under the construction analysis above.

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD's adopted AQMP.

Nonetheless, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. Operational air quality impacts are therefore assessed based on the incremental increase in emissions compared to baseline conditions. Under CEQA, the baseline environmental setting for an EIR is established at or around the time that the Notice of Preparation for the EIR is published. As discussed previously, the Project Site is currently vacant and therefore all Project emissions would constitute an increase in the baseline conditions. The maximum daily emissions from operation of the Project are compared to the SCAQMD daily regional numeric thresholds.

Greenhouse Gas

CEQA requires that lead agencies consider the cumulative impacts of GHG emissions from even relatively small (on a global basis) increases in GHG emissions. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and therefore significant. In the case of global climate change, the proximity of the Project to other GHG emission generating activities is not directly relevant to the determination of a cumulative impact because climate change is a global condition. As stated above, GHG emission impacts are, by their very nature cumulative, as both the California Natural Resources Agency and CAPCOA have recognized.[217] Therefore, an analysis of a project's GHG emission impacts also serves as a cumulative impact assessment.

Energy

Cumulative impacts occur when impacts that are significant or less than significant from a Proposed Project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. The geographic context for the cumulative analysis of electricity is SCE's service area and the geographic context for the cumulative analysis of natural gas is SoCalGas' service area. While the geographic context for transportation-related energy use is more difficult to define, it is meaningful to consider the Project in the context of County-wide consumption. Growth within these geographies is anticipated to increase the demand for electricity, natural gas, and transportation energy, as well as the need for energy infrastructure, such as new or expanded energy facilities.

3.1.4 Project Design Features

The following Project Design Features would be incorporated into the Proposed Project during construction and operational activities and would result in reduction of Project emissions.

[217] California Air Pollution Control Officers Association, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, (2008).

AQ-1: The Program shall use off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 4 off-road emissions standards for equipment rated at 50 horsepower or greater and not identified under AQ-2. below. Such equipment will be outfitted with Best Available Control Technology (BACT) devices, including a CARB-certified Level 3 Diesel Particulate Filter or equivalent. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment.

AQ-2: At a minimum, the following equipment shall be electric or non-diesel fueled: aerial lifts, forklifts, and air compressors. Additionally, onsite electricity shall be used to power the equipment to the greatest extent possible. Where grid electricity cannot be used, a non-diesel powered generator shall be used and use of the generator shall be limited to only those activities necessary.

AQ-3: Construction of the Proposed Project shall mandate that only electric fireplaces be installed in any of the residences.

Energy-1: To comply with Riverside County Climate Action Plan 2019 Addendum Update R2-CE1 policies, the Project will offset 30 percent or more of the energy consumption onsite with solar panel installation on the proposed new residential buildings.

3.2 Air Quality Impacts

Threshold AIR-1 Conflict with or obstruct implementation of the applicable air quality plan.

Impact AIR-1

Implementation of the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant).

The Proposed Project is located within the Air Basin, which is under the jurisdiction of the SCAQMD. As such, SCAQMD's 2016 AQMP is the applicable air quality plan for the Proposed Project. Projects that are consistent with the regional population, housing, and employment forecasts identified by SCAG are considered to be consistent with the AQMP growth projections, since the forecast assumptions by SCAG forms the basis of the land use and transportation control portions of the AQMP. Additionally, because SCAG's regional growth forecasts are based upon, among other things, land uses designated in general plans, a project that is consistent with the land use designated in a general plan would also be consistent with the SCAG's regional forecast projections, and thus also with the AQMP growth projections.

Construction

The Proposed Project would result in an increase in short-term employment compared to existing conditions. Also, construction employees are typically employees of the construction firm and are not hired specifically for any one construction job. Being relatively small in number and temporary in nature, construction jobs under the project would not conflict with the long-term employment

projections upon which the AQMP is based. Control strategies in the AQMP with applicability to short-term emissions from construction activities include strategies denoted in the 2016 AQMP as MOB-08 and MOB-10 and are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. Construction contractors would be required to comply with the CARB Air Toxic Control Measure that limits heavy duty diesel motor vehicle idling to no more than five minutes at any given location with certain limited exceptions defined in the regulation for equipment in which idling is integral to the function of the equipment or activity (such as concrete trucks and concrete pouring). In addition, contractors would be required to comply with required and applicable BACT and the CARB In-Use Off-Road Diesel Vehicle Regulation to use lower emitting equipment in accordance with the phased-in compliance schedule for equipment fleet operators. The project would not conflict with implementation of these strategies. The project is also required to comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403. Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities.

As discussed further below in the analysis for Impact AIR-2, in addition to the Proposed Project being consistent with applicable strategies in the AQMP, local and state regulations, and other voluntary measures designed to reduce non-attainment pollutants, regional emissions during construction of the Proposed Project would not exceed the significance threshold for any criteria pollutants. Therefore, impacts related to consistency with air quality plans during construction of the Proposed Project would be less than significant.

Operation

The AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP. The Project would include a single-family residential uses.

The Project would generate indirect growth associated with the 144 new dwelling units. According to the Southern California Association of Governments (SCAG), Unincorporated Riverside County forecast household growth of 60,600 households between 2020 and 2035. As such, the estimated 144 homes generated by the Project are within SCAG's growth assumptions for Unincorporated Riverside County representing approximately 0.25 percent of the total growth anticipated by 2035. As such, the Project would not generate growth beyond the range of development anticipated within the established SCAG regional forecast. The Project would not increase or induce residential density growth not otherwise anticipated. Consequently, the Project would not foster growth inducing impacts.

The 2016 AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP.

As detailed in *Impact AIR-2* below and shown in Table 10, the projected operational emissions would not exceed the SCAQMD's regional significance thresholds. As a result, the Project would not conflict with or obstruct implementation of the AQMP. Therefore, regional operational impacts would be less than significant.

Mitigation:

None Required

Significance Determination: Less than Significant.

Threshold AIR-2	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Impact AIR-2

Implementation of the Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (Less than Significant with Mitigation)

The Proposed Project would contribute to local and regional air pollutant emissions during construction (short-term or temporary) and operation (long-term).

Construction

Regional Emissions Analysis

Construction of the Proposed Project has the potential to generate temporary regional criteria pollutant emissions through the use of heavy-duty construction equipment, such as excavators and forklifts, through vehicle trips generated by workers and haul trucks traveling to and from the Proposed Project site, and through building activities such as the application of paint and other surface coatings. In addition, fugitive dust emissions would result from site preparation and various soil-handling activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment such as dozers and loaders. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions.

The maximum daily construction emissions for the Proposed Project were estimated for each construction phase. Some individual construction phases could potentially overlap; therefore, the estimated maximum daily emissions include these potential overlaps by combining the relevant construction phase emissions. The maximum daily emissions are predicted values for a representative worst-case day, and do not represent the actual emissions that would occur for every day of construction, which would likely be lower on many days. As stated above, in order to provide

a conservative emissions analysis, for modeling purposes, construction emissions were modeled beginning in 2022. Detailed emissions calculations are provided in Appendix B of this report.

The results of the criteria pollutant calculations are presented in **Table 9,** *Estimated Maximum Unmitigated Regional Construction Emissions,* and include dust control measures required to be implemented by SCAQMD Rule 403 (Control of Fugitive Dust), including subsection (e) – Additional Requirements for Large Operations, and fugitive VOC control measures required to be implemented by architectural coating emission factors based on SCAQMD Rule 1113 (Architectural Coatings). Emissions identified in Table 9 take into account the incorporation of PDF AQ-1. Emissions reductions from PDF AQ-2 were not included in the modeling as the full extent of incorporation was not known as the time the modeling was completed. However, incorporation of PDF AQ-2 would further reduce emissions from what is identified in Table 9. As shown in Table 9, construction-related daily emissions would not exceed the SCAQMD threshold of significance for any criteria pollutant. Therefore, regional construction emissions impacts would be less-than-significant.

TABLE 9
ESTIMATED MAXIMUM UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY)[a]

Source	VOC	NO_X	CO	SO_2	PM10[b]	PM2.5[b]
Site Preparation/Grading	5	56	30	<1	6	3
Trenching/Utilities	1	9	9	<1	1	<1
Building Construction	2	20	17	<1	2	1
Paving	1	13	16	<1	1	1
Architectural Coating	17	2	3	<1	<1	<1
Building Construction/Paving/Architectural Coating	20	36	36	0	3	2
Maximum Daily Emissions	20	56	36	<1	6	3
SCAQMD Thresholds of Significance	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B of this report.

[b] Emissions include consistency with fugitive dust control measures consistent with SCAQMD Rule 403, including subsection (e) – Additional Requirements for Large Operations; SCAQMD Rule 1113 for architectural coatings and Project Design Feature AQ-1.

SOURCE: ESA 2020.

Operations

Regional Emissions Analysis

As discussed under methodology above, operation of the Project would generate criteria pollutant emissions from Project-generated vehicles trips traveling to and from the Project Site, energy sources on-site such as natural gas combustion, area sources such as landscaping equipment and use of consumer products including solvents used in non-industrial applications which emit VOCs

during their product use, such as cleaning supplies and kitchen aerosols. Detailed emissions calculations are provided in Appendix B of this report.

Results of the criteria pollutant calculations are presented in **Table 10**, *Unmitigated Regional Maximum Daily Operational Emissions*. The increase in operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM10, and PM2.5) would not exceed the SCAQMD threshold of significance for any non-attainment pollutants. Therefore, impacts would be less than significant.

TABLE 10
UNMITIGATED REGIONAL MAXIMUM DAILY OPERATIONAL EMISSIONS (POUNDS PER DAY)[a]

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Project Emissions						
Area	*11*	*3*	*50*	*<1*	*6*	*6*
Energy (Natural Gas)	*<1*	*1*	*0*	*<1*	*<1*	*<1*
Mobile	6	7	24	<1	7	<1
Total	16	11	75	0	14	6
SCAQMD Significance Thresholds	55	55	550	150	150	55
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Note: parenthetical numbers represent a reduction in emissions

[a] Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix B.

SOURCE: ESA, 2020

Health Impact Assessment

NOx and VOC emissions from projects are directly related to the increase in ozone in the local area/region which aggravate respiratory diseases, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms and may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. As shown in Tables 9 and 10, unmitigated Project-related construction and operational emissions would be below the thresholds of significance for all criteria pollutants. Therefore, construction and operation of the Proposed Project would not have the potential to result in additional quantifiable health impacts, and impacts would be less-than-significant.

Mitigation:

None required.

Significance Determination: Less than Significant.

Threshold AIR-3 Expose sensitive receptors to substantial pollutant concentrations.

Impact AIR-3

Implementation of the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant with Mitigation)

Localized Construction

The maximum daily localized emissions for each of the construction phases and the localized significance thresholds are presented in **Table 11**, *Estimated Maximum Unmitigated Localized Construction Emissions.* The same phasing, equipment assumptions, and compliance with SCAQMD Rule 403, Rule 1113, and PDF AQ-1 were used as for the regional emissions calculations discussed above. As shown in Table 11, maximum localized construction emissions for sensitive receptors would not exceed the localized threshold of significance for any criteria pollutant. As the Proposed Project's maximum localized emissions from construction would not exceed the localized thresholds of significance, localized construction emissions impacts would be less than significant. Detailed emissions calculations are provided in Appendix B of this report.

TABLE 11
ESTIMATED MAXIMUM UNMITIGATED LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY) [a]

Source	NO_X	CO	PM10[b]	PM2.5[b]
Site Preparation/Grading	55	28	5	3
Trenching/Utilities	8	8	<1	<1
Building Construction	19	15	1	1
Paving	13	15	1	1
Architectural Coating	2	2	<1	<1
Building Construction/Paving/Architectural Coating	33	31	2	1
Maximum Localized (On-Site) Emissions	55	31	5	3
SCAQMD Thresholds of Significance	206	1,965	**13**	8
Exceed Thresholds?	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B of this report.

[B] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

SOURCE: ESA, 2020.

Localized Operations

The maximum daily localized emissions operational activities as compared to the significance thresholds are presented in **Table 12,** *Estimated Maximum Localized Operational Emissions.* As shown in Table 12, maximum localized operational emissions would not exceed the localized threshold of significance. Therefore, with the implementation of mitigation the Proposed Project's maximum localized emissions from emissions impacts would be less than significant. Detailed emissions calculations are provided in Appendix B of this report. The localized operational emissions include reductions from implementation of Project Design Feature AQ-3.

TABLE 12
ESTIMATED MAXIMUM LOCALIZED OPERATIONAL EMISSIONS (POUNDS PER DAY) [a]

Source	NO_X	CO	PM10[b]	PM2.5[b]
Area	<1	12	<1	<1
Energy	1	<1	<1	<1
Total	1	13	<1	<1
SCAQMD Thresholds of Significance	206	1,965	4	2
Exceed Thresholds?	No	No	No	No

[a] Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B of this report.
[B] Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

SOURCE: ESA, 2020.

Toxic Air Contaminants

Construction

Excess lifetime cancer risk is estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to carcinogens. As the individual incremental increase in lifetime cancer risk is assessed over long exposure time periods (i.e., 30-year for residential receptors), the potential effects of Proposed Project-related carcinogenic TAC emissions must include the combination of exposure to construction-related activities and exposure to operation-related activities. For cancer risk, SCAQMD guidance identifies a significant impact if a project would result in an incremental cancer risk that is greater than 10 in one million for any receptor. A chronic HI equal to or greater than 1.0 represents a significant chronic health hazard. A chronic health effect could include irritation to eyes, throat, lungs or neurological damage.

The TAC emissions of the Proposed Project would be generated from mobile sources including diesel-powered heavy-duty trucks and construction equipment. These sources generate DPM from combustion of diesel fuels. The potential emission sources of DPM would be diesel-fueled heavy-duty equipment, on-road travel and idling emissions from diesel-fueled haul trucks.

Implementation of Project Design Features AQ-1 and AQ-2 would reduce DPM emissions to the greatest extent possible and would therefore result in risk levels below the SCAQMD regulatory requirements. Therefore, impacts would be less-than-significant.

Operational

SCAQMD recommends that health risk assessments be conducted for substantial sources of TAC emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions. The Project is not anticipated to generate a substantial number of daily truck trips, nor would it result in the emission of other TACs at a level where concern would be raised regarding health risk. Therefore, the Project would not warrant the need

for a health risk assessment associated with on-site operational activities, and potential TAC impacts are expected to be less than significant.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes and automotive repair facilities. The Project would implement 144 single family residences resulting in emissions of TAC from the use of consumer products (e.g., aerosol sprays). Therefore, the Project is not expected to release substantial amounts of TACs during operational activities, and no significant impact on human health would occur.

Mitigation:

None Required

Significance Determination: Less than Significant.

Threshold AIR-4	Result in other emissions (such as those leading to odors) affecting a substantial number of people.

Impact AIR-4

Implementation of the Proposed Project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people). (Less than Significant)

Construction

Potential activities that may emit odors during construction include the use of architectural coatings and solvents, as well as the combustion of diesel fuel in on-and off-road equipment. SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. In addition, the Proposed Project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Through mandatory compliance with SCAQMD Rules, no construction activities or materials are expected to create objectionable odors affecting a substantial number of people. Furthermore, as shown in Table 9, construction emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO_2). Therefore, construction activities would result in less than significant impacts with respect to other emissions, including those leading to odors.

Operations

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Proposed Project would not include any uses identified by the SCAQMD as being associated with substantial odors. As a result, the Proposed Project is not expected to discharge contaminants into the air in quantities that would cause a nuisance, injury, or annoyance to the public or property pursuant to

SCAQMD Rule 402. Furthermore, as discussed under Impact AIR-2 above, operational emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO_2). Therefore, operation of the Proposed Project would result in less than significant impacts with respect to other emissions, including those leading to odors.

Mitigation: None required.

Significance Determination: Less Than Significant.

3.3 Greenhouse Gas Impacts

Threshold GHG-1 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact GHG-1

Implementation of the Proposed Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Less than Significant)

Construction

According to SCAQMD methodology, because GHG emissions are a cumulative impact, Project significance is determined by the combined amortized construction and operational emissions. The Proposed Project's total estimated GHG emissions during construction are identified in **Table 13,** *Amortized Annual Construction GHG Emissions.* As shown, estimated GHG emissions would be approximately 1,608 $MTCO_2e$ over the entire lifetime of the project. This would equal approximately 54 $MTCO_2e$ per year after amortization over 30 years per SCAQMD methodology. Detailed calculations and modeling output are included in Appendix C, E and F of this report.

Operational

Operational GHG emissions result from area sources and the increased electrical use as a result of daily activities once the improved reservoir is operational. **Table 14,** *Annual Operational GHG Emissions,* shows the total annual GHG emissions associated with the combined construction and operation of the Proposed Project. As shown in Table 13, operational emissions result in 3,324 $MTCO_2e$ annually. As discussed previously, the County of Riverside Climate Action Plan expects a reduction of 16.30 percent from 2017 levels by 2035. This is equivalent to a 12.65 percent reduction over 2017 levels by 2025. As shown in Table 14, the Proposed Project would result in a reduction of 16.45 percent over BAU. Therefore, the Proposed Project would be consistent with the Riverside County Climate Action Plan and would result in less than significant impacts.

Project Total

As shown in Table 14, the proposed Project would generate a total of 2,023 MTCO2e per year. This level of GHG emissions is less than the 3,000 MTCO2e annual emission thresholds for GHG

as identified in the CAP for project to be considered to have potential GHG impacts. Therefore, the proposed Project would not have a significant greenhouse gas impact.

TABLE 13
AMORTIZED ANNUAL CONSTRUCTION GHG EMISSIONS

Source	$MTCO_2e$
Site Preparation/Grading	192
Trenching/Utilities	79
Building Construction	911
Paving	50
Architectural Coating	13
Total Project Construction Emissions	**1,607**
Amortized Project Construction Emissions	**54**

SOURCE: ESA 2020.

TABLE 14
ANNUAL OPERATIONAL GHG EMISSIONS

Source	Project $MTCO_2e$	2017 BAU $MTCO_2e$
Area	46	47
Energy	456	544
Mobile Source	1369	3,225
Waste	50	50
Water	47	59
Subtotal Operational Emissions	**1,969**	**3,925**
Amortized Project Construction Emissions	54	54
Total Project Emissions	**2,023**	**3,978**
Percent Reduction		49.14
CAP Required Percent Reduction (based on 2025 operational year)		12.65
Fall short of Percent Reduction Requirement?		No

SOURCE: ESA, 2020.

Mitigation: None required.

Significance Determination: Less Than Significant.

Threshold GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Impact GHG-2

Implementation of the Proposed Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. (Less than Significant)

Consistency with the Climate Change Scoping Plan

The CARB Climate Change Scoping Plan was designed to reduce GHG emissions from new land use projects. The Proposed Project would be subject to the Scoping Plan requirements. The majority of the Scoping Plan measures target measures that reduce energy and transportation emissions from residential and commercial/industrial development and therefore the majority of the Scoping Plan measures are not applicable to the Proposed Project. Out of the Recommended Actions contained in CARB's Scoping Plan, the actions that are most applicable to the proposed program would be reducing diesel-fueled commercial motor vehicle idling, and reducing energy associated with water use. The Proposed Project would be designed to comply with the California regulations to limit idling of onsite vehicles to 5 minutes or less per location.

In support of AB 32, the state has promulgated specific laws aimed at GHG reductions applicable to the Project. The heating, ventilation, and air conditioning (HVAC) system would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency caused by heat loss and heat gain. The Project would generate GHG emissions due to construction and operational activities; however, its annual GHG emissions, would be generated due to development located and designed to be consistent with relevant goals and actions designed to encourage development that results in the efficient use of public and private resources. Therefore, the Project's GHG emissions and associated impacts would be less than significant.

Consistency with SB 375

The key goal of the Sustainable Communities Standard is to achieve GHG emission reduction targets through integrated land use and transportation strategies. The focus of these reductions is on transportation and land use strategies that influence vehicle travel. The Proposed Project would increase vehicle traffic in the region however, it would also be consistent with the anticipated growth for the Project Area. The Project would be consistent with all state and local regulations with respect to vehicle emissions and efficiencies. Therefore, the Proposed Project would not conflict with the implementation of SB 375 and impacts would be less than significant.

Consistency with Applicable Regulations

The Heavy-Duty Vehicle and Light-Duty vehicle rules have been established to reduce CO2 emissions from the combustion of fossil fuels. The Proposed Project would not involve the manufacture of vehicles or production of vehicle fuels. However, vehicles that are purchased and used within the project site would comply with any vehicle and fuel standards that the CARB adopts or has adopted. Therefore, the construction and operation of the Proposed Project would not conflict with these regulations.

CARB's ATCM limits heavy-duty diesel motor vehicle idling to reduce DPM and other TACs and applies to all the haul trucks, heavy duty vendor trucks, and construction equipment that would be used on the project site. CARB also implemented the Truck and Bus Regulation to further reduce NOx, PM10 and PM2.5 from on-road diesel operating vehicles. CARB has also promulgated emissions standards for off-road diesel construction equipment greater than 24 horsepower to reduce criteria pollutant emissions. The Proposed Project would operate both on- and off-road trucks and construction equipment. These vehicles would comply with all of the CARB regulations and onsite trucks and equipment would be monitored to ensure that idling would occur for only five minutes at any given time. Therefore, the Proposed Project would be consistent with the applicable regulations for heavy-duty, light-duty and off-road vehicles and equipment and impacts would be less than significant.

Consistency with Riverside County Climate Action Plan

As detailed under GHG-1 above, the Proposed Project would be consistent with the Riverside County Climate Action Plan if the Proposed Project would reduce emissions by a minimum of 12.67 percent over 2017 BAU scenario. As shown, the Proposed Project results in a 16.45 percent reduction over 2017 BAU scenario. Therefore, the Proposed Project would be consistent with the Riverside County Climate Action Plan and impacts would be less than significant.

Mitigation: None required.

Significance Determination: Less Than Significant.

3.4 Energy Impacts

ENERGY-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact ENE-1

The Project would include sustainable design features that would comply with energy efficiency regulatory requirements. Furthermore, the Project's land use characteristics (such as proximity to transit and a variety of uses) and location would minimize vehicle trips and VMT. For these reasons, the Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources.

Construction

Construction of the Project would result in energy consumption from the use of heavy-duty construction equipment, on-road trucks, and construction workers commuting to and from the Project Site.

Electricity would be used during construction to provide temporary power for lighting and electronic equipment (e.g., computers, etc.) and to power certain construction equipment (e.g., hand tools or other electric equipment). Energy use during construction would generally not result in a

substantial increase in on-site electricity consumption and would be substantially less than the energy use under existing conditions. Electricity use during construction would be variable depending on lighting needs and the use of electric-powered equipment and would be temporary for the duration of construction activities. It is expected that construction electricity use would be temporary and negligible over the long-term. Natural gas is not anticipated to be used during construction activities.

Based on the Proposed development program and engineering estimates that form the basis of the construction-related impact analyses, heavy-duty construction equipment would be primarily diesel-fueled. The assumption that diesel fuel would be used for most equipment represents the most conservative scenario for maximum potential energy use during construction. The estimated total diesel fuel that would be consumed by heavy-duty construction equipment is shown in **Table 15**, *Summary of Energy Use During Project Construction*. Calculation details are provided in Appendix D of this Report.

TABLE 15
SUMMARY OF ENERGY USE DURING PROJECT CONSTRUCTION [a]

Fuel Type	Total Quantity [a]	Annual Average Quantity During Construction [a]
Gasoline		
On-Road Construction Equipment	23,811 gallons	9,524 gallons
Off-Road Construction Equipment	0 gallons	0 gallons
Total Gasoline	**23,811 gallons**	**9,524 gallons**
Diesel		
On-Road Construction Equipment	9,657 gallons	3,863 gallons
Off-Road Construction Equipment	121,956 gallons	48,783 gallons
Total Diesel	**131,613 gallons**	**52,645 gallons**

[a] Totals may not add up due to rounding of decimals.

SOURCE: ESA, 2020.

Based on CARB's on-road vehicle emissions model, EMFAC2017, heavy-duty haul trucks and vendor trucks operating in the South Coast Air Basin would have an estimated average fuel economy of approximately 6.2 and 6.7 miles per gallon in 2022. Although construction would occur over 30 months, 2021 fuel economy values were used to provide a conservative assessment as fuel economies would increase in future years.

The number of construction workers that would be required would vary based on the phase of construction and activity taking place. The transportation fuel required by construction workers to travel to and from the Project Site would depend on the total number of worker trips estimated for the duration of construction activity. The total gasoline fuel was estimated for workers and is also shown in Table 15.

For comparison purposes only, and not for the purpose of determining significance, the annual average fuel usage would represent approximately 0.001 percent of the 2019 annual on-road

gasoline-related energy consumption and 0.05 percent of the 2019 annual diesel fuel-related energy consumption in Riverside County,[218] as shown in Appendix D of this Draft EIR.

Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[219] Vehicles that would be used by construction workers would comply with Corporate Average Fuel Economy fuel economy standards, which would result in more efficient use of transportation fuels (lower consumption). Vehicles that would be used by construction workers would also comply with Pavley and Low Carbon Fuel Standards which are designed to reduce vehicle GHG emissions, but would also result in fuel savings in addition to compliance with Corporate Average Fuel Economy standards.[220]

Construction of the Project would utilize fuel-efficient equipment consistent with State and federal regulations, such as fuel efficiency regulations in accordance with the CARB Pavley Phase II standards, the anti-idling regulation in accordance with Section 2485 in Title 13 of the California Code of Regulations, and fuel requirements in accordance with Section 93115 in Title 17 of the California Code of Regulations, and would comply with State measures to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation fuels. While these regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations discussed above would also result in fuel savings from the use of more fuel-efficient engines.

Based on the analysis above, construction would utilize energy only for necessary on-site activities and to transport construction materials, excavated fill, and demolition debris to and from the Project Site. As discussed above, idling restrictions and the use of cleaner, energy-efficient equipment would result in less fuel combustion and energy consumption and thus reduce the Project's construction-related energy use. Therefore, construction of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy, and impacts would be less than significant.

Mitigation

None Required.

Significance Determination: Less than Significant

218 CEC, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2020 https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting, accessed December 2020.

219 BP Global, Oil reserves, 2018, http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/oil/oil-reserves.html, accessed January 7, 2019.

220 As mentioned under Subsection IV.F.2.a)(2)(d), *California Assembly Bill 1493 (AB 1493, Pavley)*, In September 2019, the USEPA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule in the federal register (Federal Register, Vol. 84, No. 188, Friday, September 27, 2019, Rules and Regulations, 51310-51363) that maintains the vehicle miles per gallon standards applicable in model year 2020 for model years 2021 through 2026. California and 23 other states and environmental groups in November 2019 in U.S. District Court in Washington, filed a petition for the EPA to reconsider the published rule. The Court has not yet ruled on these lawsuits.

Operation

Operational energy consumption would occur as a result of the building's energy needs, and the use of transportation fuels (e.g., diesel and gasoline) associated with vehicles traveling to and from the Project Site. This analysis estimates the maximum operational energy consumption to evaluate the Project's associated impacts on energy resources.

Daily operation of the Project would consume energy in the form of electricity and natural gas. Additionally, energy would be consumed off-site for the conveyance and treatment of water, wastewater, and the disposal of solid waste. Building energy use factors and water demand factors from CalEEMod, consistent with the Project analyses conducted for air quality and greenhouse emissions, are used to estimate building energy use. The Project's estimated net operational energy demand is provided in **Table 16**, *Project Operational Energy Usage*. The Project would be designed to meet the applicable standards of the Green Building Program requirements such as, energy-efficient appliances, water efficient plumbing fixtures and fittings, and water-efficient landscaping. These energy saving features are included in the electricity estimates in Table 16. Calculation details are provided in Appendix D of this Report.

TABLE 16
SUMMARY OF ANNUAL NET NEW ENERGY USE DURING PROJECT OPERATION [a,b]

Energy Type	Annual Quantity
Electricity	1.25 GWh
Percentage of SCE's 2018 Sales	**0.001%**
Natural Gas	4,524 MMBTU
Percentage of SoCalGas' 2024 Sales	**0.00083%**
Transportation	
Gasoline	106,113 gallons
Diesel	41,160 gallons
Percentage of Gasoline Consumption	**0.01%**
Percentage of County Diesel Consumption	**0.04%**

kWh = kilowatt-hours
MMBtu = million British thermal units

[a] Detailed calculations are provided in Appendix F of this Draft EIR.

[b] Project electricity and natural gas estimates assume compliance with applicable 2019 Title 24 and CALGreen requirements.

SOURCE: ESA, 2020.

Electricity

As shown in Table 16, with compliance with 2019 Title 24 standards and applicable CALGreen requirements, buildout of the Project would result in a projected net increase in the on-site demand for electricity totaling approximately 1.31 GWH per year. The Project would include building features such as energy-efficient appliances, water efficient plumbing fixtures and fittings, and

water-efficient landscaping. All Project components would, at a minimum, meet mandatory Green Building Program requirements.

SCE is required to procure at least 33 percent of its energy portfolio from renewable sources by 2020. With the passage of SB 100 in September 2018, SCE will be required to update its long-term plans to demonstrate compliance including providing 60 percent of its energy portfolio from renewable sources by December 31, 2030, and ultimately planning for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. SCE's current sources include wind, solar, eligible hydroelectric, biomass/biowaste, and geothermal sources. These sources accounted for approximately 47 percent of SCE's overall energy mix in 2025.

Based on SCE's its 2019 Annual Report, SCE total system sales for 2020 fiscal year (the latest data available) was 85,399,000 MWh of electricity.[221] As such, the Project-related net increase in annual electricity consumption would represent approximately 0.001 percent of SCE's total energy sales. In addition, as previously described, the Project would incorporate a variety of energy conservation measures to reduce energy usage. Therefore, operation of the Project would not result in the wasteful, inefficient, or unnecessary consumption of electricity, and impacts would be less than significant.

Natural Gas

With compliance with 2019 Title 24 standards and applicable CALGreen requirements, buildout of the Project is projected to generate a net increase in the on-site demand for natural gas totaling approximately 4,524 MMBtu per year. As discussed above, in addition to complying with applicable regulatory requirements regarding energy conservation (e.g., California Building Energy Efficiency Standards and CALGreen), the Project will implement project design features to further reduce energy use. Consistent with regulatory requirements and the green building program, the Project would also include building features that would include such items as energy-efficient appliances, water efficient plumbing fixtures and fittings, and water-efficient landscaping.

Based on the 2020 California Gas Report, the California Energy and Electric Utilities, a collective of California utility companies, estimates natural gas supplies within SoCalGas' planning area will be approximately 1,300,164,675 MMBtu in 2024.[222] The Project would account for approximately 0.0004 percent of the 2024 forecasted consumption in SoCalGas' planning area.

As previously described, the Project incorporates a variety of energy conservation measures and features to reduce energy usage and minimize energy demand. Therefore, operation of the Project would not result in the wasteful, inefficient, or unnecessary consumption of natural gas, and impacts would be less than significant.

Transportation Energy

During operation, Project-related traffic would result in the consumption of petroleum-based fuels related to vehicular travel to and from the Project Site. As summarized in Table 16, the Project's

[221] Southern California Edison, 2018. 2018 Annual Report, p. 2.

[222] California Gas and Electric Utilities, 2020 California Gas Report, 2020, page 145.

estimated net increase in petroleum-based fuel usage would be approximately 106,113 gallons of gasoline and 41,160 gallons of diesel per year.

Based on the CEC's California Annual Retail Fuel Outlet Report, Riverside County consumed approximately 921,000,000 gallons of gasoline and 108,000,000 gallons of diesel fuel in 2019.[223] The Project would account for 0.01 percent of County gasoline consumption and 0.04 percent of County diesel consumption (based on the available County fuel sales data for the year 2019).

Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[224] Vehicles used by future residents, visitors, and workers would comply with Corporate Average Fuel Economy fuel economy standards, which would result in more efficient use of transportation fuels (lower consumption). Vehicles used by future residents, visitors, and workers would also comply with Pavley and Low Carbon Fuel Standards which are designed to reduce vehicle GHG emissions, but would also result in fuel savings in addition to compliance with Corporate Average Fuel Economy standards.[225]

Additionally, in accordance with the CALGreen Code, infrastructure for EV charging stations for the Project Site would be provided and meet local applicable Codes. Alternative-fueled, electric, and hybrid vehicles, to the extent these types of vehicles would be purchased or utilized by residents of Project Site, has the potential to reduce the Project's consumption of gasoline and diesel; however, the effect may be minimal in the current vehicle market. According to EMFAC2017, electric vehicles are predicted to account for approximately 2.3 percent of the vehicle fleet total in 2025 in the region, which would result in a small amount of fuel savings.

Furthermore, the Project would be consistent with the energy efficiency policies emphasized by the 2020-2045 RTP/SCS. The Project would not conflict with the 2020-2045 RTP/SCS goals and benefits intended to improve mobility and access to diverse destinations, provide better "placemaking," provide more transportation choices, and reduce vehicular demand and associated emissions. Therefore, the Project would not conflict with the energy reduction-related actions and strategies contained in the 2020-2045 RTP/SCS.

As the above discussion demonstrates, the Project would minimize operational transportation fuel demand consistent with and not in conflict with State, and regional goals. Therefore, operation of

223 CEC, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2020 https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting, accessed December 2020.

224 BP Global, Oil reserves, 2018, http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/oil/oil-reserves.html, accessed October 14, 2020.

225 As mentioned under Subsection IV.F.2.a)(2)(d), *California Assembly Bill 1493 (AB 1493, Pavley)*, In September 2019, the USEPA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule in the federal register (Federal Register, Vol. 84, No. 188, Friday, September 27, 2019, Rules and Regulations, 51310-51363) that maintains the vehicle miles per gallon standards applicable in model year 2020 for model years 2021 through 2026. California and 23 other states and environmental groups in November 2019 in U.S. District Court in Washington, filed a petition for the EPA to reconsider the published rule. The Court has not yet ruled on these lawsuits.

the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy, and impacts would be less than significant.

Mitigation

None Required.

Significance Determination: Less than Significant

Consistency with Energy Plans

ENERGY-2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact ENE-2

The Project would include a number of sustainable energy efficiency features to support the use of renewable energy and energy efficiency goals. The Project would support and not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

As discussed above, the Project would incorporate green building design features such as solar electric PV systems and electric vehicle charging consistent with the energy efficiency standards in the Green Building Program and CALGreen Code.

The Project would not conflict with the 2016-2040 RTP/SCS and 2020-2045 RTP/SCS goals and benefits intended to improve mobility and access to diverse destinations, provide better "placemaking," provide more transportation choices, and reduce vehicular demand and associated emissions.

As a result, the Project would support Statewide efforts to improve transportation energy efficiency and reduce wasteful or inefficient transportation energy consumption with respect to private automobiles. Overall the Project's features would support and promote the use of renewable energy and energy efficiency, therefore, the Project impacts would be less than significant.

Mitigation

None Required.

Significance Determination: Less than Significant

3.5 Cumulative Air Quality Impacts

The following cumulative impact analysis is based on the recommendations provided by SCAQMD in the Potential Control Strategies to Address Cumulative Impacts from Air Pollution White Paper. SCAQMD's guidance for assessing a project's cumulative impacts recommends the use of two alternative methodologies: (1) that project-specific air quality impacts be used to determine the

project's potential cumulative impacts to regional air quality; or (2) that a project's consistency with the AQMPs are used to determine its potential cumulative impacts.

Under SCAQMD's guidance, "[p]rojects that exceed the project-specific significance thresholds are considered by 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, consistent with this guidance, the potential for the Proposed Project to results in cumulative impacts from regional emissions is assessed based on SCAQMD thresholds.

Consistency with AQMP

As described above under Impact AIR-1, construction of the Proposed Project would be consistent with the County General Plan as well as the AQMP. As the Proposed Project's maximum regional emissions from construction would not exceed the regional thresholds of significance, the Proposed Project would be consistent with the AQMP and cumulative impacts would be less than significant.

Operation of the Proposed Project would be consistent with the AQMP as the Proposed Project would not generate emissions of nonattainment pollutants or precursors (i.e., VOC, NO_X, CO, SOx, PM10, and PM2.5) that exceed the applicable significance thresholds. Therefore, the Proposed Project would result in a less than significant cumulative operational impact.

Mitigation

None Required.

Significance Determination: Less than Significant

Project-Specific Impacts

Construction

As described above under Impact AIR-2 and Impact AIR-3, regional and localized emissions during construction of the Proposed Project would not exceed the SCAQMD significance thresholds. Thus, based on SCAQMD methodology, the Proposed Project's construction emissions would not represent a considerable contribution to a cumulative impact. As the Proposed Project's maximum mitigated regional emissions from construction would not exceed the regional thresholds of significance, the Proposed Project would not represent a considerable contribution to a cumulative impact, resulting in a less than cumulative impact.

Operation

As discussed under Impact AIR-2 and Impact AIR-3, above, regional and localized operational emissions of VOC, NO_X, CO, PM10, and PM2.5 would not exceed the SCAQMD significance thresholds. Thus, based on SCAQMD methodology, the Proposed Project operational emissions would not represent a considerable contribution to a cumulative impact, resulting in a less than significant cumulative impact.

Mitigation

None Required.

Significance Determination: Less than Significant

3.6 Cumulative GHG Impacts

The GHG emissions of the project alone would not cause a direct physical change in the environment. According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.[226]" It is global GHG emissions in their aggregate that contribute to climate change, not any single source of GHG emissions alone. The impact analysis of the project's GHG emissions and consistency with existing plans and policies related to GHG emissions provided above for the project serves as a cumulative impact analysis. Therefore, as discussed under Section 3.4 above, the Project would be consistent with applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions and the Project would not generate GHG emissions that would have a significant impact on the environment. As such, the Project would result in a less than cumulatively considerable impact related to applicable GHG emissions and GHG reduction plans and policies and cumulative impacts would be less than significant.

Mitigation

None Required.

Significance Determination: Less than Significant

3.7 Cumulative Energy Impacts

Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. The geographic context for the cumulative analysis of electricity is SCE's service area and the geographic context for the cumulative analysis of natural gas is SoCalGas' service area. While the geographic context for transportation-related energy use is more difficult to define, it is meaningful to consider the Project in the context of County-wide consumption. Growth within these geographies is anticipated to increase the demand for electricity, natural gas, and transportation energy, as well as the need for energy infrastructure, such as new or expanded energy facilities.

226 California Air Pollution Officers Association (CAPCOA). 2008. CEQA & Climate change: Evaluating and Addressing Greenhous Gas Emissions from Projects Subject to the California Environmental Quality Act. January. Available online at: http://capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf. Accessed June 2020.

Wasteful, Inefficient, and Unnecessary use of Energy

Electricity

Buildout of the Project, related projects, and additional forecasted growth in SCE's service area would cumulatively increase the demand for electricity supplies and infrastructure capacity. SCE total energy sales in the 2020 (the latest data available) was 85,399 GWh of electricity.[227] Based on the Project's estimated net new electrical consumption of 1,250 MWh per year, the Project would account for approximately 0.001 percent of SCE's total sales in the Project's buildout year. Thus, although Project development would result in the use of renewable and non-renewable electricity resources during construction and operation, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures making the Project more energy-efficient, and would be consistent with growth expectations for SCE's service area. Furthermore, as with the Project, during construction and operation, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations, including the 2019 Title 24 standards and CALGreen code, and incorporate mitigation measures, as necessary.

Additionally, as discussed above, SCE is required to procure a minimum of 33 percent of its energy portfolio from eligible renewables sources by 2020. SCE's current sources of renewable energy include biomass and biowaste, geothermal, hydroelectric, solar and wind, and accounted for 36 percent of SCE's overall energy mix in 2018, the most recent year for which data are available.[228] This represents the available off-site renewable sources of energy that could meet the Project's and related projects energy demand. Therefore, the Project and related projects would comply with the energy conservation plans and efficiency standards required to ensure efficient energy use.

As such, the Project's contribution to cumulative impacts related to wasteful, inefficient and unnecessary use of electricity would not be cumulatively considerable and, thus, cumulative impacts would be less than significant**.**

Natural Gas

Buildout of the Project, related projects, and additional forecasted growth in SoCalGas' service area would cumulatively increase the demand for natural gas supplies and infrastructure capacity. Based on the 2020 California Gas Report, the CEC estimates natural gas consumption within SoCalGas' planning area will be approximately 3,435 million cf per day in 2025 (the Project's buildout year).[229] The Project would account for approximately 0.0004 percent of the 2025 forecasted consumption in SoCalGas' planning area. SoCalGas forecasts take into account projected population growth and development based on local and regional plans, and the Project's growth and development would not conflict with those projections. Although Project development would result in the use of natural gas resources, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures rendering the

227 SCE, 2018. 2018 Annual Report, p. 2. Available: https://www.edison.com/content/dam/eix/documents/investors/corporate-governance/eix-sce-2018-annual-report.pdf. Accessed December 2020

228 SCE, Power Content Label, July 2019.

229 California Gas and Electric Utilities, 2020 California Gas Report, 2020, page 145

Project more energy-efficient, and would be consistent with regional and local growth expectations for SoCalGas' service area. Related projects, as with the Project, would be required to evaluate energy impacts during construction and operation related to the wasteful, inefficient or unnecessary use of natural gas, incorporate energy conservation features, comply with applicable regulations including the Title 24 standards and CALGreen Code, and incorporate mitigation measures, as necessary under CEQA.

As such, the Project's contribution to cumulative impacts related to wasteful, inefficient and unnecessary use of natural gas would not be cumulatively considerable, and, thus, cumulative impacts would be less than significant.

Transportation Energy

Buildout of the Project, related projects, and additional forecasted growth would cumulatively increase the demand for transportation-related fuel in the state and region. As described above, at buildout, the Project would consume a total net increase of 106,113 gallons of gasoline and 41,160 gallons of diesel per year. For comparison purposes, the transportation-related fuel usage for the Project would represent approximately 0.001 percent of the 2019 annual on-road gasoline and 0.04 percent of the annual on-road diesel-related energy consumption in Riverside County, as shown in Appendix D of this report.

Additionally, as described above, petroleum currently accounts for 90 percent of California's transportation energy sources; however, over the last decade the State has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce vehicle miles traveled which would reduce reliance on petroleum fuels. The CEC predicts that the demand for gasoline and transportation fossil fuels in general will continue to decline over the next ten years primarily due to improvements in fuel efficiency and increased electrification.[230]

The 2020-2045 RTP/SCS is a regional plan that addresses cumulative growth and resulting environmental effects and is applicable to the Project and related projects with respect to transportation energy efficiency. Related projects would be required under CEQA to evaluate if their respective developments would result in wasteful, inefficient or unnecessary use of transportation energy. Furthermore, related projects would be required to implement mitigation measures, as needed, if found to result in wasteful, inefficient or unnecessary use of transportation energy.

Since the Project would be consistent with the 2020-2045 RTP/SCS, its contribution to cumulative impacts due to wasteful, inefficient or unnecessary use of transportation fuel would not be cumulatively considerable, and, thus, cumulative impacts would be less than significant.

230 CEC, 2019 Integrated Energy Policy Report, page 228.

Consistency with State or Local Plans

Electricity

Buildout of the Project, related projects, and additional forecasted growth in SCE's service area would cumulatively increase the demand for electricity supplies and on infrastructure capacity.

The Project would incorporate energy efficiency measures that meet applicable required energy plans and standards. Related projects, as with the Project, would be required to evaluate electricity conservation features and compliance with applicable electricity efficiency plans and standards including the Title 24 standards and CALGreen Code, and incorporate mitigation measures, as necessary under CEQA. Related projects, as with the Project, would also be required to evaluate potential impacts related to local and regional supplies or capacity based on regional growth plans, such as the SCE energy supply projections for long-term planning.

As such, the Project's contribution to cumulative impacts due to conflicting with or obstruction of a state or local plan for renewable energy or energy efficiency would not be cumulatively considerable, and, thus, cumulative impacts would be less than significant.

Natural Gas

Buildout of the Project, related projects, and additional forecasted growth in SoCalGas' service area would cumulatively increase the demand for natural gas supplies and on infrastructure capacity. However, as discussed above, SoCalGas forecasts take into account projected population growth and development based on local and regional plans, and the Project's growth and development would not conflict with those projections.

Related projects, as with the Project, would be required to evaluate natural gas conservation features and compliance with applicable regulations including the Title 24 standards and CALGreen Code, and incorporate mitigation measures, as necessary under CEQA. Related projects, as with the Project, would also be required to evaluate potential impacts related to consistency with the Green Building Program, and local and regional supplies or capacity based on regional growth plans, such as the SoCalGas energy supply projections for long-term planning.

As such, the Project's contribution to cumulative impacts due to conflicting with or obstruction of a state or local plan for natural gas consumption or energy efficiency would not be cumulatively considerable, and, thus, cumulative impacts would be less than significant.

Transportation Energy

Buildout of the Project, related projects, and additional forecasted growth would cumulatively increase the demand for transportation-related fuel in the state and region. However, as discussed above, the Project would not conflict with the energy efficiency policies emphasized by the 2020-2045 RTP/SCS. Related projects would need to demonstrate consistency with these goals and incorporate project design features or mitigation measures as required under CEQA, which would also ensure related projects contribute to transportation energy efficiency. Therefore, the Project and related projects would incorporate land use characteristics consistent with state goals for reducing VMT, or incorporate mitigation measures under CEQA.

APPENDIX A

Assumptions

Hemet 30
Assumptions

Analysis Date: 2/10/2022

CalEEMod Inputs (Non-Default information only)

Project Location		
County	Riverside	
Air District	SCAQMD	
Climate Zone	10	
Construction Year start	2021	
Operational Year Project	2025	
Utility Provider	Southern California Edison	
Source Receptor Area (SCAQMD)	28	

	2021	2025	2020	2017
CO2 intensity	462.58	401.15	503.95	511.47
% renewable	38.50%	46.67%	33.00%	32.00%

1 Southern California Edison, 2018. ESG/Sustainability Template. Report date: September 27, 2018. Available: https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf. Accessed April 5, 2019.

2 SCE 2017 Power Content Label https://www.sce.com/sites/default/files/inline-files/2017PCL_0.pdf

3 SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180

Project Description

The project site is vacant and proposed to include 144 single-family dwelling units. Access to the project site will be provided at Perimeter Road and SR-74 and will be restricted to right-in/right out access. Access will also be provided via the west-leg of the existing intersection at Joel Drive and Donald Street. Figure 2, Project Layout Plan, illustrates the site access locations for the proposed project.

Land Use	Building SQFT	Building KFS	Units/ Spaces	Acres	CalEEMod Category
Residential:		0.00	144	29.00	Single Family Residential

SCAG 2016/2040 RTP/SCS Growth Forecast

Unincorporated Riverside County

2020	2035	Growth	Project	% Growth
1,074,700	1,135,300	60,600	144	0.24%

Source: 2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction

Construction Assumptions

Construction Schedule

Phase Name	Start Date	End Date	Days/week	Workdays
Total	**6/1/2021**	5/31/2024		**784**
Site Preparation/Grading	6/1/2021	8/27/2021	5	64
Trenching/Utilities	8/28/2021	1/12/2022	5	98
Building Construction	1/13/2022	5/31/2024	5	622
Paving	1/13/2022	3/23/2022	5	50
Architectural Coating	1/13/2022	6/1/2022	5	100
				36 months

Consturction will occur: 5 days per week

Monday through Friday: 7:00 AM 7:00 PM

Notes:

1 *Modeled so all phases start in 2021 as a conservative estimation of equipment emissions.*

2 *Modeling includes an overlap of building constructiion, paving, and architectural coating for a conservative estimate of emissions as architectural coating could occur throughout the building and construction phase.*

3 Subsequent to completion of modeling, the project construction start date was shifted from mid-2021 to mid-2022. As construction fleets and on-road vehicles emissions requirements become more strict in future years, a 2022 start date would generally result in less emissions than the same project starting in 2021 (given a fleetwide emissions rate average). Therefore, leaving the modeling to start at a 2021 date results in a conservative estimate of emissions and the modeling was not revised to adjust the shift in start year.

4 Subsequent to completion of modeling, the project construction duration was shortened from 36 months to 30 months. As Air Quality is based on maximum daily emissions, the change in duration does not impact air quality. GHG emissions are based on total GHG emissions. Therefore, shortening the construction phase reduces the emissions estimates. Because the analysis using the 36 months is more conservative, the modeling was not revised to account for the shortened schedule. Energy emissions are based on an annual average using the annual GHG emissions. While the modeling and the emissions the Energy estimates are based on has not been updated (it is more conservative as is), the annual average for Energy was adjusted to account for a 30 month schedule.

Revised Scheduled to reduce duration. (Schedule not modeled)

Phase Name	Start Date	End Date	Days/week	Workdays
Total	**6/1/2022**	11/30/2024		**653**
Site Preparation/Grading	6/1/2022	8/12/2022	5	53
Trenching/Utilities	8/13/2022	12/6/2022	5	82
Building Construction	12/7/2022	11/29/2024	5	518
Paving	12/7/2022	2/1/2023	5	41
Architectural Coating	12/7/2022	2/1/2023	5	100
				30 months

Trips and VMT

Phase	*Workers/day*	*Worker Trips*	*Vendor Trips*	*Haul Trips*	*Total Haul Trucks*
Site Preparation/Grading	18	36	8	0	
Trenching/Utilities	10	20	8	0	
Building Construction	54	108	16	0	
Paving	15	30	4	0	
Architectural Coating	11	22	4	0	
miles/trip		14.70	6.90	20	

*** Trips represent total number of one way trips per day.**

Sensitive Receptors North/east/south 100 ft

Construction Phasing

Site Preparation/Grading:

Soils/materials balanced onsite, no import ot export.

Equipment:

Type	#	Hrs/day	CalEEMod Designation
Dozer	1	8	Dozer
Grader	3	8	Grader
Scraper	2	8	Scraper
Jack Hammer	1	8	Tractor/loader/backhoe
Roller	1	8	Roller
Water Truck	1	2	Off-highway Trucks

Drainage/Utilities/Trenching

Equipment:

Type	#	Hrs/day	CalEEMod Designation
Excavator	1	8	Excavator
Backhoe	1	8	Backhoe
Cement Truck	1	4	Off-highway Trucks
Water Truck	1	2	Off-highway Trucks

Building Construction

Equipment:

Type	#	Hrs/day	CalEEMod Designation
Man Lift	2	8	Man Lift
line truck	1	8	line truck 250 hp
Large Crane	1	7	Large Crane
Stringing Rig	1	8	Stringing Rig 800 hp
Generator	2	8	Generator
water truck	1	2	Off-Highway Trucks

Paving

Equipment: CalEEMod Default

Architectural Coating

Equipment: CalEEMod Default

Hemet 30
Operational Assumptions

Mobile source emissions

	Land Use	Trip Rate	ADT	vmt/trip	Trips/size	VMT
	Residential:	9.44		7.98		

Source: Project Specific Traffic Study

Notes:

- VMT per trip in CalEEMod adjusted to result in Annual VMT consistent with the Traffic Study.

-CalEEMod updated to EMFAC 2017 with SAFE adjusted emission factors.

Area Sources

Defaults used

No wood hearth or wood stoves (SCAQMD Regulations)

Wood	7.55		0
Natural Gas	128.35	0.894736842	135
None	15.1	0.105263158	16

Stationary Sources

None

Solid Waste

Default used and adjusted for 44% recycle/reuse rate achieved by California.

Source: CalRecycle 2020.California's Statewide Recycling Rate. Available: https://www.calrecycle.ca.gov/75percent/RecycleRate/ Accessed December 2020.

Project

Residential:	177	99.187	*Project BAU Uses Default

Water and Wastewater

CalEEMod Defaults Used

Energy Use

Uses default rates adjusted for 2013 (Existing) and 2019 (Project) Title 24 rates

% change from 2016 (CalEEMod Default)

	2013			2019		
	Electric	Lighting	NG	Electric	Lighting	NG
Residential	28.00%	28.00%	28.00%	2.00%	0.00%	5.00%
Non-Residential	5.00%	5.00%	5.00%	10.70%	0.00%	1.00%

	Default			Adjusted		
Land Use	Electric	Lighting	NG	Electric	Lighting	NG
Residential	952	1,608.84	24,566.150	932.637	1608.840	23337.843

Note: BAU uses 2016 Title 24 or CalEEMod Defaults.

Adjustments from CalEEMod Default Phase lengths.

Phase	Start Date	# Days	% Total	Revised Days (36 months)	Revised Days (36 months)
Grading	8/10/2021	45	8.11%	64	53
Trenching/Utilities		0	0.00%	98	82
Buidling Construction	10/12/2021	440	79.28%	622	518
Paving	6/20/2023	35	6.31%	49	41
Architectural Coating	8/8/2023	35	6.31%	49	41
Total		555	100.00%	784	653
Total (non-overlap)		485	87.39%		

APPENDIX B

Air Quality Calculations

Hemet 30
Maximum Daily Unmitigated Construction Emissions

CalEEMod	2016.3.2	Title:	Hemet 30 Unmitigated and Tier 4 Equipment	Date:	2/8/2022
EMFAC	2017	Title:	EMFAC2017 (02102022)	Date:	2/8/2022

Unmitigated - Construction

	ROG	NOx	CO	SO_2	PM10 Total	PM2.5 Total
	Max Daily (lbs/day)					
Site Preparation/Grading	5	56	30	<1	6	3
Trenching/Utilities	1	9	9	<1	1	<1
Building Construction	2	20	17	<1	2	1
Paving	1	13	16	<1	1	1
Architectural Coating	17	2	3	<1	<1	<1
BC/AC/Paving	20	36	36	0	3	2
Max Daily	20	**56**	36	0	6	3
Threshold	75	**100**	550	150	150	55
Exceed Threshold?	No	**No**	No	No	No	No

Hemet 30
Maximum Daily Unmitigated Construction Emissions

Unmitigated - LST

	ROG	NOx	CO	SO_2	PM10 Total	PM2.5 Total
	Max Daily (lbs/day)					
Site Preparation/Grading		55	28		5	3
Trenching/Utilities		8	8		0	0
Building Construction		19	15		1	1
Paving		13	15		1	1
Architectural Coating		2	2		0	0
BC/AC/Paving		33	31		2	1
Max Daily		**55**	31		**5**	**3**
Threshold		**206**	1965		**13**	**8**
Exceed Threshold?		**No**	**No**		**No**	**No**

SRA 28, 25 meter distance, 5 acre size

Emissions represent onsite emissions only.

The screening criteria for NOx were developed based on the 1-hour NO2 CAAQS of 0.18 ppm. However, since the publication of the SCAQMD's guidance, the USEPA has promulgated a 1-hour NO2 NAAQS of 0.100 ppm based on a 98th percentile value, which is more stringent than the CAAQS. In order to determine if Project emissions would result in an exceedance of the 1 hour NO2 NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO2 standard, as the SCAQMD significance threshold has not been updated to reflect this standard. Calculated by scaling the NO2 LST for by the ratio of 1-hour NO2

Hemet 30
Maximum Daily Unmitigated Construction Emissions

Unmitigated - Construction

		ROG	NOx	CO	SO_2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
		(lbs/day)									
Site Preparation/Grading	Fugitive					3.21	0.00	3.21	1.33	0.00	1.33
	Off-Road	4.79	55.29	28.39	0.07		2.21	2.21		2.03	2.03
	Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.05	0.81	0.53	0.00	0.05	0.01	0.06	0.01	0.01	0.02
	Worker	0.02	0.09	1.14	0.00	0.40	0.00	0.40	0.11	0.00	0.11
Trenching/Utilities	Fugitive										
	Off-Road	0.87	8.00	8.24	0.02		0.36	0.36		0.33	0.33
	Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.05	0.81	0.53	0.00	0.05	0.01	0.06	0.01	0.01	0.02
	Worker	0.01	0.05	0.64	0.00	0.22	0.00	0.22	0.06	0.00	0.06
Building Construction	Fugitive										
	Off-Road	1.78	18.53	14.50	0.03		0.76	0.76		0.73	0.73
	Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.09	1.62	1.06	0.00	0.10	0.02	0.12	0.03	0.02	0.05
	Worker	0.03	0.15	1.91	0.01	0.67	0.00	0.67	0.18	0.00	0.18
Paving	Off-Road	1.26	12.92	14.65	0.02		0.68	0.68		0.62	0.62
	Paving	0.00					0.00	0.00		0.00	0.00
	Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.02	0.41	0.27	0.00	0.03	0.00	0.03	0.01	0.00	0.01
	Worker	0.02	0.08	0.95	0.00	0.34	0.00	0.34	0.09	0.00	0.09
Architectural Coating	AC	17.01					0.00	0.00		0.00	0.00
	Off-Road	0.22	1.53	1.82	0.00		0.09	0.09		0.09	0.09
	Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.02	0.41	0.27	0.00	0.03	0.00	0.03	0.01	0.00	0.01
	Worker	0.01	0.06	0.70	0.00	0.25	0.00	0.25	0.07	0.00	0.07

Hemet 30
CO Hotspot Analysis

Intersection		Total Daily	Total PM
1 Menifee Road/SR-74		51,670	5,167
2 Briggs Road/ SR-74		50,260	5,026
3 SR-79/SR/74		49,330	4,933
4 4 Seasons Boulevard/SR-74		44,070	4,407
5 Perimeter Road/SR-74		42,830	4,283
6 Joel Drive/Donald Street		1,150	115
7 California Avenue/SR-74		45,170	4,517
	Max:	51,670	

Sources:

1 Project Specific Traffic Analysis; Cumulative Plus Project

Hemet 30
Unmitigated Operational Impacts

CalEEMod	2020.4.0	Hemet 30 Unmitigated and Tier 4 Equipment	Date:	2/8/2022
EMFAC2017		EMFAC2017 (02102022)		2/8/2022

Unmitigated Emissions

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	*11*	*3*	*50*	*<1*	*6*	*6*
Energy	*<1*	*1*	*0*	*<1*	*<1*	*<1*
Mobile	*6*	*7*	*24*	*<1*	*7*	*<1*
Total	***16***	***11***	***75***	***0***	***14***	***6***
Thresholds	55	55	550	150	150	55
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Hemet 30
Unmitigated Operational Impacts

Without PDF AQ-3 LST Screening Level

	Pollutant					
	ROG	NO_X	CO	SOx	PM_{10}	$PM_{2.5}$
	lbs/day					
Area		3	50		6.28	6.28
Energy		1	0		0.09	0.09
Total		4	50		6.37	6.37
Threshold		***206***	***1,965***		***4***	***2***
Exceed Threshold		***No***	***No***		***Yes***	***Yes***
SRA 28, 25 meter distance, 5 acre size					13.00	8.00

Construction LST

Emissions represent onsite emissions only.

The screening criteria for NOx were developed based on the 1-hour NO2 CAAQS of 0.18 ppm. However, since the publication of the SCAQMD's guidance, the USEPA has promulgated a 1-hour NO2 NAAQS of 0.100 ppm based on a 98th percentile value, which is more stringent than the CAAQS. In order to determine if Project emissions would result in an exceedance of the 1 hour NO2 NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO2 standard, as the SCAQMD significance threshold has not been updated to reflect this standard. Calculated by scaling the NO2 LST for by the ratio of 1-hour NO2 standards (federal/state)(i.e., 780 lb/day *

With PDF AQ-3 LST Screening Level

	Pollutant					
	ROG	NO_X	CO	SOx	PM_{10}	$PM_{2.5}$
	lbs/day					
Area		0	12		0	0
Energy		1	0		0	0
Total		1	14		0.16	0.16
Threshold		***206***	***1,965***		***4***	***2***
Exceed Threshold		***No***	***No***		***No***	***No***

Hearth	0
Landscaping	144

Hemet 30
Unmitigated Project Emissions

Unmitigated Emissions - Max Project

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
	Max (Lbs/day)					
Area	*10.54*	*2.98*	*49.83*	*0.14*	*6.28*	*6.28*
Energy	*0.13*	*1.07*	*0.45*	*0.01*	*0.09*	*0.09*
Mobile	*5.59*	*7.16*	*24.28*	*0.08*	*7.47*	*0.08*
Total	***16.26***	***11.21***	***74.57***	***0.22***	***13.84***	***6.45***

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
	Winter (lbs/day)									
Area	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845
Energy	0.125	1.0678	0.4544	6.82E-03		0.0863	0.0863		0.0863	0.0863
Mobile	3.7986	7.1614	21.5912	0.0762	7.4721	0.0776	7.5497	1.9985	0.0732	2.0718
Total	**14.465**	**11.2091**	**71.8779**	**0.21872**	**7.4721**	**6.4484**	**13.9205**	**1.9985**	**6.444**	**8.4426**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
	Summer (lbs/day)									
Area	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845
Energy	0.125	1.0678	0.4544	6.82E-03		0.0863	0.0863		0.0863	0.0863
Mobile	5.5928	6.7601	24.2809	0.081	7.4721	0.0775	7.5495	1.9985	0.0731	2.0716
Total	**16.2592**	**10.8078**	**74.5676**	**0.22352**	**7.4721**	**6.4483**	**13.9203**	**1.9985**	**6.4439**	**8.4424**

Hemet 30
Unmitigated Project Emissions

Area Source Emissions:

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Architectural Coating	0.466					0	0		0	0
Consumer Products	5.3816					0	0		0	0
Hearth	4.3374	2.8432	37.9633	0.1351		6.2186	6.2186		6.2186	6.2186
Landscaping	0.3737	0.1434	12.4459	6.60E-04		0.0691	0.0691		0.0691	0.0691

Area Source Emissions per unit:

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Architectural Coating	0.003236111					0	0		0	0
Consumer Products	0.037372222					0	0		0	0
Hearth	0.032103857	0.021044332	0.2809905	0.000999961		0.046027815	0.046027815		0.04602781	0.0460278
Landscaping	0.002595139	0.000995833	0.0864299	4.58333E-06		0.000479861	0.000479861		0.00047986	0.0004799

	AC	CP	Hearth	Landscaping
Units	144	144	135	144

APPENDIX C

GHG Calculations

Hemet 30
Unmitigated GHG Summary

CalEEMod: Hemet 30 Unmitigated and Tier 4 Equipment Date: 2/8/2022

EMFAC2017: EMFAC2017 (02102022) 2/8/2022

Unmitigated Construction Emissions - Max Annual

	lbs/year CO_2e				
	Onsite	**Hauling**	**Vendor**	**Worker**	**MT CO_2e**
Site Preparation/Grading	192	0	7	10	209
Trenching/Utilities	79	0	11	9	98
2021	72				
2022	6				
Building Construction	911	0	137	164	1,212
2021	371				
2022	381				
2023	160				
Paving	50	0	3	7	60
Architectural Coating	13	0	6	10	28
Total					**1,607**
Amortized Total					**54**

Hemet 30

Unmitigated Operational Emissions - Max Annual

CalEEMod:	Hemet 30 Unmitigated and Tier 4 Equipment	Date:	2/8/2022
	Hemet 30 - BAU		2/8/2022
EMFAC2017:	EMFAC2017 (02102022)		2/8/2022

	Project	BAU (2017)
Area	46	46
Energy	456	519
Mobile	1369	1666
Waste	50	50
Water	47	57
Total Operational:	1,969	2,338
Amortized Construction:	54	54
Total Project:	2,023	2,392
% Change		15.43%

Year	% Reduction from 2017 BAU	
2020	9%	
2021	10%	7%
2022	10%	
2023	11%	
2024	12%	
2025	12.65%	
2026	13%	
2027	14%	
2028	15%	
2029	16%	
2030	16.30%	16.30%

APPENDIX D

Energy Calculations

Hemet 30
Energy Summary

Construction Fuel Consumption Summary

	gallons		
Phase	**Diesel**	**Gas**	**# Years**
Tank Site	***131,613***	***23,811***	2.50
Annual Average	52,645	9,524	

County Usage[1]	108,000,000	921,000,000	gallons
Project % County	0.0487%	0.0010%	

Construction	Total Gallons		
Tank Site			Annual
Onsite Equipment	121,956	diesel	48,783
On-Road Diesel	9,657	diesel	3,863
Haul Trucks	0	diesel	
Vendor Trucks	9,657	diesel	
Worker Trips	23,811	gasoline	

Note:
Subsequent to completion of modeling, the project construction duration was shortened from 36 months to 30 months. As Air Quality is based on maximum daily emissions, the change in duration does not impact air quality. GHG emissions are based on total GHG emissions. Therefore, shortening the construction phase reduces the emissions estimates. Because the analysis using the 36 months is more conservative, the modeling was not revised to account for the shortened schedule. Energy emissions are based on an annual average using the annual GHG emissions. While the modeling and the emissions the Energy estimates are based on has not been updated (it is more conservative as is), the annual average for Energy was adjusted to account for a 30 month schedule.

Hemet 30
Energy Summary

Annual Operational Energy Consumption

	gallons		MMBTU/yr	GWh/yr
	Diesel	**Gas**	**Natural Gas**	**Electric**
Project (2025)	41,160	106,113	4,524.24	1.25
% of County	*0.0381%*	*0.01152%*	0.01062%	0.008%
%SCE/SoCal (2019)			0.00083%	0.001%
			0.00035%	

	kBTU	MMBTU	kWh	GWh	MWh
Total Project[2]	4,228,970	4,228.97	1,252,430	1.25	
Riverside (2019)[3,4]		42,599,209		15,520	
SCE (2018)[5]				85,399	
SoCal Gas (2019)[6]		542,471,132			
SoCal Gas (2024)		1,300,164,675			

Operational Vehicle Consumption[7]

	Project	
Gasolilne	106,113	gallons
Diesel	41,160	gallons

Hemet 30
Energy Summary

Assumptions/Constants

8.78	Kg of CO_2 per gallon of Gasoline			
10.21	Kg of CO_2 per gallon of Diesel			
1040	MMBtu/MMCF	1040	MMBtu	
1	MWh=	0.001	GWh	
100,000	BTU/therm			
0.10	MMBtu/therm			
53.12	kg CO2/ thousand cubic feet[8]			
1037	btu/cubic foot[9]			
	3175 MMcf/day		1,158,875	per year
	3175000000 cf/day			
	3.29248E+12 BTU/day			
	3,292,475 Mmbtu/day		1,201,753,375	
425.99209	Riverside County Gas Consumption (million of therms)[5]			
425,992,090	County (2019) Therms[5]			
0.10	MMBTU per Therm[10]			
5,424.71	SoCalGas (2019) (million Therms)[6]			
5,424,711,319	SoCalGas (2019) Therms[6]			
1.21	hundred cubic feet of natural gas per gallon			
921	Riverside County Gasoline sales (million gallons)[1]			
108	Riverside County Diesel sales (million gallons)[1]			
15,520	County Electric Usage (GWh)[4]		2019	
80,913	SoCal Edision5		2019	

Construction	diesel	Used for trucks (haul and vendor) and off-road equipment
	gasoline	worker vehicles
Operation	diesel	Majority of trucks and buses
	gasoline	remaining vehicle mix

LCFS & Pavley assumed for on-road vehicles after year 2011

Hemet 30
Energy Summary

Sources:

1 California Energy Commission, 2019. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results. https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting Accessed, December 2020.

2 ESA, 2020 CalEEMod Output - Hemet 30 Unmitigated and Tier 4 Equipment

3 http://www.ecdms.energy.ca.gov/gasbycounty.aspx

4 http://www.ecdms.energy.ca.gov/elecbycounty.aspx

5 https://www.edison.com/content/dam/eix/documents/investors/sec-filings-financials/2020-financial-statistical-report.pdf

6 Southern California Edison, 2019. 2019 Annual Report, p. 2.

7 ESA, 2020 EMFAC2017 Output - EMFAC2017 (02102022)

8 https://www.eia.gov/environment/emissions/co2_vol_mass.php

9 https://www.eia.gov/energyexplained/units-and-calculators/energy-conversion-calculators.php

10 https://www.eia.gov/tools/faqs/faq.php?id=45&t=8#:~:text=MMBtu%20%E2%80%941,000,000%20British%20thermal%20units%20Therm%20%E2%80%94One,therm%20equals%20100,000%20Btu,%20or%200.10%20MMBtu

Hemet 30
Construction Emissions

	Total CO_2 MT/yr	Fuel Type	Factor $KGCO_2$/gal	Gallons
Onsite				
Site Preparation/Grading	192.06	diesel	10.21	18,811
Trenching/Utilities	78.87	diesel	10.21	7,725
Building Construction	911.00	diesel	10.21	89,226
Paving	50.46	diesel	10.21	4,943
Architectural Coating	12.79	diesel	10.21	1,253

	Haul gallons	Vendor gallons	Worker gallons
Onroad			
Site Preparation/Grading	0	417	1,211
Trenching/Utilities	0	639	1,031
Building Construction	0	8,111	19,623
Paving	0	163	789
Architectural Coating	0	326	1,157
Total	0	9,657	23,811

Source: CalEEMod: *Hemet 30 Unmitigated and Tier 4 Equipment*
EMFAC2017: *EMFAC2017 (02102022)*

APPENDIX E

CalEEMod Output

Hemet 30 Operational 2017 BAU - Riverside-South Coast County, Annual

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

Hemet 30 Operational 2017 BAU

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	144.00	Dwelling Unit	29.00	271,800.00	432

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	511.47	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Trips and VMT - Modeled outside of CalEEMod to incorporate EMFAC2017

Grading - See Assumptions

Vehicle Trips - See Assumptions

Woodstoves - See Assumptions

Hemet 30 Operational 2017 BAU - Riverside-South Coast County, Annual

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

Energy Use - See Assumptions

Solid Waste - See Assumptions

Construction Off-road Equipment Mitigation - See Assumptions

Water And Wastewater -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Hemet 30 Operational 2017 BAU - Riverside-South Coast County, Annual

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

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	440.00	622.00
tblConstructionPhase	NumDays	35.00	50.00
tblConstructionPhase	NumDays	35.00	100.00
tblConstructionPhase	NumDays	45.00	64.00
tblEnergyUse	T24E	199.85	932.64
tblEnergyUse	T24NG	22,256.94	23,337.84
tblFireplaces	NumberGas	122.40	135.00
tblFireplaces	NumberNoFireplace	14.40	16.00
tblFireplaces	NumberWood	7.20	0.00
tblFleetMix	HHD	0.02	0.06
tblFleetMix	LDA	0.51	0.51
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	7.9900e-003	7.1539e-003
tblFleetMix	MCY	0.03	5.0182e-003
tblFleetMix	MDV	0.16	0.15
tblFleetMix	MH	7.5830e-003	1.6222e-003
tblFleetMix	MHD	0.01	0.02
tblFleetMix	OBUS	7.0000e-004	9.4926e-004
tblFleetMix	SBUS	1.1150e-003	9.2901e-004
tblFleetMix	UBUS	3.5400e-004	1.1620e-003
tblGrading	AcresOfGrading	256.00	160.00
tblLandUse	LandUseSquareFeet	259,200.00	271,800.00
tblLandUse	LotAcreage	46.75	29.00
tblLandUse	Population	412.00	432.00
tblOffRoadEquipment	HorsePower	172.00	800.00

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

tblOffRoadEquipment	HorsePower	168.00	250.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.029
tblProjectCharacteristics	CO2IntensityFactor	390.98	511.47
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.006
tblSolidWaste	SolidWasteGenerationRate	177.12	99.19
tblTripsAndVMT	VendorTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	52.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.00	1.4732e-007
tblVehicleEF	HHD	6.07	6.07
tblVehicleEF	HHD	0.69	0.69
tblVehicleEF	HHD	4.2460e-003	4.2457e-003
tblVehicleEF	HHD	1,333.17	1,333.17
tblVehicleEF	HHD	1,449.66	1,449.66
tblVehicleEF	HHD	0.09	0.09
tblVehicleEF	HHD	7.58	7.58
tblVehicleEF	HHD	4.84	4.84

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

tblVehicleEF	HHD	1.35	1.35
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.11	0.11
tblVehicleEF	HHD	5.0000e-006	4.9776e-006
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9060e-003	8.9060e-003
tblVehicleEF	HHD	0.10	0.10
tblVehicleEF	HHD	5.0000e-006	4.7033e-006
tblVehicleEF	HHD	2.0000e-005	1.9718e-005
tblVehicleEF	HHD	7.2600e-004	7.2640e-004
tblVehicleEF	HHD	0.61	0.61
tblVehicleEF	HHD	1.0000e-005	9.8207e-006
tblVehicleEF	HHD	0.17	0.17
tblVehicleEF	HHD	2.2800e-004	2.9193e-003
tblVehicleEF	HHD	1.0000e-006	7.5782e-007
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	8.5084e-007
tblVehicleEF	HHD	2.0000e-005	1.9718e-005
tblVehicleEF	HHD	7.2600e-004	7.2640e-004
tblVehicleEF	HHD	0.69	0.69
tblVehicleEF	HHD	1.0000e-005	9.8207e-006
tblVehicleEF	HHD	0.20	0.20
tblVehicleEF	HHD	2.2800e-004	2.9193e-003
tblVehicleEF	HHD	1.0000e-006	8.2972e-007
tblVehicleEF	HHD	0.03	0.03

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

tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.00	1.4129e-007
tblVehicleEF	HHD	5.84	5.84
tblVehicleEF	HHD	0.69	0.69
tblVehicleEF	HHD	4.0090e-003	4.0087e-003
tblVehicleEF	HHD	1,339.62	1,339.62
tblVehicleEF	HHD	1,449.67	1,449.67
tblVehicleEF	HHD	0.09	0.09
tblVehicleEF	HHD	7.47	7.47
tblVehicleEF	HHD	4.57	4.57
tblVehicleEF	HHD	1.35	1.35
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.11	0.11
tblVehicleEF	HHD	5.0000e-006	4.9776e-006
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9060e-003	8.9060e-003
tblVehicleEF	HHD	0.10	0.10
tblVehicleEF	HHD	5.0000e-006	4.7033e-006
tblVehicleEF	HHD	4.0000e-005	4.0184e-005
tblVehicleEF	HHD	8.5000e-004	8.4985e-004
tblVehicleEF	HHD	0.62	0.62
tblVehicleEF	HHD	2.1000e-005	2.0667e-005
tblVehicleEF	HHD	0.17	0.17
tblVehicleEF	HHD	2.3800e-004	3.0416e-003
tblVehicleEF	HHD	1.0000e-006	7.2874e-007
tblVehicleEF	HHD	0.01	0.01

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

tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	8.4712e-007
tblVehicleEF	HHD	4.0000e-005	4.0184e-005
tblVehicleEF	HHD	8.5000e-004	8.4985e-004
tblVehicleEF	HHD	0.71	0.71
tblVehicleEF	HHD	2.1000e-005	2.0667e-005
tblVehicleEF	HHD	0.20	0.20
tblVehicleEF	HHD	2.3800e-004	3.0416e-003
tblVehicleEF	HHD	1.0000e-006	7.9788e-007
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.00	1.4802e-007
tblVehicleEF	HHD	6.37	6.37
tblVehicleEF	HHD	0.69	0.69
tblVehicleEF	HHD	4.2040e-003	4.2044e-003
tblVehicleEF	HHD	1,324.28	1,324.28
tblVehicleEF	HHD	1,449.66	1,449.66
tblVehicleEF	HHD	0.09	0.09
tblVehicleEF	HHD	7.73	7.73
tblVehicleEF	HHD	4.81	4.81
tblVehicleEF	HHD	1.35	1.35
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.11	0.11
tblVehicleEF	HHD	5.0000e-006	4.9776e-006
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9060e-003	8.9060e-003

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

tblVehicleEF	HHD	0.10	0.10
tblVehicleEF	HHD	5.0000e-006	4.7033e-006
tblVehicleEF	HHD	1.8000e-005	1.7906e-005
tblVehicleEF	HHD	9.1800e-004	9.1782e-004
tblVehicleEF	HHD	0.59	0.59
tblVehicleEF	HHD	9.0000e-006	9.0564e-006
tblVehicleEF	HHD	0.17	0.17
tblVehicleEF	HHD	2.3700e-004	3.0394e-003
tblVehicleEF	HHD	1.0000e-006	7.6101e-007
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	8.5019e-007
tblVehicleEF	HHD	1.8000e-005	1.7906e-005
tblVehicleEF	HHD	9.1800e-004	9.1782e-004
tblVehicleEF	HHD	0.67	0.67
tblVehicleEF	HHD	9.0000e-006	9.0564e-006
tblVehicleEF	HHD	0.20	0.20
tblVehicleEF	HHD	2.3700e-004	3.0394e-003
tblVehicleEF	HHD	1.0000e-006	8.3321e-007
tblVehicleEF	LDA	4.7110e-003	4.7110e-003
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	1.02	1.02
tblVehicleEF	LDA	2.41	2.41
tblVehicleEF	LDA	295.33	295.06
tblVehicleEF	LDA	61.11	61.11
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.25	0.25
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003

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

tblVehicleEF	LDA	1.4930e-003	1.4869e-003
tblVehicleEF	LDA	2.0150e-003	2.0155e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.3770e-003	1.3714e-003
tblVehicleEF	LDA	1.8550e-003	1.8553e-003
tblVehicleEF	LDA	0.11	0.50
tblVehicleEF	LDA	0.14	0.14
tblVehicleEF	LDA	0.08	0.36
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.34	0.34
tblVehicleEF	LDA	2.9220e-003	2.9218e-003
tblVehicleEF	LDA	6.0500e-004	6.0472e-004
tblVehicleEF	LDA	0.11	0.50
tblVehicleEF	LDA	0.14	0.14
tblVehicleEF	LDA	0.08	0.36
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.37	0.37
tblVehicleEF	LDA	5.3160e-003	5.3159e-003
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	1.25	1.24
tblVehicleEF	LDA	2.13	2.13
tblVehicleEF	LDA	321.40	321.11
tblVehicleEF	LDA	60.52	60.52
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.24	0.24
tblVehicleEF	LDA	0.04	0.04

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

tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.4930e-003	1.4869e-003
tblVehicleEF	LDA	2.0150e-003	2.0155e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.3770e-003	1.3714e-003
tblVehicleEF	LDA	1.8550e-003	1.8553e-003
tblVehicleEF	LDA	0.21	0.98
tblVehicleEF	LDA	0.18	0.18
tblVehicleEF	LDA	0.15	0.70
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.30	0.30
tblVehicleEF	LDA	3.1800e-003	3.1798e-003
tblVehicleEF	LDA	5.9900e-004	5.9892e-004
tblVehicleEF	LDA	0.21	0.98
tblVehicleEF	LDA	0.18	0.18
tblVehicleEF	LDA	0.15	0.70
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.03	0.27
tblVehicleEF	LDA	0.33	0.33
tblVehicleEF	LDA	4.5520e-003	4.5524e-003
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.96	0.96
tblVehicleEF	LDA	2.47	2.47
tblVehicleEF	LDA	288.06	287.80
tblVehicleEF	LDA	61.22	61.22
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.25	0.25

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

tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.4930e-003	1.4869e-003
tblVehicleEF	LDA	2.0150e-003	2.0155e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.3770e-003	1.3714e-003
tblVehicleEF	LDA	1.8550e-003	1.8553e-003
tblVehicleEF	LDA	0.09	0.42
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	0.06	0.29
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.30
tblVehicleEF	LDA	0.35	0.35
tblVehicleEF	LDA	2.8500e-003	2.8499e-003
tblVehicleEF	LDA	6.0600e-004	6.0585e-004
tblVehicleEF	LDA	0.09	0.42
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	0.06	0.29
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.03	0.30
tblVehicleEF	LDA	0.38	0.38
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.79	2.79
tblVehicleEF	LDT1	2.90	2.90
tblVehicleEF	LDT1	351.40	351.37
tblVehicleEF	LDT1	74.48	74.48
tblVehicleEF	LDT1	0.27	0.27

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

tblVehicleEF	LDT1	0.44	0.44
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.1660e-003	3.1919e-003
tblVehicleEF	LDT1	3.8540e-003	3.8543e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.9190e-003	2.9435e-003
tblVehicleEF	LDT1	3.5490e-003	3.5487e-003
tblVehicleEF	LDT1	0.33	1.48
tblVehicleEF	LDT1	0.39	0.39
tblVehicleEF	LDT1	0.21	0.94
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.15	1.25
tblVehicleEF	LDT1	0.68	0.68
tblVehicleEF	LDT1	3.4770e-003	3.4773e-003
tblVehicleEF	LDT1	7.3700e-004	7.3700e-004
tblVehicleEF	LDT1	0.33	1.48
tblVehicleEF	LDT1	0.39	0.39
tblVehicleEF	LDT1	0.21	0.94
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.15	1.25
tblVehicleEF	LDT1	0.75	0.75
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	3.35	3.35
tblVehicleEF	LDT1	2.56	2.56
tblVehicleEF	LDT1	379.24	379.19
tblVehicleEF	LDT1	73.65	73.65

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

tblVehicleEF	LDT1	0.25	0.25
tblVehicleEF	LDT1	0.42	0.42
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.1660e-003	3.1919e-003
tblVehicleEF	LDT1	3.8540e-003	3.8543e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.9190e-003	2.9435e-003
tblVehicleEF	LDT1	3.5490e-003	3.5487e-003
tblVehicleEF	LDT1	0.65	2.91
tblVehicleEF	LDT1	0.49	0.49
tblVehicleEF	LDT1	0.42	1.87
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.15	1.26
tblVehicleEF	LDT1	0.60	0.60
tblVehicleEF	LDT1	3.7530e-003	3.7528e-003
tblVehicleEF	LDT1	7.2900e-004	7.2886e-004
tblVehicleEF	LDT1	0.65	2.91
tblVehicleEF	LDT1	0.49	0.49
tblVehicleEF	LDT1	0.42	1.87
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.15	1.26
tblVehicleEF	LDT1	0.65	0.65
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.62	2.62
tblVehicleEF	LDT1	2.96	2.96
tblVehicleEF	LDT1	343.01	342.98

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

tblVehicleEF	LDT1	74.64	74.64
tblVehicleEF	LDT1	0.26	0.26
tblVehicleEF	LDT1	0.44	0.44
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.1660e-003	3.1919e-003
tblVehicleEF	LDT1	3.8540e-003	3.8543e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.9190e-003	2.9435e-003
tblVehicleEF	LDT1	3.5490e-003	3.5487e-003
tblVehicleEF	LDT1	0.29	1.29
tblVehicleEF	LDT1	0.44	0.44
tblVehicleEF	LDT1	0.17	0.78
tblVehicleEF	LDT1	0.07	0.07
tblVehicleEF	LDT1	0.17	1.45
tblVehicleEF	LDT1	0.70	0.70
tblVehicleEF	LDT1	3.3940e-003	3.3943e-003
tblVehicleEF	LDT1	7.3900e-004	7.3858e-004
tblVehicleEF	LDT1	0.29	1.29
tblVehicleEF	LDT1	0.44	0.44
tblVehicleEF	LDT1	0.17	0.78
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.17	1.45
tblVehicleEF	LDT1	0.77	0.77
tblVehicleEF	LDT2	7.4610e-003	7.4695e-003
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	1.53	1.53
tblVehicleEF	LDT2	3.21	3.22

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

tblVehicleEF	LDT2	387.03	387.52
tblVehicleEF	LDT2	81.85	81.98
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.45	0.45
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.6070e-003	1.6039e-003
tblVehicleEF	LDT2	2.0960e-003	2.0990e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.4810e-003	1.4779e-003
tblVehicleEF	LDT2	1.9290e-003	1.9321e-003
tblVehicleEF	LDT2	0.14	0.65
tblVehicleEF	LDT2	0.18	0.18
tblVehicleEF	LDT2	0.10	0.49
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.06	0.53
tblVehicleEF	LDT2	0.48	0.48
tblVehicleEF	LDT2	3.8300e-003	3.8341e-003
tblVehicleEF	LDT2	8.1000e-004	8.1122e-004
tblVehicleEF	LDT2	0.14	0.65
tblVehicleEF	LDT2	0.18	0.18
tblVehicleEF	LDT2	0.10	0.49
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.06	0.53
tblVehicleEF	LDT2	0.52	0.52
tblVehicleEF	LDT2	8.3880e-003	8.3980e-003
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	1.86	1.86

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

tblVehicleEF	LDT2	2.84	2.85
tblVehicleEF	LDT2	415.37	415.90
tblVehicleEF	LDT2	81.06	81.18
tblVehicleEF	LDT2	0.15	0.15
tblVehicleEF	LDT2	0.44	0.44
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.6070e-003	1.6039e-003
tblVehicleEF	LDT2	2.0960e-003	2.0990e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.4810e-003	1.4779e-003
tblVehicleEF	LDT2	1.9290e-003	1.9321e-003
tblVehicleEF	LDT2	0.27	1.27
tblVehicleEF	LDT2	0.22	0.22
tblVehicleEF	LDT2	0.20	0.94
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.06	0.54
tblVehicleEF	LDT2	0.42	0.42
tblVehicleEF	LDT2	4.1100e-003	4.1148e-003
tblVehicleEF	LDT2	8.0200e-004	8.0338e-004
tblVehicleEF	LDT2	0.27	1.27
tblVehicleEF	LDT2	0.22	0.22
tblVehicleEF	LDT2	0.20	0.94
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.06	0.54
tblVehicleEF	LDT2	0.45	0.46
tblVehicleEF	LDT2	7.1860e-003	7.1947e-003
tblVehicleEF	LDT2	0.10	0.10

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

tblVehicleEF	LDT2	1.43	1.43
tblVehicleEF	LDT2	3.29	3.30
tblVehicleEF	LDT2	378.50	378.98
tblVehicleEF	LDT2	82.02	82.15
tblVehicleEF	LDT2	0.16	0.16
tblVehicleEF	LDT2	0.45	0.45
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.6070e-003	1.6039e-003
tblVehicleEF	LDT2	2.0960e-003	2.0990e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.4810e-003	1.4779e-003
tblVehicleEF	LDT2	1.9290e-003	1.9321e-003
tblVehicleEF	LDT2	0.11	0.53
tblVehicleEF	LDT2	0.19	0.20
tblVehicleEF	LDT2	0.09	0.41
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.61
tblVehicleEF	LDT2	0.49	0.49
tblVehicleEF	LDT2	3.7450e-003	3.7496e-003
tblVehicleEF	LDT2	8.1200e-004	8.1290e-004
tblVehicleEF	LDT2	0.11	0.53
tblVehicleEF	LDT2	0.19	0.20
tblVehicleEF	LDT2	0.09	0.41
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.07	0.61
tblVehicleEF	LDT2	0.53	0.54
tblVehicleEF	LHD1	5.2050e-003	5.2049e-003

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

tblVehicleEF	LHD1	8.1230e-003	8.1226e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	1.19	1.24
tblVehicleEF	LHD1	1.13	1.13
tblVehicleEF	LHD1	9.59	9.59
tblVehicleEF	LHD1	666.11	686.29
tblVehicleEF	LHD1	11.52	11.52
tblVehicleEF	LHD1	0.09	0.09
tblVehicleEF	LHD1	2.24	1.99
tblVehicleEF	LHD1	0.34	0.34
tblVehicleEF	LHD1	9.2800e-004	9.2773e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.9470e-003	9.9470e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	3.5000e-004	3.4959e-004
tblVehicleEF	LHD1	8.8800e-004	8.8760e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4870e-003	2.4868e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	3.2400e-004	3.2391e-004
tblVehicleEF	LHD1	3.9330e-003	0.06
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8100e-003	0.03
tblVehicleEF	LHD1	0.09	0.09
tblVehicleEF	LHD1	0.23	0.61
tblVehicleEF	LHD1	0.11	0.11
tblVehicleEF	LHD1	9.3000e-005	9.2802e-005

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

tblVehicleEF	LHD1	6.4830e-003	6.4827e-003
tblVehicleEF	LHD1	1.1400e-004	1.1397e-004
tblVehicleEF	LHD1	3.9330e-003	0.06
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.8100e-003	0.03
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.23	0.61
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	5.2180e-003	5.2184e-003
tblVehicleEF	LHD1	8.2180e-003	8.2183e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	1.21	1.26
tblVehicleEF	LHD1	1.07	1.07
tblVehicleEF	LHD1	9.59	9.59
tblVehicleEF	LHD1	666.15	686.33
tblVehicleEF	LHD1	11.42	11.42
tblVehicleEF	LHD1	0.09	0.09
tblVehicleEF	LHD1	2.11	1.87
tblVehicleEF	LHD1	0.33	0.33
tblVehicleEF	LHD1	9.2800e-004	9.2773e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.9470e-003	9.9470e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	3.5000e-004	3.4959e-004
tblVehicleEF	LHD1	8.8800e-004	8.8760e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4870e-003	2.4868e-003

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

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	3.2400e-004	3.2391e-004
tblVehicleEF	LHD1	7.4270e-003	0.11
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.6160e-003	0.05
tblVehicleEF	LHD1	0.09	0.09
tblVehicleEF	LHD1	0.23	0.61
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	9.3000e-005	9.2802e-005
tblVehicleEF	LHD1	6.4830e-003	6.4831e-003
tblVehicleEF	LHD1	1.1300e-004	1.1300e-004
tblVehicleEF	LHD1	7.4270e-003	0.11
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	3.6160e-003	0.05
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.23	0.61
tblVehicleEF	LHD1	0.11	0.11
tblVehicleEF	LHD1	5.2050e-003	5.2045e-003
tblVehicleEF	LHD1	8.1020e-003	8.1018e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	1.18	1.23
tblVehicleEF	LHD1	1.13	1.13
tblVehicleEF	LHD1	9.59	9.59
tblVehicleEF	LHD1	666.10	686.28
tblVehicleEF	LHD1	11.52	11.52
tblVehicleEF	LHD1	0.09	0.09

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

tblVehicleEF	LHD1	2.21	1.96
tblVehicleEF	LHD1	0.34	0.34
tblVehicleEF	LHD1	9.2800e-004	9.2773e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.9470e-003	9.9470e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	3.5000e-004	3.4959e-004
tblVehicleEF	LHD1	8.8800e-004	8.8760e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4870e-003	2.4868e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	3.2400e-004	3.2391e-004
tblVehicleEF	LHD1	3.6450e-003	0.05
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.6560e-003	0.02
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.25	0.65
tblVehicleEF	LHD1	0.11	0.11
tblVehicleEF	LHD1	9.3000e-005	9.2802e-005
tblVehicleEF	LHD1	6.4830e-003	6.4826e-003
tblVehicleEF	LHD1	1.1400e-004	1.1398e-004
tblVehicleEF	LHD1	3.6450e-003	0.05
tblVehicleEF	LHD1	0.12	0.12
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.6560e-003	0.02
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.25	0.65
tblVehicleEF	LHD1	0.12	0.12

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

tblVehicleEF	LHD2	3.4350e-003	3.4352e-003
tblVehicleEF	LHD2	5.2930e-003	5.2926e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.74	0.76
tblVehicleEF	LHD2	0.65	0.65
tblVehicleEF	LHD2	15.09	15.09
tblVehicleEF	LHD2	664.99	687.64
tblVehicleEF	LHD2	7.86	7.86
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	2.52	2.33
tblVehicleEF	LHD2	0.21	0.21
tblVehicleEF	LHD2	1.3990e-003	1.3990e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	1.4100e-004	1.4065e-004
tblVehicleEF	LHD2	1.3380e-003	1.3385e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7030e-003	2.7034e-003
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	1.2900e-004	1.2941e-004
tblVehicleEF	LHD2	1.9970e-003	0.03
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	9.2900e-004	0.01
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.11	0.30
tblVehicleEF	LHD2	0.06	0.06

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

tblVehicleEF	LHD2	1.4400e-004	1.4419e-004
tblVehicleEF	LHD2	6.4090e-003	6.4095e-003
tblVehicleEF	LHD2	7.8000e-005	7.7795e-005
tblVehicleEF	LHD2	1.9970e-003	0.03
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	9.2900e-004	0.01
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.11	0.30
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	3.4430e-003	3.4432e-003
tblVehicleEF	LHD2	5.3410e-003	5.3407e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.75	0.76
tblVehicleEF	LHD2	0.63	0.63
tblVehicleEF	LHD2	15.09	15.09
tblVehicleEF	LHD2	665.00	687.65
tblVehicleEF	LHD2	7.81	7.81
tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	2.38	2.20
tblVehicleEF	LHD2	0.20	0.20
tblVehicleEF	LHD2	1.3990e-003	1.3990e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	1.4100e-004	1.4065e-004
tblVehicleEF	LHD2	1.3380e-003	1.3385e-003
tblVehicleEF	LHD2	0.04	0.04

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

tblVehicleEF	LHD2	2.7030e-003	2.7034e-003
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	1.2900e-004	1.2941e-004
tblVehicleEF	LHD2	3.7880e-003	0.06
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.8450e-003	0.03
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.11	0.30
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	1.4400e-004	1.4419e-004
tblVehicleEF	LHD2	6.4100e-003	6.4096e-003
tblVehicleEF	LHD2	7.7000e-005	7.7267e-005
tblVehicleEF	LHD2	3.7880e-003	0.06
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.8450e-003	0.03
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.11	0.30
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	3.4330e-003	3.4334e-003
tblVehicleEF	LHD2	5.2800e-003	5.2802e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.74	0.75
tblVehicleEF	LHD2	0.66	0.66
tblVehicleEF	LHD2	15.09	15.09
tblVehicleEF	LHD2	664.99	687.63
tblVehicleEF	LHD2	7.87	7.87

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

tblVehicleEF	LHD2	0.13	0.13
tblVehicleEF	LHD2	2.49	2.31
tblVehicleEF	LHD2	0.21	0.21
tblVehicleEF	LHD2	1.3990e-003	1.3990e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	1.4100e-004	1.4065e-004
tblVehicleEF	LHD2	1.3380e-003	1.3385e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.7030e-003	2.7034e-003
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	1.2900e-004	1.2941e-004
tblVehicleEF	LHD2	1.6370e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.6800e-004	0.01
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.11	0.32
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	1.4400e-004	1.4419e-004
tblVehicleEF	LHD2	6.4090e-003	6.4094e-003
tblVehicleEF	LHD2	7.8000e-005	7.7909e-005
tblVehicleEF	LHD2	1.6370e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.6800e-004	0.01
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.11	0.32

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

tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	MCY	0.33	0.33
tblVehicleEF	MCY	0.25	0.25
tblVehicleEF	MCY	21.46	21.46
tblVehicleEF	MCY	8.48	8.48
tblVehicleEF	MCY	208.52	208.52
tblVehicleEF	MCY	62.19	62.19
tblVehicleEF	MCY	1.15	1.15
tblVehicleEF	MCY	0.26	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.5180e-003	1.5180e-003
tblVehicleEF	MCY	3.0160e-003	3.0158e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.4260e-003	1.4262e-003
tblVehicleEF	MCY	2.8530e-003	2.8532e-003
tblVehicleEF	MCY	1.60	3.20
tblVehicleEF	MCY	0.82	0.82
tblVehicleEF	MCY	0.87	1.74
tblVehicleEF	MCY	2.26	2.26
tblVehicleEF	MCY	0.51	2.11
tblVehicleEF	MCY	1.87	1.87
tblVehicleEF	MCY	2.0630e-003	2.0635e-003
tblVehicleEF	MCY	6.1500e-004	6.1539e-004
tblVehicleEF	MCY	1.60	3.20
tblVehicleEF	MCY	0.82	0.82
tblVehicleEF	MCY	0.87	1.74
tblVehicleEF	MCY	2.73	2.73

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

tblVehicleEF	MCY	0.51	2.11
tblVehicleEF	MCY	2.04	2.04
tblVehicleEF	MCY	0.32	0.32
tblVehicleEF	MCY	0.22	0.22
tblVehicleEF	MCY	22.12	22.12
tblVehicleEF	MCY	8.00	8.00
tblVehicleEF	MCY	209.44	209.44
tblVehicleEF	MCY	60.72	60.72
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	0.25	0.25
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.5180e-003	1.5180e-003
tblVehicleEF	MCY	3.0160e-003	3.0158e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.4260e-003	1.4262e-003
tblVehicleEF	MCY	2.8530e-003	2.8532e-003
tblVehicleEF	MCY	3.17	6.33
tblVehicleEF	MCY	1.19	1.19
tblVehicleEF	MCY	2.00	3.99
tblVehicleEF	MCY	2.22	2.22
tblVehicleEF	MCY	0.51	2.10
tblVehicleEF	MCY	1.66	1.66
tblVehicleEF	MCY	2.0730e-003	2.0726e-003
tblVehicleEF	MCY	6.0100e-004	6.0086e-004
tblVehicleEF	MCY	3.17	6.33
tblVehicleEF	MCY	1.19	1.19
tblVehicleEF	MCY	2.00	3.99

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

tblVehicleEF	MCY	2.69	2.69
tblVehicleEF	MCY	0.51	2.10
tblVehicleEF	MCY	1.81	1.81
tblVehicleEF	MCY	0.33	0.33
tblVehicleEF	MCY	0.25	0.25
tblVehicleEF	MCY	20.90	20.90
tblVehicleEF	MCY	8.37	8.37
tblVehicleEF	MCY	207.60	207.60
tblVehicleEF	MCY	62.01	62.01
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	0.26	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.5180e-003	1.5180e-003
tblVehicleEF	MCY	3.0160e-003	3.0158e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.4260e-003	1.4262e-003
tblVehicleEF	MCY	2.8530e-003	2.8532e-003
tblVehicleEF	MCY	1.56	3.11
tblVehicleEF	MCY	1.03	1.03
tblVehicleEF	MCY	0.72	1.44
tblVehicleEF	MCY	2.25	2.25
tblVehicleEF	MCY	0.58	2.38
tblVehicleEF	MCY	1.87	1.87
tblVehicleEF	MCY	2.0540e-003	2.0544e-003
tblVehicleEF	MCY	6.1400e-004	6.1366e-004
tblVehicleEF	MCY	1.56	3.11
tblVehicleEF	MCY	1.03	1.03

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

tblVehicleEF	MCY	0.72	1.44
tblVehicleEF	MCY	2.72	2.72
tblVehicleEF	MCY	0.58	2.38
tblVehicleEF	MCY	2.03	2.03
tblVehicleEF	MDV	9.2580e-003	9.2598e-003
tblVehicleEF	MDV	0.12	0.12
tblVehicleEF	MDV	1.74	1.74
tblVehicleEF	MDV	3.88	3.88
tblVehicleEF	MDV	466.61	466.80
tblVehicleEF	MDV	98.62	98.64
tblVehicleEF	MDV	0.20	0.20
tblVehicleEF	MDV	0.54	0.54
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.6740e-003	1.6640e-003
tblVehicleEF	MDV	2.2570e-003	2.2572e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.5460e-003	1.5365e-003
tblVehicleEF	MDV	2.0790e-003	2.0797e-003
tblVehicleEF	MDV	0.14	0.67
tblVehicleEF	MDV	0.19	0.19
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.06	0.55
tblVehicleEF	MDV	0.61	0.61
tblVehicleEF	MDV	4.6150e-003	4.6157e-003
tblVehicleEF	MDV	9.7600e-004	9.7609e-004
tblVehicleEF	MDV	0.14	0.67

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

tblVehicleEF	MDV	0.19	0.19
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.06	0.55
tblVehicleEF	MDV	0.67	0.67
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.10	0.10
tblVehicleEF	MDV	2.10	2.10
tblVehicleEF	MDV	3.42	3.42
tblVehicleEF	MDV	496.38	496.62
tblVehicleEF	MDV	97.63	97.65
tblVehicleEF	MDV	0.19	0.19
tblVehicleEF	MDV	0.52	0.52
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.6740e-003	1.6640e-003
tblVehicleEF	MDV	2.2570e-003	2.2572e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.5460e-003	1.5365e-003
tblVehicleEF	MDV	2.0790e-003	2.0797e-003
tblVehicleEF	MDV	0.28	1.30
tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.22	1.00
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.06	0.55
tblVehicleEF	MDV	0.53	0.53
tblVehicleEF	MDV	4.9090e-003	4.9103e-003
tblVehicleEF	MDV	9.6600e-004	9.6632e-004

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

tblVehicleEF	MDV	0.28	1.30
tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.22	1.00
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.06	0.55
tblVehicleEF	MDV	0.58	0.58
tblVehicleEF	MDV	8.9340e-003	8.9352e-003
tblVehicleEF	MDV	0.12	0.12
tblVehicleEF	MDV	1.63	1.63
tblVehicleEF	MDV	3.96	3.96
tblVehicleEF	MDV	457.86	458.02
tblVehicleEF	MDV	98.80	98.82
tblVehicleEF	MDV	0.19	0.19
tblVehicleEF	MDV	0.54	0.54
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.6740e-003	1.6640e-003
tblVehicleEF	MDV	2.2570e-003	2.2572e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.5460e-003	1.5365e-003
tblVehicleEF	MDV	2.0790e-003	2.0797e-003
tblVehicleEF	MDV	0.12	0.54
tblVehicleEF	MDV	0.20	0.20
tblVehicleEF	MDV	0.10	0.45
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.07	0.62
tblVehicleEF	MDV	0.63	0.63
tblVehicleEF	MDV	4.5280e-003	4.5290e-003

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

tblVehicleEF	MDV	9.7800e-004	9.7787e-004
tblVehicleEF	MDV	0.12	0.54
tblVehicleEF	MDV	0.20	0.20
tblVehicleEF	MDV	0.10	0.45
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.07	0.62
tblVehicleEF	MDV	0.69	0.69
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	2.59	2.59
tblVehicleEF	MH	2.46	2.46
tblVehicleEF	MH	1,508.29	1,508.29
tblVehicleEF	MH	20.66	20.66
tblVehicleEF	MH	1.83	1.83
tblVehicleEF	MH	0.23	0.23
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	3.7700e-004	3.7654e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2780e-003	3.2779e-003
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	3.4900e-004	3.4863e-004
tblVehicleEF	MH	1.62	1.62
tblVehicleEF	MH	0.08	0.08
tblVehicleEF	MH	0.53	0.53
tblVehicleEF	MH	0.10	0.10
tblVehicleEF	MH	0.02	1.82
tblVehicleEF	MH	0.13	0.13

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

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	2.0400e-004	2.0449e-004
tblVehicleEF	MH	1.62	1.62
tblVehicleEF	MH	0.08	0.08
tblVehicleEF	MH	0.53	0.53
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.02	1.82
tblVehicleEF	MH	0.14	0.14
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	2.67	2.67
tblVehicleEF	MH	2.30	2.30
tblVehicleEF	MH	1,508.42	1,508.42
tblVehicleEF	MH	20.38	20.38
tblVehicleEF	MH	1.69	1.69
tblVehicleEF	MH	0.22	0.22
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	3.7700e-004	3.7654e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2780e-003	3.2779e-003
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	3.4900e-004	3.4863e-004
tblVehicleEF	MH	2.97	2.97
tblVehicleEF	MH	0.10	0.10
tblVehicleEF	MH	1.07	1.07
tblVehicleEF	MH	0.10	0.10
tblVehicleEF	MH	0.02	1.82

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

tblVehicleEF	MH	0.12	0.12
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	2.0200e-004	2.0171e-004
tblVehicleEF	MH	2.97	2.97
tblVehicleEF	MH	0.10	0.10
tblVehicleEF	MH	1.07	1.07
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.02	1.82
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	2.58	2.58
tblVehicleEF	MH	2.48	2.48
tblVehicleEF	MH	1,508.26	1,508.26
tblVehicleEF	MH	20.69	20.69
tblVehicleEF	MH	1.80	1.80
tblVehicleEF	MH	0.23	0.23
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	3.7700e-004	3.7654e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2780e-003	3.2779e-003
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	3.4900e-004	3.4863e-004
tblVehicleEF	MH	1.69	1.69
tblVehicleEF	MH	0.10	0.10
tblVehicleEF	MH	0.52	0.52
tblVehicleEF	MH	0.10	0.10

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

tblVehicleEF	MH	0.02	1.91
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	2.0500e-004	2.0473e-004
tblVehicleEF	MH	1.69	1.69
tblVehicleEF	MH	0.10	0.10
tblVehicleEF	MH	0.52	0.52
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.02	1.91
tblVehicleEF	MH	0.14	0.14
tblVehicleEF	MHD	3.1920e-003	3.1920e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.35	0.35
tblVehicleEF	MHD	1.18	1.18
tblVehicleEF	MHD	1.18	1.18
tblVehicleEF	MHD	80.43	80.43
tblVehicleEF	MHD	1,062.01	1,062.01
tblVehicleEF	MHD	8.79	8.79
tblVehicleEF	MHD	0.96	0.96
tblVehicleEF	MHD	4.36	4.36
tblVehicleEF	MHD	0.71	0.71
tblVehicleEF	MHD	5.2770e-003	5.2765e-003
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.16	0.16
tblVehicleEF	MHD	1.6600e-004	1.6609e-004
tblVehicleEF	MHD	5.0480e-003	5.0483e-003
tblVehicleEF	MHD	0.06	0.06

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

tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	0.16	0.16
tblVehicleEF	MHD	1.5500e-004	1.5453e-004
tblVehicleEF	MHD	1.1030e-003	1.1027e-003
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	5.1300e-004	5.1340e-004
tblVehicleEF	MHD	0.23	0.23
tblVehicleEF	MHD	0.03	0.14
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	7.6200e-004	7.6240e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.7000e-005	8.6968e-005
tblVehicleEF	MHD	1.1030e-003	1.1027e-003
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	5.1300e-004	5.1340e-004
tblVehicleEF	MHD	0.26	0.26
tblVehicleEF	MHD	0.03	0.14
tblVehicleEF	MHD	0.07	0.07
tblVehicleEF	MHD	3.0170e-003	3.0173e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.27	0.27
tblVehicleEF	MHD	1.19	1.19
tblVehicleEF	MHD	1.13	1.13
tblVehicleEF	MHD	83.36	83.36
tblVehicleEF	MHD	1,062.03	1,062.03
tblVehicleEF	MHD	8.69	8.69

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

tblVehicleEF	MHD	0.98	0.98
tblVehicleEF	MHD	4.11	4.11
tblVehicleEF	MHD	0.71	0.71
tblVehicleEF	MHD	4.4500e-003	4.4504e-003
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.16	0.16
tblVehicleEF	MHD	1.6600e-004	1.6609e-004
tblVehicleEF	MHD	4.2580e-003	4.2579e-003
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	0.16	0.16
tblVehicleEF	MHD	1.5500e-004	1.5453e-004
tblVehicleEF	MHD	2.1390e-003	2.1386e-003
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.0520e-003	1.0518e-003
tblVehicleEF	MHD	0.23	0.23
tblVehicleEF	MHD	0.03	0.14
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	7.9000e-004	7.9014e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.6000e-005	8.6027e-005
tblVehicleEF	MHD	2.1390e-003	2.1386e-003
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.0520e-003	1.0518e-003
tblVehicleEF	MHD	0.26	0.26
tblVehicleEF	MHD	0.03	0.14

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

tblVehicleEF	MHD	0.07	0.07
tblVehicleEF	MHD	3.4400e-003	3.4405e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.46	0.46
tblVehicleEF	MHD	1.17	1.17
tblVehicleEF	MHD	1.20	1.20
tblVehicleEF	MHD	76.39	76.39
tblVehicleEF	MHD	1,062.00	1,062.00
tblVehicleEF	MHD	8.81	8.81
tblVehicleEF	MHD	0.92	0.92
tblVehicleEF	MHD	4.32	4.32
tblVehicleEF	MHD	0.71	0.71
tblVehicleEF	MHD	6.4170e-003	6.4173e-003
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.16	0.16
tblVehicleEF	MHD	1.6600e-004	1.6609e-004
tblVehicleEF	MHD	6.1400e-003	6.1397e-003
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	0.16	0.16
tblVehicleEF	MHD	1.5500e-004	1.5453e-004
tblVehicleEF	MHD	9.2600e-004	9.2604e-004
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	4.3100e-004	4.3053e-004
tblVehicleEF	MHD	0.23	0.23
tblVehicleEF	MHD	0.03	0.15

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

tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	7.2400e-004	7.2405e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.7000e-005	8.7172e-005
tblVehicleEF	MHD	9.2600e-004	9.2604e-004
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	4.3100e-004	4.3053e-004
tblVehicleEF	MHD	0.26	0.26
tblVehicleEF	MHD	0.03	0.15
tblVehicleEF	MHD	0.07	0.07
tblVehicleEF	OBUS	9.5660e-003	9.5658e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.50	0.50
tblVehicleEF	OBUS	1.72	1.72
tblVehicleEF	OBUS	2.88	2.88
tblVehicleEF	OBUS	72.58	72.58
tblVehicleEF	OBUS	1,516.94	1,516.94
tblVehicleEF	OBUS	22.52	22.52
tblVehicleEF	OBUS	0.60	0.60
tblVehicleEF	OBUS	2.96	2.96
tblVehicleEF	OBUS	0.43	0.43
tblVehicleEF	OBUS	4.7370e-003	4.7369e-003
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	2.3100e-004	2.3090e-004
tblVehicleEF	OBUS	4.5320e-003	4.5320e-003

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

tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	2.1400e-004	2.1418e-004
tblVehicleEF	OBUS	2.5910e-003	2.5909e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	1.0740e-003	1.0743e-003
tblVehicleEF	OBUS	0.18	0.18
tblVehicleEF	OBUS	0.07	0.24
tblVehicleEF	OBUS	0.15	0.15
tblVehicleEF	OBUS	6.9300e-004	6.9272e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	2.2300e-004	2.2289e-004
tblVehicleEF	OBUS	2.5910e-003	2.5909e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	1.0740e-003	1.0743e-003
tblVehicleEF	OBUS	0.22	0.22
tblVehicleEF	OBUS	0.07	0.24
tblVehicleEF	OBUS	0.16	0.16
tblVehicleEF	OBUS	9.5280e-003	9.5283e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.46	0.46
tblVehicleEF	OBUS	1.74	1.74
tblVehicleEF	OBUS	2.69	2.69
tblVehicleEF	OBUS	74.15	74.15
tblVehicleEF	OBUS	1,516.99	1,516.99

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

tblVehicleEF	OBUS	22.20	22.20
tblVehicleEF	OBUS	0.61	0.61
tblVehicleEF	OBUS	2.77	2.77
tblVehicleEF	OBUS	0.42	0.42
tblVehicleEF	OBUS	3.9960e-003	3.9961e-003
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	2.3100e-004	2.3090e-004
tblVehicleEF	OBUS	3.8230e-003	3.8232e-003
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	2.1400e-004	2.1418e-004
tblVehicleEF	OBUS	4.7280e-003	4.7282e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	2.1280e-003	2.1277e-003
tblVehicleEF	OBUS	0.18	0.18
tblVehicleEF	OBUS	0.07	0.24
tblVehicleEF	OBUS	0.14	0.14
tblVehicleEF	OBUS	7.0800e-004	7.0752e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	2.2000e-004	2.1972e-004
tblVehicleEF	OBUS	4.7280e-003	4.7282e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	2.1280e-003	2.1277e-003
tblVehicleEF	OBUS	0.22	0.22

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

tblVehicleEF	OBUS	0.07	0.24
tblVehicleEF	OBUS	0.16	0.16
tblVehicleEF	OBUS	9.6430e-003	9.6428e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.56	0.56
tblVehicleEF	OBUS	1.71	1.71
tblVehicleEF	OBUS	2.91	2.91
tblVehicleEF	OBUS	70.42	70.42
tblVehicleEF	OBUS	1,516.93	1,516.93
tblVehicleEF	OBUS	22.57	22.57
tblVehicleEF	OBUS	0.58	0.58
tblVehicleEF	OBUS	2.93	2.93
tblVehicleEF	OBUS	0.43	0.43
tblVehicleEF	OBUS	5.7600e-003	5.7599e-003
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	2.3100e-004	2.3090e-004
tblVehicleEF	OBUS	5.5110e-003	5.5107e-003
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	2.1400e-004	2.1418e-004
tblVehicleEF	OBUS	2.5220e-003	2.5224e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	1.0550e-003	1.0548e-003
tblVehicleEF	OBUS	0.18	0.18

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

tblVehicleEF	OBUS	0.07	0.25
tblVehicleEF	OBUS	0.15	0.15
tblVehicleEF	OBUS	6.7200e-004	6.7228e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	2.2300e-004	2.2335e-004
tblVehicleEF	OBUS	2.5220e-003	2.5224e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	OBUS	1.0550e-003	1.0548e-003
tblVehicleEF	OBUS	0.22	0.22
tblVehicleEF	OBUS	0.07	0.25
tblVehicleEF	OBUS	0.16	0.16
tblVehicleEF	SBUS	0.07	0.07
tblVehicleEF	SBUS	8.6520e-003	8.6523e-003
tblVehicleEF	SBUS	6.8770e-003	6.8772e-003
tblVehicleEF	SBUS	2.86	2.86
tblVehicleEF	SBUS	0.77	0.77
tblVehicleEF	SBUS	0.98	0.98
tblVehicleEF	SBUS	370.44	370.44
tblVehicleEF	SBUS	1,146.51	1,146.51
tblVehicleEF	SBUS	6.00	6.00
tblVehicleEF	SBUS	3.92	3.92
tblVehicleEF	SBUS	5.48	5.48
tblVehicleEF	SBUS	0.48	0.48
tblVehicleEF	SBUS	5.3250e-003	5.3247e-003
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.6000e-005	3.5727e-005

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

tblVehicleEF	SBUS	5.0940e-003	5.0944e-003
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.6520e-003	2.6519e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3000e-005	3.2850e-005
tblVehicleEF	SBUS	1.1270e-003	1.1270e-003
tblVehicleEF	SBUS	7.1550e-003	7.1549e-003
tblVehicleEF	SBUS	0.35	0.35
tblVehicleEF	SBUS	4.9000e-004	4.9007e-004
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	3.5370e-003	3.5365e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.9000e-005	5.9374e-005
tblVehicleEF	SBUS	1.1270e-003	1.1270e-003
tblVehicleEF	SBUS	7.1550e-003	7.1549e-003
tblVehicleEF	SBUS	0.50	0.50
tblVehicleEF	SBUS	4.9000e-004	4.9007e-004
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	0.07	0.07
tblVehicleEF	SBUS	8.7690e-003	8.7695e-003
tblVehicleEF	SBUS	5.7570e-003	5.7573e-003
tblVehicleEF	SBUS	2.81	2.81
tblVehicleEF	SBUS	0.79	0.79
tblVehicleEF	SBUS	0.71	0.71
tblVehicleEF	SBUS	382.84	382.84

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

tblVehicleEF	SBUS	1,146.54	1,146.54
tblVehicleEF	SBUS	5.55	5.55
tblVehicleEF	SBUS	4.04	4.04
tblVehicleEF	SBUS	5.15	5.15
tblVehicleEF	SBUS	0.48	0.48
tblVehicleEF	SBUS	4.4940e-003	4.4943e-003
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.6000e-005	3.5727e-005
tblVehicleEF	SBUS	4.3000e-003	4.2999e-003
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.6520e-003	2.6519e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3000e-005	3.2850e-005
tblVehicleEF	SBUS	2.0400e-003	2.0397e-003
tblVehicleEF	SBUS	7.8160e-003	7.8156e-003
tblVehicleEF	SBUS	0.35	0.35
tblVehicleEF	SBUS	9.4800e-004	9.4770e-004
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.6540e-003	3.6537e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.5000e-005	5.4904e-005
tblVehicleEF	SBUS	2.0400e-003	2.0397e-003
tblVehicleEF	SBUS	7.8160e-003	7.8156e-003
tblVehicleEF	SBUS	0.50	0.50
tblVehicleEF	SBUS	9.4800e-004	9.4770e-004

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

tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	0.07	0.07
tblVehicleEF	SBUS	8.6460e-003	8.6460e-003
tblVehicleEF	SBUS	7.0990e-003	7.0990e-003
tblVehicleEF	SBUS	2.92	2.92
tblVehicleEF	SBUS	0.77	0.77
tblVehicleEF	SBUS	1.02	1.02
tblVehicleEF	SBUS	353.31	353.31
tblVehicleEF	SBUS	1,146.51	1,146.51
tblVehicleEF	SBUS	6.07	6.07
tblVehicleEF	SBUS	3.76	3.76
tblVehicleEF	SBUS	5.43	5.43
tblVehicleEF	SBUS	0.49	0.49
tblVehicleEF	SBUS	6.4710e-003	6.4715e-003
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.6000e-005	3.5727e-005
tblVehicleEF	SBUS	6.1920e-003	6.1915e-003
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.6520e-003	2.6519e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3000e-005	3.2850e-005
tblVehicleEF	SBUS	1.1100e-003	1.1102e-003
tblVehicleEF	SBUS	7.8620e-003	7.8621e-003
tblVehicleEF	SBUS	0.35	0.35
tblVehicleEF	SBUS	4.9200e-004	4.9174e-004

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

tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	3.3750e-003	3.3747e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.0000e-005	6.0065e-005
tblVehicleEF	SBUS	1.1100e-003	1.1102e-003
tblVehicleEF	SBUS	7.8620e-003	7.8621e-003
tblVehicleEF	SBUS	0.50	0.50
tblVehicleEF	SBUS	4.9200e-004	4.9174e-004
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	UBUS	3.57	3.57
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	24.36	24.36
tblVehicleEF	UBUS	1.44	1.45
tblVehicleEF	UBUS	1,642.45	1,642.45
tblVehicleEF	UBUS	18.97	19.01
tblVehicleEF	UBUS	0.80	0.80
tblVehicleEF	UBUS	0.21	0.21
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	2.8000e-003	2.7997e-003
tblVehicleEF	UBUS	3.7000e-005	3.6795e-005
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	5.4780e-003	5.4782e-003
tblVehicleEF	UBUS	2.6750e-003	2.6747e-003
tblVehicleEF	UBUS	3.4000e-005	3.3832e-005

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

tblVehicleEF	UBUS	1.5860e-003	1.5893e-003
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	9.8600e-004	9.8781e-004
tblVehicleEF	UBUS	0.13	0.13
tblVehicleEF	UBUS	1.8430e-003	0.06
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	5.1720e-003	5.1721e-003
tblVehicleEF	UBUS	1.8800e-004	1.8812e-004
tblVehicleEF	UBUS	1.5860e-003	1.5893e-003
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	9.8600e-004	9.8781e-004
tblVehicleEF	UBUS	3.72	3.72
tblVehicleEF	UBUS	1.8430e-003	0.06
tblVehicleEF	UBUS	0.10	0.10
tblVehicleEF	UBUS	3.57	3.58
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	24.36	24.47
tblVehicleEF	UBUS	1.23	1.24
tblVehicleEF	UBUS	1,642.46	1,649.47
tblVehicleEF	UBUS	18.60	18.85
tblVehicleEF	UBUS	0.79	0.79
tblVehicleEF	UBUS	0.20	0.20
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	2.8000e-003	2.8116e-003
tblVehicleEF	UBUS	3.7000e-005	3.7201e-005
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	5.4780e-003	5.4632e-003
tblVehicleEF	UBUS	2.6750e-003	2.6861e-003

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

tblVehicleEF	UBUS	3.4000e-005	3.4205e-005
tblVehicleEF	UBUS	2.8090e-003	2.8463e-003
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.9210e-003	1.9463e-003
tblVehicleEF	UBUS	0.13	0.13
tblVehicleEF	UBUS	1.7900e-003	0.06
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	5.1720e-003	5.1942e-003
tblVehicleEF	UBUS	1.8400e-004	1.8649e-004
tblVehicleEF	UBUS	2.8090e-003	2.8463e-003
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.9210e-003	1.9463e-003
tblVehicleEF	UBUS	3.72	3.74
tblVehicleEF	UBUS	1.7900e-003	0.06
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	3.57	3.58
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	24.36	24.46
tblVehicleEF	UBUS	1.43	1.45
tblVehicleEF	UBUS	1,642.45	1,649.47
tblVehicleEF	UBUS	18.95	19.20
tblVehicleEF	UBUS	0.80	0.80
tblVehicleEF	UBUS	0.21	0.21
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	2.8000e-003	2.8116e-003
tblVehicleEF	UBUS	3.7000e-005	3.7201e-005
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	5.4780e-003	5.4632e-003

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

tblVehicleEF	UBUS	2.6750e-003	2.6861e-003
tblVehicleEF	UBUS	3.4000e-005	3.4205e-005
tblVehicleEF	UBUS	1.5820e-003	1.6032e-003
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.0290e-003	1.0423e-003
tblVehicleEF	UBUS	0.13	0.13
tblVehicleEF	UBUS	2.1350e-003	0.07
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	5.1720e-003	5.1942e-003
tblVehicleEF	UBUS	1.8800e-004	1.8997e-004
tblVehicleEF	UBUS	1.5820e-003	1.6032e-003
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.0290e-003	1.0423e-003
tblVehicleEF	UBUS	3.72	3.74
tblVehicleEF	UBUS	2.1350e-003	0.07
tblVehicleEF	UBUS	0.09	0.10
tblVehicleTrips	HO_TL	8.70	7.98
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TL	5.90	7.98
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TL	14.70	7.98
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	9.54	9.44
tblVehicleTrips	SU_TR	8.55	9.44
tblWoodstoves	NumberCatalytic	7.20	7.55
tblWoodstoves	NumberNoncatalytic	7.20	7.55

2.0 Emissions Summary

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

2.1 Overall Construction

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	tons/yr										MT/yr					
2021	1.3101	4.8722	3.5709	7.9400e-003	0.2776	0.2046	0.4821	0.1151	0.1920	0.3071	0.0000	693.7275	693.7275	0.1822	0.0000	698.2815
2022	0.2103	2.0954	1.8808	4.4200e-003	0.0000	0.0855	0.0855	0.0000	0.0817	0.0817	0.0000	385.1433	385.1433	0.0840	0.0000	387.2438
2023	0.0806	0.7773	0.7675	1.8200e-003	0.0000	0.0310	0.0310	0.0000	0.0296	0.0296	0.0000	158.7964	158.7964	0.0341	0.0000	159.6500
Maximum	**1.3101**	**4.8722**	**3.5709**	**7.9400e-003**	**0.2776**	**0.2046**	**0.4821**	**0.1151**	**0.1920**	**0.3071**	**0.0000**	**693.7275**	**693.7275**	**0.1822**	**0.0000**	**698.2815**

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	tons/yr										MT/yr					
2021	1.0522	1.9435	3.9051	7.9400e-003	0.1028	0.0575	0.1603	0.0426	0.0535	0.0962	0.0000	693.7267	693.7267	0.1822	0.0000	698.2807
2022	0.1075	1.0548	2.1101	4.4200e-003	0.0000	0.0283	0.0283	0.0000	0.0263	0.0263	0.0000	385.1429	385.1429	0.0840	0.0000	387.2433
2023	0.0418	0.3898	0.8661	1.8200e-003	0.0000	0.0101	0.0101	0.0000	9.4300e-003	9.4300e-003	0.0000	158.7962	158.7962	0.0341	0.0000	159.6498
Maximum	**1.0522**	**1.9435**	**3.9051**	**7.9400e-003**	**0.1028**	**0.0575**	**0.1603**	**0.0426**	**0.0535**	**0.0962**	**0.0000**	**693.7267**	**693.7267**	**0.1822**	**0.0000**	**698.2807**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**24.95**	**56.25**	**-10.65**	**0.00**	**62.95**	**70.15**	**66.81**	**62.95**	**70.56**	**68.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-1-2021**	**8-31-2021**	2.5748	0.9085
2	**9-1-2021**	**11-30-2021**	0.9481	0.4980
3	**12-1-2021**	**2-28-2022**	0.7230	0.3724
4	**3-1-2022**	**5-31-2022**	0.5754	0.2898
5	**6-1-2022**	**8-31-2022**	0.5754	0.2898
6	**9-1-2022**	**11-30-2022**	0.5692	0.2866
7	**12-1-2022**	**2-28-2023**	0.5256	0.2645
8	**3-1-2023**	**5-31-2023**	0.5172	0.2602
9	**6-1-2023**	**8-31-2023**	0.0056	0.0028
		Highest	2.5748	0.9085

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1681	0.0530	1.9745	1.7700e-003		0.0859	0.0859		0.0859	0.0859	10.1054	34.8443	44.9497	0.0503	5.9000e-004	46.3843
Energy	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	516.2369	516.2369	0.0208	7.5500e-003	519.0056
Mobile	1.2836	2.7356	7.1191	0.0174	1.3380	0.0478	1.3858	0.3585	0.0455	0.4040	0.0000	1,627.9012	1,627.9012	0.0864	0.1217	1,666.3184
Waste						0.0000	0.0000		0.0000	0.0000	20.1347	0.0000	20.1347	1.1899	0.0000	49.8828
Water						0.0000	0.0000		0.0000	0.0000	2.9765	43.5878	46.5643	0.3082	7.7300e-003	56.5726
Total	**2.4745**	**2.9835**	**9.1766**	**0.0205**	**1.3380**	**0.1494**	**1.4874**	**0.3585**	**0.1471**	**0.5056**	**33.2166**	**2,222.5702**	**2,255.7869**	**1.6556**	**0.1375**	**2,338.1637**

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

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	1.1681	0.0530	1.9745	1.7700e-003		0.0859	0.0859		0.0859	0.0859	10.1054	34.8443	44.9497	0.0503	5.9000e-004	46.3843
Energy	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	516.2369	516.2369	0.0208	7.5500e-003	519.0056
Mobile	1.2836	2.7356	7.1191	0.0174	1.3380	0.0478	1.3858	0.3585	0.0455	0.4040	0.0000	1,627.9012	1,627.9012	0.0864	0.1217	1,666.3184
Waste						0.0000	0.0000		0.0000	0.0000	20.1347	0.0000	20.1347	1.1899	0.0000	49.8828
Water						0.0000	0.0000		0.0000	0.0000	2.9765	43.5878	46.5643	0.3082	7.7300e-003	56.5726
Total	**2.4745**	**2.9835**	**9.1766**	**0.0205**	**1.3380**	**0.1494**	**1.4874**	**0.3585**	**0.1471**	**0.5056**	**33.2166**	**2,222.5702**	**2,255.7869**	**1.6556**	**0.1375**	**2,338.1637**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	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	Building Construction	Building Construction	1/13/2021	6/1/2023	5	622	
2	Paving	Paving	1/13/2021	3/23/2021	5	50	
3	Architectural Coating	Architectural Coating	1/13/2021	6/1/2021	5	100	

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

4	Site Preparation and Grading	Grading	6/1/2021	8/27/2021	5	64	
5	Trenching/utilities	Trenching	8/28/2021	1/12/2022	5	98	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 160

Acres of Paving: 0

Residential Indoor: 550,395; Residential Outdoor: 183,465; 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
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Off-Highway Trucks	1	2.00	402	0.38
Building Construction	Other Construction Equipment	1	8.00	800	0.42
Building Construction	Other Material Handling Equipment	1	8.00	250	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation and Grading	Excavators	0	8.00	158	0.38
Site Preparation and Grading	Graders	3	8.00	187	0.41
Site Preparation and Grading	Off-Highway Trucks	1	2.00	402	0.38
Site Preparation and Grading	Rollers	1	8.00	80	0.38
Site Preparation and Grading	Rubber Tired Dozers	1	8.00	247	0.40

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

Site Preparation and Grading	Scrapers	2	8.00	367	0.48
Site Preparation and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching/utilities	Excavators	1	8.00	158	0.38
Trenching/utilities	Off-Highway Trucks	1	4.00	402	0.38
Trenching/utilities	Off-Highway Trucks	1	2.00	402	0.38
Trenching/utilities	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Building Construction	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation and Grading	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/utilities	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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

3.2 Building Construction - 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	tons/yr										MT/yr					
Off-Road	0.2249	2.3438	1.8346	4.2300e-003		0.0961	0.0961		0.0918	0.0918	0.0000	368.5353	368.5353	0.0802	0.0000	370.5413
Total	**0.2249**	**2.3438**	**1.8346**	**4.2300e-003**		**0.0961**	**0.0961**		**0.0918**	**0.0918**	**0.0000**	**368.5353**	**368.5353**	**0.0802**	**0.0000**	**370.5413**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.2 Building Construction - 2021

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	tons/yr										MT/yr					
Off-Road	0.1142	1.1990	2.0425	4.2300e-003		0.0329	0.0329		0.0306	0.0306	0.0000	368.5348	368.5348	0.0802	0.0000	370.5408
Total	**0.1142**	**1.1990**	**2.0425**	**4.2300e-003**		**0.0329**	**0.0329**		**0.0306**	**0.0306**	**0.0000**	**368.5348**	**368.5348**	**0.0802**	**0.0000**	**370.5408**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Operational 2017 BAU - Riverside-South Coast County, Annual

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

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2072	2.0695	1.8487	4.3500e-003		0.0844	0.0844		0.0807	0.0807	0.0000	378.7550	378.7550	0.0820	0.0000	380.8037
Total	**0.2072**	**2.0695**	**1.8487**	**4.3500e-003**		**0.0844**	**0.0844**		**0.0807**	**0.0807**	**0.0000**	**378.7550**	**378.7550**	**0.0820**	**0.0000**	**380.8037**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1056	1.0410	2.0750	4.3500e-003		0.0278	0.0278		0.0259	0.0259	0.0000	378.7545	378.7545	0.0820	0.0000	380.8033
Total	**0.1056**	**1.0410**	**2.0750**	**4.3500e-003**		**0.0278**	**0.0278**		**0.0259**	**0.0259**	**0.0000**	**378.7545**	**378.7545**	**0.0820**	**0.0000**	**380.8033**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.2 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0806	0.7773	0.7675	1.8200e-003		0.0310	0.0310		0.0296	0.0296	0.0000	158.7964	158.7964	0.0341	0.0000	159.6500
Total	**0.0806**	**0.7773**	**0.7675**	**1.8200e-003**		**0.0310**	**0.0310**		**0.0296**	**0.0296**	**0.0000**	**158.7964**	**158.7964**	**0.0341**	**0.0000**	**159.6500**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.2 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0418	0.3898	0.8661	1.8200e-003		0.0101	0.0101		9.4300e-003	9.4300e-003	0.0000	158.7962	158.7962	0.0341	0.0000	159.6498
Total	**0.0418**	**0.3898**	**0.8661**	**1.8200e-003**		**0.0101**	**0.0101**		**9.4300e-003**	**9.4300e-003**	**0.0000**	**158.7962**	**158.7962**	**0.0341**	**0.0000**	**159.6498**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.3 Paving - 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	tons/yr										MT/yr					
Off-Road	0.0314	0.3230	0.3663	5.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	50.0587	50.0587	0.0162	0.0000	50.4635
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0314**	**0.3230**	**0.3663**	**5.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**50.0587**	**50.0587**	**0.0162**	**0.0000**	**50.4635**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.3 Paving - 2021

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	tons/yr										MT/yr					
Off-Road	7.0100e-003	0.0304	0.4324	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	50.0586	50.0586	0.0162	0.0000	50.4634
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.0100e-003**	**0.0304**	**0.4324**	**5.7000e-004**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**50.0586**	**50.0586**	**0.0162**	**0.0000**	**50.4634**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.4 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.8504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0763	0.0909	1.5000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	12.7663	12.7663	8.8000e-004	0.0000	12.7882
Total	**0.8613**	**0.0763**	**0.0909**	**1.5000e-004**		**4.7000e-003**	**4.7000e-003**		**4.7000e-003**	**4.7000e-003**	**0.0000**	**12.7663**	**12.7663**	**8.8000e-004**	**0.0000**	**12.7882**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.4 Architectural Coating - 2021

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	tons/yr										MT/yr					
Archit. Coating	0.8504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	6.4400e-003	0.0916	1.5000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	12.7663	12.7663	8.8000e-004	0.0000	12.7882
Total	**0.8519**	**6.4400e-003**	**0.0916**	**1.5000e-004**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**12.7663**	**12.7663**	**8.8000e-004**	**0.0000**	**12.7882**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.5 Site Preparation and 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	tons/yr										MT/yr					
Fugitive Dust					0.2776	0.0000	0.2776	0.1151	0.0000	0.1151	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1534	1.7692	0.9085	2.1700e-003		0.0706	0.0706		0.0649	0.0649	0.0000	190.5189	190.5189	0.0616	0.0000	192.0593
Total	**0.1534**	**1.7692**	**0.9085**	**2.1700e-003**	**0.2776**	**0.0706**	**0.3481**	**0.1151**	**0.0649**	**0.1800**	**0.0000**	**190.5189**	**190.5189**	**0.0616**	**0.0000**	**192.0593**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.5 Site Preparation and Grading - 2021

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	tons/yr										MT/yr					
Fugitive Dust					0.1028	0.0000	0.1028	0.0426	0.0000	0.0426	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0541	0.5102	0.9353	2.1700e-003		0.0163	0.0163		0.0152	0.0152	0.0000	190.5187	190.5187	0.0616	0.0000	192.0591
Total	**0.0541**	**0.5102**	**0.9353**	**2.1700e-003**	**0.1028**	**0.0163**	**0.1191**	**0.0426**	**0.0152**	**0.0579**	**0.0000**	**190.5187**	**190.5187**	**0.0616**	**0.0000**	**192.0591**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.6 Trenching/utilities - 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	tons/yr										MT/yr					
Off-Road	0.0392	0.3599	0.3706	8.2000e-004		0.0163	0.0163		0.0150	0.0150	0.0000	71.8484	71.8484	0.0232	0.0000	72.4293
Total	**0.0392**	**0.3599**	**0.3706**	**8.2000e-004**		**0.0163**	**0.0163**		**0.0150**	**0.0150**	**0.0000**	**71.8484**	**71.8484**	**0.0232**	**0.0000**	**72.4293**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.6 Trenching/utilities - 2021

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	tons/yr										MT/yr					
Off-Road	0.0250	0.1974	0.4034	8.2000e-004		7.1200e-003	7.1200e-003		6.6000e-003	6.6000e-003	0.0000	71.8483	71.8483	0.0232	0.0000	72.4292
Total	**0.0250**	**0.1974**	**0.4034**	**8.2000e-004**		**7.1200e-003**	**7.1200e-003**		**6.6000e-003**	**6.6000e-003**	**0.0000**	**71.8483**	**71.8483**	**0.0232**	**0.0000**	**72.4292**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.6 Trenching/utilities - 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	tons/yr										MT/yr					
Off-Road	3.0500e-003	0.0259	0.0321	7.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	6.3884	6.3884	2.0700e-003	0.0000	6.4400
Total	**3.0500e-003**	**0.0259**	**0.0321**	**7.0000e-005**		**1.1400e-003**	**1.1400e-003**		**1.0500e-003**	**1.0500e-003**	**0.0000**	**6.3884**	**6.3884**	**2.0700e-003**	**0.0000**	**6.4400**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.6 Trenching/utilities - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9900e-003	0.0138	0.0351	7.0000e-005		4.9000e-004	4.9000e-004		4.6000e-004	4.6000e-004	0.0000	6.3884	6.3884	2.0700e-003	0.0000	6.4400
Total	**1.9900e-003**	**0.0138**	**0.0351**	**7.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**6.3884**	**6.3884**	**2.0700e-003**	**0.0000**	**6.4400**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2836	2.7356	7.1191	0.0174	1.3380	0.0478	1.3858	0.3585	0.0455	0.4040	0.0000	1,627.9012	1,627.9012	0.0864	0.1217	1,666.3184
Unmitigated	1.2836	2.7356	7.1191	0.0174	1.3380	0.0478	1.3858	0.3585	0.0455	0.4040	0.0000	1,627.9012	1,627.9012	0.0864	0.1217	1,666.3184

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,359.36	1,359.36	1359.36	3,505,832	3,505,832
Total	1,359.36	1,359.36	1,359.36	3,505,832	3,505,832

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Single Family Housing	7.98	7.98	7.98	40.00	20.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.508651	0.050292	0.165833	0.150471	0.027433	0.007154	0.017738	0.062749	0.000949	0.001162	0.005018	0.000929	0.001622

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

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	290.5630	290.5630	0.0165	3.4100e-003	291.9906
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	290.5630	290.5630	0.0165	3.4100e-003	291.9906
NaturalGas Mitigated	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	225.6739	225.6739	4.3300e-003	4.1400e-003	227.0150
NaturalGas Unmitigated	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	225.6739	225.6739	4.3300e-003	4.1400e-003	227.0150

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	4.22897e+006	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	225.6739	225.6739	4.3300e-003	4.1400e-003	227.0150
Total		**0.0228**	**0.1949**	**0.0829**	**1.2400e-003**		**0.0158**	**0.0158**		**0.0158**	**0.0158**	**0.0000**	**225.6739**	**225.6739**	**4.3300e-003**	**4.1400e-003**	**227.0150**

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	tons/yr										MT/yr					
Single Family Housing	4.22897e+006	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	225.6739	225.6739	4.3300e-003	4.1400e-003	227.0150
Total		**0.0228**	**0.1949**	**0.0829**	**1.2400e-003**		**0.0158**	**0.0158**		**0.0158**	**0.0158**	**0.0000**	**225.6739**	**225.6739**	**4.3300e-003**	**4.1400e-003**	**227.0150**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.25243e+006	290.5630	0.0165	3.4100e-003	291.9906
Total		**290.5630**	**0.0165**	**3.4100e-003**	**291.9906**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.25243e+006	290.5630	0.0165	3.4100e-003	291.9906
Total		**290.5630**	**0.0165**	**3.4100e-003**	**291.9906**

6.0 Area Detail

6.1 Mitigation Measures Area

Hemet 30 Operational 2017 BAU - Riverside-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1681	0.0530	1.9745	1.7700e-003		0.0859	0.0859		0.0859	0.0859	10.1054	34.8443	44.9497	0.0503	5.9000e-004	46.3843
Unmitigated	1.1681	0.0530	1.9745	1.7700e-003		0.0859	0.0859		0.0859	0.0859	10.1054	34.8443	44.9497	0.0503	5.9000e-004	46.3843

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	tons/yr										MT/yr					
Architectural Coating	0.0850					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0542	0.0355	0.4745	1.6900e-003		0.0777	0.0777		0.0777	0.0777	10.1054	32.4185	42.5240	0.0479	5.9000e-004	43.8976
Landscaping	0.0467	0.0175	1.5000	8.0000e-005		8.1400e-003	8.1400e-003		8.1400e-003	8.1400e-003	0.0000	2.4258	2.4258	2.4300e-003	0.0000	2.4866
Total	**1.1681**	**0.0530**	**1.9745**	**1.7700e-003**		**0.0859**	**0.0859**		**0.0859**	**0.0859**	**10.1054**	**34.8443**	**44.9497**	**0.0503**	**5.9000e-004**	**46.3843**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0850					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0542	0.0355	0.4745	1.6900e-003		0.0777	0.0777		0.0777	0.0777	10.1054	32.4185	42.5240	0.0479	5.9000e-004	43.8976
Landscaping	0.0467	0.0175	1.5000	8.0000e-005		8.1400e-003	8.1400e-003		8.1400e-003	8.1400e-003	0.0000	2.4258	2.4258	2.4300e-003	0.0000	2.4866
Total	**1.1681**	**0.0530**	**1.9745**	**1.7700e-003**		**0.0859**	**0.0859**		**0.0859**	**0.0859**	**10.1054**	**34.8443**	**44.9497**	**0.0503**	**5.9000e-004**	**46.3843**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	46.5643	0.3082	7.7300e-003	56.5726
Unmitigated	46.5643	0.3082	7.7300e-003	56.5726

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	9.38218 / 5.91485	46.5643	0.3082	7.7300e-003	56.5726
Total		**46.5643**	**0.3082**	**7.7300e-003**	**56.5726**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	9.38218 / 5.91485	46.5643	0.3082	7.7300e-003	56.5726
Total		**46.5643**	**0.3082**	**7.7300e-003**	**56.5726**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.1347	1.1899	0.0000	49.8828
Unmitigated	20.1347	1.1899	0.0000	49.8828

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	99.19	20.1347	1.1899	0.0000	49.8828
Total		**20.1347**	**1.1899**	**0.0000**	**49.8828**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	99.19	20.1347	1.1899	0.0000	49.8828
Total		**20.1347**	**1.1899**	**0.0000**	**49.8828**

9.0 Operational Offroad

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

Hemet 30 Unmitigated and Tier 4 equipment

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	144.00	Dwelling Unit	29.00	271,800.00	432

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	401.15	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Trips and VMT - Modeled outside of CalEEMod to incorporate EMFAC2017

Grading - See Assumptions

Vehicle Trips - See Assumptions

Woodstoves - See Assumptions

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

Energy Use - See Assumptions

Solid Waste - See Assumptions

Construction Off-road Equipment Mitigation - See Assumptions

Water And Wastewater -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	440.00	622.00
tblConstructionPhase	NumDays	35.00	50.00
tblConstructionPhase	NumDays	35.00	100.00
tblConstructionPhase	NumDays	45.00	64.00
tblEnergyUse	T24E	199.85	932.64
tblEnergyUse	T24NG	22,256.94	23,337.84
tblFireplaces	NumberGas	122.40	135.00
tblFireplaces	NumberNoFireplace	14.40	16.00
tblFireplaces	NumberWood	7.20	0.00
tblFleetMix	HHD	0.02	0.07
tblFleetMix	LDA	0.54	0.53
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.03	0.02
tblFleetMix	LHD2	7.0740e-003	5.9610e-003
tblFleetMix	MCY	0.02	4.3270e-003
tblFleetMix	MDV	0.14	0.12
tblFleetMix	MH	4.9320e-003	1.0050e-003
tblFleetMix	MHD	0.01	0.02
tblFleetMix	OBUS	6.1000e-004	8.6700e-004
tblFleetMix	SBUS	1.0940e-003	9.6400e-004
tblFleetMix	UBUS	3.0400e-004	1.0810e-003
tblGrading	AcresOfGrading	256.00	160.00
tblLandUse	LandUseSquareFeet	259,200.00	271,800.00
tblLandUse	LotAcreage	46.75	29.00
tblLandUse	Population	412.00	432.00
tblOffRoadEquipment	HorsePower	172.00	800.00

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tblOffRoadEquipment	HorsePower	168.00	250.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.029
tblProjectCharacteristics	CO2IntensityFactor	390.98	401.15
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.006
tblSolidWaste	SolidWasteGenerationRate	177.12	99.19
tblTripsAndVMT	VendorTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	52.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleEF	HHD	4.0000e-005	3.9000e-005
tblVehicleEF	HHD	1.5000e-005	1.8000e-004
tblVehicleEF	HHD	4.0000e-005	3.9000e-005
tblVehicleEF	HHD	1.5000e-005	1.8000e-004
tblVehicleEF	HHD	1.5000e-005	1.8200e-004
tblVehicleEF	HHD	1.5000e-005	1.8200e-004
tblVehicleEF	HHD	1.6000e-005	1.9200e-004
tblVehicleEF	HHD	1.6000e-005	1.9200e-004
tblVehicleEF	LDA	0.51	0.52
tblVehicleEF	LDA	1.86	1.87
tblVehicleEF	LDA	234.14	241.67

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tblVehicleEF	LDA	48.28	49.77
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003
tblVehicleEF	LDA	0.05	0.25
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	5.5010e-003	5.5070e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	0.05	0.25
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	7.9980e-003	8.0210e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.17	0.17
tblVehicleEF	LDA	0.63	0.63
tblVehicleEF	LDA	1.64	1.65
tblVehicleEF	LDA	254.48	262.67
tblVehicleEF	LDA	47.87	49.35
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.14	0.14
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003

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

tblVehicleEF	LDA	0.10	0.49
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.08	0.37
tblVehicleEF	LDA	6.2070e-003	6.2140e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.14	0.14
tblVehicleEF	LDA	0.10	0.49
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.08	0.37
tblVehicleEF	LDA	9.0270e-003	9.0540e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	0.48	0.48
tblVehicleEF	LDA	1.89	1.90
tblVehicleEF	LDA	228.58	235.93
tblVehicleEF	LDA	48.35	49.84
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.17
tblVehicleEF	LDA	5.3160e-003	5.3220e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	0.04	0.20

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

tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.17
tblVehicleEF	LDA	7.7270e-003	7.7490e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.18	0.18
tblVehicleEF	LDT1	1.03	1.04
tblVehicleEF	LDT1	2.06	2.08
tblVehicleEF	LDT1	281.46	290.50
tblVehicleEF	LDT1	58.94	60.77
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.22	0.22
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003
tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.16	0.72
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.11	0.51
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.28	0.28
tblVehicleEF	LDT1	0.16	0.72
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.11	0.51
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.31	0.31
tblVehicleEF	LDT1	1.26	1.27
tblVehicleEF	LDT1	1.83	1.84

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

tblVehicleEF	LDT1	303.12	312.86
tblVehicleEF	LDT1	58.46	60.26
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003
tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.30	1.40
tblVehicleEF	LDT1	0.23	0.24
tblVehicleEF	LDT1	0.21	0.96
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.08	0.64
tblVehicleEF	LDT1	0.25	0.25
tblVehicleEF	LDT1	0.30	1.40
tblVehicleEF	LDT1	0.23	0.24
tblVehicleEF	LDT1	0.21	0.96
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.08	0.64
tblVehicleEF	LDT1	0.27	0.27
tblVehicleEF	LDT1	0.97	0.97
tblVehicleEF	LDT1	2.11	2.13
tblVehicleEF	LDT1	274.85	283.68
tblVehicleEF	LDT1	59.05	60.87
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.22	0.22
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003

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

tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.13	0.60
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	0.09	0.43
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.09	0.73
tblVehicleEF	LDT1	0.29	0.29
tblVehicleEF	LDT1	0.13	0.60
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	0.09	0.43
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.09	0.73
tblVehicleEF	LDT1	0.32	0.32
tblVehicleEF	LDT2	0.73	0.73
tblVehicleEF	LDT2	2.37	2.38
tblVehicleEF	LDT2	292.27	299.82
tblVehicleEF	LDT2	61.49	63.39
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.09	0.44
tblVehicleEF	LDT2	0.11	0.11
tblVehicleEF	LDT2	0.08	0.36
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.24	0.24

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

tblVehicleEF	LDT2	0.09	0.44
tblVehicleEF	LDT2	0.11	0.11
tblVehicleEF	LDT2	0.08	0.36
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.26	0.26
tblVehicleEF	LDT2	0.90	0.90
tblVehicleEF	LDT2	2.10	2.11
tblVehicleEF	LDT2	312.64	320.73
tblVehicleEF	LDT2	60.97	62.85
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.18	0.85
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.14	0.67
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	0.18	0.85
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.14	0.67
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.23	0.23
tblVehicleEF	LDT2	0.68	0.68

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tblVehicleEF	LDT2	2.43	2.44
tblVehicleEF	LDT2	286.05	293.44
tblVehicleEF	LDT2	61.61	63.51
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.22
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.07	0.34
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.07	0.31
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.24	0.24
tblVehicleEF	LDT2	0.07	0.34
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.07	0.31
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.27	0.27
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	604.48	617.86
tblVehicleEF	LHD1	1.05	0.97
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	2.5860e-003	0.04
tblVehicleEF	LHD1	1.3190e-003	0.02
tblVehicleEF	LHD1	0.18	0.42

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tblVehicleEF	LHD1	2.5860e-003	0.04
tblVehicleEF	LHD1	1.3190e-003	0.02
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.18	0.42
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	604.49	617.87
tblVehicleEF	LHD1	0.99	0.91
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	4.8140e-003	0.07
tblVehicleEF	LHD1	2.4810e-003	0.04
tblVehicleEF	LHD1	0.18	0.43
tblVehicleEF	LHD1	4.8140e-003	0.07
tblVehicleEF	LHD1	2.4810e-003	0.04
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.18	0.43
tblVehicleEF	LHD1	0.48	0.49
tblVehicleEF	LHD1	604.48	617.86
tblVehicleEF	LHD1	1.04	0.96
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	2.2460e-003	0.03
tblVehicleEF	LHD1	1.1970e-003	0.02
tblVehicleEF	LHD1	0.19	0.45
tblVehicleEF	LHD1	2.2460e-003	0.03
tblVehicleEF	LHD1	1.1970e-003	0.02
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.19	0.45
tblVehicleEF	LHD2	0.37	0.37

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tblVehicleEF	LHD2	604.15	619.03
tblVehicleEF	LHD2	1.17	1.11
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	1.3880e-003	0.02
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.08	0.19
tblVehicleEF	LHD2	1.3880e-003	0.02
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.08	0.19
tblVehicleEF	LHD2	0.38	0.37
tblVehicleEF	LHD2	604.15	619.03
tblVehicleEF	LHD2	1.11	1.05
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	2.6120e-003	0.04
tblVehicleEF	LHD2	1.3770e-003	0.02
tblVehicleEF	LHD2	0.08	0.20
tblVehicleEF	LHD2	2.6120e-003	0.04
tblVehicleEF	LHD2	1.3770e-003	0.02
tblVehicleEF	LHD2	0.06	0.05
tblVehicleEF	LHD2	0.08	0.20
tblVehicleEF	LHD2	0.37	0.37
tblVehicleEF	LHD2	604.15	619.02
tblVehicleEF	LHD2	1.16	1.10
tblVehicleEF	LHD2	0.01	0.01

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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	1.0560e-003	0.02
tblVehicleEF	LHD2	6.1700e-004	9.1860e-003
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	1.0560e-003	0.02
tblVehicleEF	LHD2	6.1700e-004	9.1860e-003
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	MCY	1.68	3.36
tblVehicleEF	MCY	0.90	1.81
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	1.68	3.36
tblVehicleEF	MCY	0.90	1.81
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	3.32	6.64
tblVehicleEF	MCY	2.05	4.09
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	3.32	6.64
tblVehicleEF	MCY	2.05	4.09
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	1.59	3.18
tblVehicleEF	MCY	0.72	1.45
tblVehicleEF	MCY	0.54	1.89
tblVehicleEF	MCY	1.59	3.18
tblVehicleEF	MCY	0.72	1.45
tblVehicleEF	MCY	0.54	1.89
tblVehicleEF	MDV	0.81	0.81
tblVehicleEF	MDV	2.65	2.67

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

tblVehicleEF	MDV	367.15	376.98
tblVehicleEF	MDV	76.81	79.18
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.12	0.54
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.10	0.47
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.12	0.54
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.10	0.47
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.33	0.33
tblVehicleEF	MDV	0.99	0.99
tblVehicleEF	MDV	2.34	2.35
tblVehicleEF	MDV	388.58	399.03
tblVehicleEF	MDV	76.18	78.54
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.26	0.26
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.23	1.05

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

tblVehicleEF	MDV	0.17	0.17
tblVehicleEF	MDV	0.19	0.86
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	0.23	1.05
tblVehicleEF	MDV	0.17	0.17
tblVehicleEF	MDV	0.19	0.86
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.29	0.29
tblVehicleEF	MDV	0.75	0.76
tblVehicleEF	MDV	2.71	2.73
tblVehicleEF	MDV	360.65	370.29
tblVehicleEF	MDV	76.94	79.31
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.09	0.42
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.09	0.40
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.07	0.51
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.09	0.42
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.09	0.40

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.07	0.51
tblVehicleEF	MDV	0.34	0.34
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.02	1.18
tblVehicleEF	MH	0.02	1.18
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.28
tblVehicleEF	OBUS	0.08	0.28
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	5.7000e-005	5.6000e-005
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	UBUS	3.36	3.36

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	26.11	26.10
tblVehicleEF	UBUS	1.46	1.46
tblVehicleEF	UBUS	1,591.71	1,591.16
tblVehicleEF	UBUS	17.32	17.29
tblVehicleEF	UBUS	0.31	0.31
tblVehicleEF	UBUS	0.17	0.17
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	2.6660e-003	2.6650e-003
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	5.4780e-003	5.4790e-003
tblVehicleEF	UBUS	2.5330e-003	2.5320e-003
tblVehicleEF	UBUS	1.3310e-003	1.3280e-003
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	8.1200e-004	8.1100e-004
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	1.7510e-003	0.06
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	4.6610e-003	4.6590e-003
tblVehicleEF	UBUS	1.3310e-003	1.3280e-003
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	8.1200e-004	8.1100e-004
tblVehicleEF	UBUS	3.43	3.43
tblVehicleEF	UBUS	1.7510e-003	0.06
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	1.6940e-003	0.06
tblVehicleEF	UBUS	1.6940e-003	0.06
tblVehicleEF	UBUS	2.0810e-003	0.07

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

tblVehicleEF	UBUS	2.0810e-003	0.07
tblVehicleTrips	HO_TL	8.70	7.98
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TL	5.90	7.98
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TL	14.70	7.98
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	9.54	9.44
tblVehicleTrips	SU_TR	8.55	9.44
tblWoodstoves	NumberCatalytic	7.20	7.55
tblWoodstoves	NumberNoncatalytic	7.20	7.55

2.0 Emissions Summary

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

2.1 Overall Construction

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	tons/yr										MT/yr					
2021	1.3101	4.8722	3.5709	7.9400e-003	0.2776	0.2046	0.4821	0.1151	0.1920	0.3071	0.0000	693.7275	693.7275	0.1822	0.0000	698.2815
2022	0.2103	2.0954	1.8808	4.4200e-003	0.0000	0.0855	0.0855	0.0000	0.0817	0.0817	0.0000	385.1433	385.1433	0.0840	0.0000	387.2438
2023	0.0806	0.7773	0.7675	1.8200e-003	0.0000	0.0310	0.0310	0.0000	0.0296	0.0296	0.0000	158.7964	158.7964	0.0341	0.0000	159.6500
Maximum	**1.3101**	**4.8722**	**3.5709**	**7.9400e-003**	**0.2776**	**0.2046**	**0.4821**	**0.1151**	**0.1920**	**0.3071**	**0.0000**	**693.7275**	**693.7275**	**0.1822**	**0.0000**	**698.2815**

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	tons/yr										MT/yr					
2021	1.0522	1.9435	3.9051	7.9400e-003	0.1028	0.0575	0.1603	0.0426	0.0535	0.0962	0.0000	693.7267	693.7267	0.1822	0.0000	698.2807
2022	0.1075	1.0548	2.1101	4.4200e-003	0.0000	0.0283	0.0283	0.0000	0.0263	0.0263	0.0000	385.1429	385.1429	0.0840	0.0000	387.2433
2023	0.0418	0.3898	0.8661	1.8200e-003	0.0000	0.0101	0.0101	0.0000	9.4300e-003	9.4300e-003	0.0000	158.7962	158.7962	0.0341	0.0000	159.6498
Maximum	**1.0522**	**1.9435**	**3.9051**	**7.9400e-003**	**0.1028**	**0.0575**	**0.1603**	**0.0426**	**0.0535**	**0.0962**	**0.0000**	**693.7267**	**693.7267**	**0.1822**	**0.0000**	**698.2807**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**24.95**	**56.25**	**-10.65**	**0.00**	**62.95**	**70.15**	**66.81**	**62.95**	**70.56**	**68.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-1-2021**	**8-31-2021**	2.5748	0.9085
2	**9-1-2021**	**11-30-2021**	0.9481	0.4980
3	**12-1-2021**	**2-28-2022**	0.7230	0.3724
4	**3-1-2022**	**5-31-2022**	0.5754	0.2898
5	**6-1-2022**	**8-31-2022**	0.5754	0.2898
6	**9-1-2022**	**11-30-2022**	0.5692	0.2866
7	**12-1-2022**	**2-28-2023**	0.5256	0.2645
8	**3-1-2023**	**5-31-2023**	0.5172	0.2602
9	**6-1-2023**	**8-31-2023**	0.0056	0.0028
		Highest	2.5748	0.9085

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1660	0.0526	1.9582	1.7700e-003		0.0860	0.0860		0.0860	0.0860	10.1054	34.8443	44.9497	0.0502	5.9000e-004	46.3815
Energy	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	453.5648	453.5648	0.0208	7.5500e-003	456.3335
Mobile	0.7265	1.2948	4.0436	0.0141	1.3377	0.0141	1.3518	0.3583	0.0133	0.3716	0.0000	1,340.6043	1,340.6043	0.0512	0.0922	1,369.3585
Waste						0.0000	0.0000		0.0000	0.0000	20.1347	0.0000	20.1347	1.1899	0.0000	49.8828
Water						0.0000	0.0000		0.0000	0.0000	2.9765	34.1863	37.1628	0.3082	7.7300e-003	47.1711
Total	**1.9153**	**1.5423**	**6.0847**	**0.0171**	**1.3377**	**0.1158**	**1.4535**	**0.3583**	**0.1150**	**0.4733**	**33.2166**	**1,863.1996**	**1,896.4163**	**1.6203**	**0.1081**	**1,969.1273**

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

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	1.1660	0.0526	1.9582	1.7700e-003		0.0860	0.0860		0.0860	0.0860	10.1054	34.8443	44.9497	0.0502	5.9000e-004	46.3815
Energy	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	453.5648	453.5648	0.0208	7.5500e-003	456.3335
Mobile	0.7265	1.2948	4.0436	0.0141	1.3377	0.0141	1.3518	0.3583	0.0133	0.3716	0.0000	1,340.6043	1,340.6043	0.0512	0.0922	1,369.3585
Waste						0.0000	0.0000		0.0000	0.0000	20.1347	0.0000	20.1347	1.1899	0.0000	49.8828
Water						0.0000	0.0000		0.0000	0.0000	2.9765	34.1863	37.1628	0.3082	7.7300e-003	47.1711
Total	**1.9153**	**1.5423**	**6.0847**	**0.0171**	**1.3377**	**0.1158**	**1.4535**	**0.3583**	**0.1150**	**0.4733**	**33.2166**	**1,863.1996**	**1,896.4163**	**1.6203**	**0.1081**	**1,969.1273**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	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	Building Construction	Building Construction	1/13/2021	6/1/2023	5	622	
2	Paving	Paving	1/13/2021	3/23/2021	5	50	
3	Architectural Coating	Architectural Coating	1/13/2021	6/1/2021	5	100	

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

4	Site Preparation and Grading	Grading	6/1/2021	8/27/2021	5	64	
5	Trenching/utilities	Trenching	8/28/2021	1/12/2022	5	98	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 160

Acres of Paving: 0

Residential Indoor: 550,395; Residential Outdoor: 183,465; 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
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Off-Highway Trucks	1	2.00	402	0.38
Building Construction	Other Construction Equipment	1	8.00	800	0.42
Building Construction	Other Material Handling Equipment	1	8.00	250	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation and Grading	Excavators	0	8.00	158	0.38
Site Preparation and Grading	Graders	3	8.00	187	0.41
Site Preparation and Grading	Off-Highway Trucks	1	2.00	402	0.38
Site Preparation and Grading	Rollers	1	8.00	80	0.38
Site Preparation and Grading	Rubber Tired Dozers	1	8.00	247	0.40

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

Site Preparation and Grading	Scrapers	2	8.00	367	0.48
Site Preparation and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching/utilities	Excavators	1	8.00	158	0.38
Trenching/utilities	Off-Highway Trucks	1	4.00	402	0.38
Trenching/utilities	Off-Highway Trucks	1	2.00	402	0.38
Trenching/utilities	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Building Construction	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation and Grading	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/utilities	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.2 Building Construction - 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	tons/yr										MT/yr					
Off-Road	0.2249	2.3438	1.8346	4.2300e-003		0.0961	0.0961		0.0918	0.0918	0.0000	368.5353	368.5353	0.0802	0.0000	370.5413
Total	**0.2249**	**2.3438**	**1.8346**	**4.2300e-003**		**0.0961**	**0.0961**		**0.0918**	**0.0918**	**0.0000**	**368.5353**	**368.5353**	**0.0802**	**0.0000**	**370.5413**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.2 Building Construction - 2021

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	tons/yr										MT/yr					
Off-Road	0.1142	1.1990	2.0425	4.2300e-003		0.0329	0.0329		0.0306	0.0306	0.0000	368.5348	368.5348	0.0802	0.0000	370.5408
Total	**0.1142**	**1.1990**	**2.0425**	**4.2300e-003**		**0.0329**	**0.0329**		**0.0306**	**0.0306**	**0.0000**	**368.5348**	**368.5348**	**0.0802**	**0.0000**	**370.5408**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2072	2.0695	1.8487	4.3500e-003		0.0844	0.0844		0.0807	0.0807	0.0000	378.7550	378.7550	0.0820	0.0000	380.8037
Total	**0.2072**	**2.0695**	**1.8487**	**4.3500e-003**		**0.0844**	**0.0844**		**0.0807**	**0.0807**	**0.0000**	**378.7550**	**378.7550**	**0.0820**	**0.0000**	**380.8037**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1056	1.0410	2.0750	4.3500e-003		0.0278	0.0278		0.0259	0.0259	0.0000	378.7545	378.7545	0.0820	0.0000	380.8033
Total	**0.1056**	**1.0410**	**2.0750**	**4.3500e-003**		**0.0278**	**0.0278**		**0.0259**	**0.0259**	**0.0000**	**378.7545**	**378.7545**	**0.0820**	**0.0000**	**380.8033**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.2 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0806	0.7773	0.7675	1.8200e-003		0.0310	0.0310		0.0296	0.0296	0.0000	158.7964	158.7964	0.0341	0.0000	159.6500
Total	**0.0806**	**0.7773**	**0.7675**	**1.8200e-003**		**0.0310**	**0.0310**		**0.0296**	**0.0296**	**0.0000**	**158.7964**	**158.7964**	**0.0341**	**0.0000**	**159.6500**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.2 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0418	0.3898	0.8661	1.8200e-003		0.0101	0.0101		9.4300e-003	9.4300e-003	0.0000	158.7962	158.7962	0.0341	0.0000	159.6498
Total	**0.0418**	**0.3898**	**0.8661**	**1.8200e-003**		**0.0101**	**0.0101**		**9.4300e-003**	**9.4300e-003**	**0.0000**	**158.7962**	**158.7962**	**0.0341**	**0.0000**	**159.6498**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.3 Paving - 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	tons/yr										MT/yr					
Off-Road	0.0314	0.3230	0.3663	5.7000e-004		0.0169	0.0169		0.0156	0.0156	0.0000	50.0587	50.0587	0.0162	0.0000	50.4635
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0314**	**0.3230**	**0.3663**	**5.7000e-004**		**0.0169**	**0.0169**		**0.0156**	**0.0156**	**0.0000**	**50.0587**	**50.0587**	**0.0162**	**0.0000**	**50.4635**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.3 Paving - 2021

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	tons/yr										MT/yr					
Off-Road	7.0100e-003	0.0304	0.4324	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	50.0586	50.0586	0.0162	0.0000	50.4634
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.0100e-003**	**0.0304**	**0.4324**	**5.7000e-004**		**9.3000e-004**	**9.3000e-004**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**50.0586**	**50.0586**	**0.0162**	**0.0000**	**50.4634**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.4 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.8504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0763	0.0909	1.5000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	12.7663	12.7663	8.8000e-004	0.0000	12.7882
Total	**0.8613**	**0.0763**	**0.0909**	**1.5000e-004**		**4.7000e-003**	**4.7000e-003**		**4.7000e-003**	**4.7000e-003**	**0.0000**	**12.7663**	**12.7663**	**8.8000e-004**	**0.0000**	**12.7882**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.4 Architectural Coating - 2021

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	tons/yr										MT/yr					
Archit. Coating	0.8504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	6.4400e-003	0.0916	1.5000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	12.7663	12.7663	8.8000e-004	0.0000	12.7882
Total	**0.8519**	**6.4400e-003**	**0.0916**	**1.5000e-004**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**12.7663**	**12.7663**	**8.8000e-004**	**0.0000**	**12.7882**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.5 Site Preparation and 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	tons/yr										MT/yr					
Fugitive Dust					0.2776	0.0000	0.2776	0.1151	0.0000	0.1151	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1534	1.7692	0.9085	2.1700e-003		0.0706	0.0706		0.0649	0.0649	0.0000	190.5189	190.5189	0.0616	0.0000	192.0593
Total	**0.1534**	**1.7692**	**0.9085**	**2.1700e-003**	**0.2776**	**0.0706**	**0.3481**	**0.1151**	**0.0649**	**0.1800**	**0.0000**	**190.5189**	**190.5189**	**0.0616**	**0.0000**	**192.0593**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.5 Site Preparation and Grading - 2021

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	tons/yr										MT/yr					
Fugitive Dust					0.1028	0.0000	0.1028	0.0426	0.0000	0.0426	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0541	0.5102	0.9353	2.1700e-003		0.0163	0.0163		0.0152	0.0152	0.0000	190.5187	190.5187	0.0616	0.0000	192.0591
Total	**0.0541**	**0.5102**	**0.9353**	**2.1700e-003**	**0.1028**	**0.0163**	**0.1191**	**0.0426**	**0.0152**	**0.0579**	**0.0000**	**190.5187**	**190.5187**	**0.0616**	**0.0000**	**192.0591**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.6 Trenching/utilities - 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	tons/yr										MT/yr					
Off-Road	0.0392	0.3599	0.3706	8.2000e-004		0.0163	0.0163		0.0150	0.0150	0.0000	71.8484	71.8484	0.0232	0.0000	72.4293
Total	**0.0392**	**0.3599**	**0.3706**	**8.2000e-004**		**0.0163**	**0.0163**		**0.0150**	**0.0150**	**0.0000**	**71.8484**	**71.8484**	**0.0232**	**0.0000**	**72.4293**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.6 Trenching/utilities - 2021

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	tons/yr										MT/yr					
Off-Road	0.0250	0.1974	0.4034	8.2000e-004		7.1200e-003	7.1200e-003		6.6000e-003	6.6000e-003	0.0000	71.8483	71.8483	0.0232	0.0000	72.4292
Total	**0.0250**	**0.1974**	**0.4034**	**8.2000e-004**		**7.1200e-003**	**7.1200e-003**		**6.6000e-003**	**6.6000e-003**	**0.0000**	**71.8483**	**71.8483**	**0.0232**	**0.0000**	**72.4292**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

3.6 Trenching/utilities - 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	tons/yr										MT/yr					
Off-Road	3.0500e-003	0.0259	0.0321	7.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	6.3884	6.3884	2.0700e-003	0.0000	6.4400
Total	**3.0500e-003**	**0.0259**	**0.0321**	**7.0000e-005**		**1.1400e-003**	**1.1400e-003**		**1.0500e-003**	**1.0500e-003**	**0.0000**	**6.3884**	**6.3884**	**2.0700e-003**	**0.0000**	**6.4400**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

3.6 Trenching/utilities - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9900e-003	0.0138	0.0351	7.0000e-005		4.9000e-004	4.9000e-004		4.6000e-004	4.6000e-004	0.0000	6.3884	6.3884	2.0700e-003	0.0000	6.4400
Total	**1.9900e-003**	**0.0138**	**0.0351**	**7.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**6.3884**	**6.3884**	**2.0700e-003**	**0.0000**	**6.4400**

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7265	1.2948	4.0436	0.0141	1.3377	0.0141	1.3518	0.3583	0.0133	0.3716	0.0000	1,340.6043	1,340.6043	0.0512	0.0922	1,369.3585
Unmitigated	0.7265	1.2948	4.0436	0.0141	1.3377	0.0141	1.3518	0.3583	0.0133	0.3716	0.0000	1,340.6043	1,340.6043	0.0512	0.0922	1,369.3585

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,359.36	1,359.36	1359.36	3,505,832	3,505,832
Total	1,359.36	1,359.36	1,359.36	3,505,832	3,505,832

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Single Family Housing	7.98	7.98	7.98	40.00	20.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.532351	0.053415	0.168457	0.124686	0.021544	0.005961	0.018186	0.067156	0.000867	0.001081	0.004327	0.000964	0.001005

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	227.8909	227.8909	0.0165	3.4100e-003	229.3185
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	227.8909	227.8909	0.0165	3.4100e-003	229.3185
NaturalGas Mitigated	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	225.6739	225.6739	4.3300e-003	4.1400e-003	227.0150
NaturalGas Unmitigated	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	225.6739	225.6739	4.3300e-003	4.1400e-003	227.0150

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	4.22897e+006	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	225.6739	225.6739	4.3300e-003	4.1400e-003	227.0150
Total		**0.0228**	**0.1949**	**0.0829**	**1.2400e-003**		**0.0158**	**0.0158**		**0.0158**	**0.0158**	**0.0000**	**225.6739**	**225.6739**	**4.3300e-003**	**4.1400e-003**	**227.0150**

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	tons/yr										MT/yr					
Single Family Housing	4.22897e+006	0.0228	0.1949	0.0829	1.2400e-003		0.0158	0.0158		0.0158	0.0158	0.0000	225.6739	225.6739	4.3300e-003	4.1400e-003	227.0150
Total		**0.0228**	**0.1949**	**0.0829**	**1.2400e-003**		**0.0158**	**0.0158**		**0.0158**	**0.0158**	**0.0000**	**225.6739**	**225.6739**	**4.3300e-003**	**4.1400e-003**	**227.0150**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Annual

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.25243e+006	227.8909	0.0165	3.4100e-003	229.3185
Total		**227.8909**	**0.0165**	**3.4100e-003**	**229.3185**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.25243e+006	227.8909	0.0165	3.4100e-003	229.3185
Total		**227.8909**	**0.0165**	**3.4100e-003**	**229.3185**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1660	0.0526	1.9582	1.7700e-003		0.0860	0.0860		0.0860	0.0860	10.1054	34.8443	44.9497	0.0502	5.9000e-004	46.3815
Unmitigated	1.1660	0.0526	1.9582	1.7700e-003		0.0860	0.0860		0.0860	0.0860	10.1054	34.8443	44.9497	0.0502	5.9000e-004	46.3815

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	tons/yr										MT/yr					
Architectural Coating	0.0850					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0542	0.0355	0.4745	1.6900e-003		0.0777	0.0777		0.0777	0.0777	10.1054	32.4185	42.5240	0.0479	5.9000e-004	43.8976
Landscaping	0.0445	0.0171	1.4836	8.0000e-005		8.2300e-003	8.2300e-003		8.2300e-003	8.2300e-003	0.0000	2.4258	2.4258	2.3200e-003	0.0000	2.4838
Total	**1.1660**	**0.0526**	**1.9582**	**1.7700e-003**		**0.0860**	**0.0860**		**0.0860**	**0.0860**	**10.1054**	**34.8443**	**44.9497**	**0.0502**	**5.9000e-004**	**46.3815**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0850					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0542	0.0355	0.4745	1.6900e-003		0.0777	0.0777		0.0777	0.0777	10.1054	32.4185	42.5240	0.0479	5.9000e-004	43.8976
Landscaping	0.0445	0.0171	1.4836	8.0000e-005		8.2300e-003	8.2300e-003		8.2300e-003	8.2300e-003	0.0000	2.4258	2.4258	2.3200e-003	0.0000	2.4838
Total	**1.1660**	**0.0526**	**1.9582**	**1.7700e-003**		**0.0860**	**0.0860**		**0.0860**	**0.0860**	**10.1054**	**34.8443**	**44.9497**	**0.0502**	**5.9000e-004**	**46.3815**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	37.1628	0.3082	7.7300e-003	47.1711
Unmitigated	37.1628	0.3082	7.7300e-003	47.1711

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	9.38218 / 5.91485	37.1628	0.3082	7.7300e-003	47.1711
Total		**37.1628**	**0.3082**	**7.7300e-003**	**47.1711**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	9.38218 / 5.91485	37.1628	0.3082	7.7300e-003	47.1711
Total		**37.1628**	**0.3082**	**7.7300e-003**	**47.1711**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.1347	1.1899	0.0000	49.8828
Unmitigated	20.1347	1.1899	0.0000	49.8828

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	99.19	20.1347	1.1899	0.0000	49.8828
Total		**20.1347**	**1.1899**	**0.0000**	**49.8828**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	99.19	20.1347	1.1899	0.0000	49.8828
Total		**20.1347**	**1.1899**	**0.0000**	**49.8828**

9.0 Operational Offroad

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Hemet 30 Unmitigated and Tier 4 equipment

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	144.00	Dwelling Unit	29.00	271,800.00	432

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	401.15	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Trips and VMT - Modeled outside of CalEEMod to incorporate EMFAC2017

Grading - See Assumptions

Vehicle Trips - See Assumptions

Woodstoves - See Assumptions

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

Energy Use - See Assumptions

Solid Waste - See Assumptions

Construction Off-road Equipment Mitigation - See Assumptions

Water And Wastewater -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	440.00	622.00
tblConstructionPhase	NumDays	35.00	50.00
tblConstructionPhase	NumDays	35.00	100.00
tblConstructionPhase	NumDays	45.00	64.00
tblEnergyUse	T24E	199.85	932.64
tblEnergyUse	T24NG	22,256.94	23,337.84
tblFireplaces	NumberGas	122.40	135.00
tblFireplaces	NumberNoFireplace	14.40	16.00
tblFireplaces	NumberWood	7.20	0.00
tblFleetMix	HHD	0.02	0.07
tblFleetMix	LDA	0.54	0.53
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.03	0.02
tblFleetMix	LHD2	7.0740e-003	5.9610e-003
tblFleetMix	MCY	0.02	4.3270e-003
tblFleetMix	MDV	0.14	0.12
tblFleetMix	MH	4.9320e-003	1.0050e-003
tblFleetMix	MHD	0.01	0.02
tblFleetMix	OBUS	6.1000e-004	8.6700e-004
tblFleetMix	SBUS	1.0940e-003	9.6400e-004
tblFleetMix	UBUS	3.0400e-004	1.0810e-003
tblGrading	AcresOfGrading	256.00	160.00
tblLandUse	LandUseSquareFeet	259,200.00	271,800.00
tblLandUse	LotAcreage	46.75	29.00
tblLandUse	Population	412.00	432.00
tblOffRoadEquipment	HorsePower	172.00	800.00

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblOffRoadEquipment	HorsePower	168.00	250.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.029
tblProjectCharacteristics	CO2IntensityFactor	390.98	401.15
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.006
tblSolidWaste	SolidWasteGenerationRate	177.12	99.19
tblTripsAndVMT	VendorTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	52.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleEF	HHD	4.0000e-005	3.9000e-005
tblVehicleEF	HHD	1.5000e-005	1.8000e-004
tblVehicleEF	HHD	4.0000e-005	3.9000e-005
tblVehicleEF	HHD	1.5000e-005	1.8000e-004
tblVehicleEF	HHD	1.5000e-005	1.8200e-004
tblVehicleEF	HHD	1.5000e-005	1.8200e-004
tblVehicleEF	HHD	1.6000e-005	1.9200e-004
tblVehicleEF	HHD	1.6000e-005	1.9200e-004
tblVehicleEF	LDA	0.51	0.52
tblVehicleEF	LDA	1.86	1.87
tblVehicleEF	LDA	234.14	241.67

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

tblVehicleEF	LDA	48.28	49.77
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003
tblVehicleEF	LDA	0.05	0.25
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	5.5010e-003	5.5070e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	0.05	0.25
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	7.9980e-003	8.0210e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.17	0.17
tblVehicleEF	LDA	0.63	0.63
tblVehicleEF	LDA	1.64	1.65
tblVehicleEF	LDA	254.48	262.67
tblVehicleEF	LDA	47.87	49.35
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.14	0.14
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003

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

tblVehicleEF	LDA	0.10	0.49
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.08	0.37
tblVehicleEF	LDA	6.2070e-003	6.2140e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.14	0.14
tblVehicleEF	LDA	0.10	0.49
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.08	0.37
tblVehicleEF	LDA	9.0270e-003	9.0540e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	0.48	0.48
tblVehicleEF	LDA	1.89	1.90
tblVehicleEF	LDA	228.58	235.93
tblVehicleEF	LDA	48.35	49.84
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.17
tblVehicleEF	LDA	5.3160e-003	5.3220e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	0.04	0.20

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

tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.17
tblVehicleEF	LDA	7.7270e-003	7.7490e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.18	0.18
tblVehicleEF	LDT1	1.03	1.04
tblVehicleEF	LDT1	2.06	2.08
tblVehicleEF	LDT1	281.46	290.50
tblVehicleEF	LDT1	58.94	60.77
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.22	0.22
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003
tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.16	0.72
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.11	0.51
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.28	0.28
tblVehicleEF	LDT1	0.16	0.72
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.11	0.51
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.31	0.31
tblVehicleEF	LDT1	1.26	1.27
tblVehicleEF	LDT1	1.83	1.84

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblVehicleEF	LDT1	303.12	312.86
tblVehicleEF	LDT1	58.46	60.26
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003
tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.30	1.40
tblVehicleEF	LDT1	0.23	0.24
tblVehicleEF	LDT1	0.21	0.96
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.08	0.64
tblVehicleEF	LDT1	0.25	0.25
tblVehicleEF	LDT1	0.30	1.40
tblVehicleEF	LDT1	0.23	0.24
tblVehicleEF	LDT1	0.21	0.96
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.08	0.64
tblVehicleEF	LDT1	0.27	0.27
tblVehicleEF	LDT1	0.97	0.97
tblVehicleEF	LDT1	2.11	2.13
tblVehicleEF	LDT1	274.85	283.68
tblVehicleEF	LDT1	59.05	60.87
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.22	0.22
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.13	0.60
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	0.09	0.43
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.09	0.73
tblVehicleEF	LDT1	0.29	0.29
tblVehicleEF	LDT1	0.13	0.60
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	0.09	0.43
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.09	0.73
tblVehicleEF	LDT1	0.32	0.32
tblVehicleEF	LDT2	0.73	0.73
tblVehicleEF	LDT2	2.37	2.38
tblVehicleEF	LDT2	292.27	299.82
tblVehicleEF	LDT2	61.49	63.39
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.09	0.44
tblVehicleEF	LDT2	0.11	0.11
tblVehicleEF	LDT2	0.08	0.36
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.24	0.24

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblVehicleEF	LDT2	0.09	0.44
tblVehicleEF	LDT2	0.11	0.11
tblVehicleEF	LDT2	0.08	0.36
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.26	0.26
tblVehicleEF	LDT2	0.90	0.90
tblVehicleEF	LDT2	2.10	2.11
tblVehicleEF	LDT2	312.64	320.73
tblVehicleEF	LDT2	60.97	62.85
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.18	0.85
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.14	0.67
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	0.18	0.85
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.14	0.67
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.23	0.23
tblVehicleEF	LDT2	0.68	0.68

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblVehicleEF	LDT2	2.43	2.44
tblVehicleEF	LDT2	286.05	293.44
tblVehicleEF	LDT2	61.61	63.51
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.22
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.07	0.34
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.07	0.31
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.24	0.24
tblVehicleEF	LDT2	0.07	0.34
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.07	0.31
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.27	0.27
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	604.48	617.86
tblVehicleEF	LHD1	1.05	0.97
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	2.5860e-003	0.04
tblVehicleEF	LHD1	1.3190e-003	0.02
tblVehicleEF	LHD1	0.18	0.42

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

tblVehicleEF	LHD1	2.5860e-003	0.04
tblVehicleEF	LHD1	1.3190e-003	0.02
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.18	0.42
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	604.49	617.87
tblVehicleEF	LHD1	0.99	0.91
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	4.8140e-003	0.07
tblVehicleEF	LHD1	2.4810e-003	0.04
tblVehicleEF	LHD1	0.18	0.43
tblVehicleEF	LHD1	4.8140e-003	0.07
tblVehicleEF	LHD1	2.4810e-003	0.04
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.18	0.43
tblVehicleEF	LHD1	0.48	0.49
tblVehicleEF	LHD1	604.48	617.86
tblVehicleEF	LHD1	1.04	0.96
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	2.2460e-003	0.03
tblVehicleEF	LHD1	1.1970e-003	0.02
tblVehicleEF	LHD1	0.19	0.45
tblVehicleEF	LHD1	2.2460e-003	0.03
tblVehicleEF	LHD1	1.1970e-003	0.02
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.19	0.45
tblVehicleEF	LHD2	0.37	0.37

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

tblVehicleEF	LHD2	604.15	619.03
tblVehicleEF	LHD2	1.17	1.11
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	1.3880e-003	0.02
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.08	0.19
tblVehicleEF	LHD2	1.3880e-003	0.02
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.08	0.19
tblVehicleEF	LHD2	0.38	0.37
tblVehicleEF	LHD2	604.15	619.03
tblVehicleEF	LHD2	1.11	1.05
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	2.6120e-003	0.04
tblVehicleEF	LHD2	1.3770e-003	0.02
tblVehicleEF	LHD2	0.08	0.20
tblVehicleEF	LHD2	2.6120e-003	0.04
tblVehicleEF	LHD2	1.3770e-003	0.02
tblVehicleEF	LHD2	0.06	0.05
tblVehicleEF	LHD2	0.08	0.20
tblVehicleEF	LHD2	0.37	0.37
tblVehicleEF	LHD2	604.15	619.02
tblVehicleEF	LHD2	1.16	1.10
tblVehicleEF	LHD2	0.01	0.01

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	1.0560e-003	0.02
tblVehicleEF	LHD2	6.1700e-004	9.1860e-003
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	1.0560e-003	0.02
tblVehicleEF	LHD2	6.1700e-004	9.1860e-003
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	MCY	1.68	3.36
tblVehicleEF	MCY	0.90	1.81
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	1.68	3.36
tblVehicleEF	MCY	0.90	1.81
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	3.32	6.64
tblVehicleEF	MCY	2.05	4.09
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	3.32	6.64
tblVehicleEF	MCY	2.05	4.09
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	1.59	3.18
tblVehicleEF	MCY	0.72	1.45
tblVehicleEF	MCY	0.54	1.89
tblVehicleEF	MCY	1.59	3.18
tblVehicleEF	MCY	0.72	1.45
tblVehicleEF	MCY	0.54	1.89
tblVehicleEF	MDV	0.81	0.81
tblVehicleEF	MDV	2.65	2.67

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblVehicleEF	MDV	367.15	376.98
tblVehicleEF	MDV	76.81	79.18
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.12	0.54
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.10	0.47
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.12	0.54
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.10	0.47
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.33	0.33
tblVehicleEF	MDV	0.99	0.99
tblVehicleEF	MDV	2.34	2.35
tblVehicleEF	MDV	388.58	399.03
tblVehicleEF	MDV	76.18	78.54
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.26	0.26
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.23	1.05

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

tblVehicleEF	MDV	0.17	0.17
tblVehicleEF	MDV	0.19	0.86
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	0.23	1.05
tblVehicleEF	MDV	0.17	0.17
tblVehicleEF	MDV	0.19	0.86
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.29	0.29
tblVehicleEF	MDV	0.75	0.76
tblVehicleEF	MDV	2.71	2.73
tblVehicleEF	MDV	360.65	370.29
tblVehicleEF	MDV	76.94	79.31
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.09	0.42
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.09	0.40
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.07	0.51
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.09	0.42
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.09	0.40

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.07	0.51
tblVehicleEF	MDV	0.34	0.34
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.02	1.18
tblVehicleEF	MH	0.02	1.18
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.28
tblVehicleEF	OBUS	0.08	0.28
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	5.7000e-005	5.6000e-005
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	UBUS	3.36	3.36

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

tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	26.11	26.10
tblVehicleEF	UBUS	1.46	1.46
tblVehicleEF	UBUS	1,591.71	1,591.16
tblVehicleEF	UBUS	17.32	17.29
tblVehicleEF	UBUS	0.31	0.31
tblVehicleEF	UBUS	0.17	0.17
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	2.6660e-003	2.6650e-003
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	5.4780e-003	5.4790e-003
tblVehicleEF	UBUS	2.5330e-003	2.5320e-003
tblVehicleEF	UBUS	1.3310e-003	1.3280e-003
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	8.1200e-004	8.1100e-004
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	1.7510e-003	0.06
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	4.6610e-003	4.6590e-003
tblVehicleEF	UBUS	1.3310e-003	1.3280e-003
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	8.1200e-004	8.1100e-004
tblVehicleEF	UBUS	3.43	3.43
tblVehicleEF	UBUS	1.7510e-003	0.06
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	1.6940e-003	0.06
tblVehicleEF	UBUS	1.6940e-003	0.06
tblVehicleEF	UBUS	2.0810e-003	0.07

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

tblVehicleEF	UBUS	2.0810e-003	0.07
tblVehicleTrips	HO_TL	8.70	7.98
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TL	5.90	7.98
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TL	14.70	7.98
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	9.54	9.44
tblVehicleTrips	SU_TR	8.55	9.44
tblWoodstoves	NumberCatalytic	7.20	7.55
tblWoodstoves	NumberNoncatalytic	7.20	7.55

2.0 Emissions Summary

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	23.7963	75.3414	44.7105	0.1042	8.6733	3.0596	11.7329	3.5965	2.8492	6.4457	0.0000	10,055.6833	10,055.6833	2.8411	0.0000	10,126.7103
2022	2.3576	22.3823	22.2330	0.0517	0.0000	0.9343	0.9343	0.0000	0.8831	0.8831	0.0000	4,972.0768	4,972.0768	1.2643	0.0000	5,003.6835
2023	1.4794	14.2620	14.0826	0.0335	0.0000	0.5684	0.5684	0.0000	0.5434	0.5434	0.0000	3,211.7997	3,211.7997	0.6906	0.0000	3,229.0640
Maximum	**23.7963**	**75.3414**	**44.7105**	**0.1042**	**8.6733**	**3.0596**	**11.7329**	**3.5965**	**2.8492**	**6.4457**	**0.0000**	**10,055.6833**	**10,055.6833**	**2.8411**	**0.0000**	**10,126.7103**

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	19.6296	25.5516	47.2067	0.1042	3.2135	0.7734	3.9869	1.3325	0.7211	2.0535	0.0000	10,055.6832	10,055.6832	2.8411	0.0000	10,126.7103
2022	1.3097	11.4578	24.7404	0.0517	0.0000	0.3365	0.3365	0.0000	0.3132	0.3132	0.0000	4,972.0768	4,972.0768	1.2643	0.0000	5,003.6835
2023	0.7672	7.1523	15.8908	0.0335	0.0000	0.1853	0.1853	0.0000	0.1730	0.1730	0.0000	3,211.7997	3,211.7997	0.6906	0.0000	3,229.0640
Maximum	**19.6296**	**25.5516**	**47.2067**	**0.1042**	**3.2135**	**0.7734**	**3.9869**	**1.3325**	**0.7211**	**2.0535**	**0.0000**	**10,055.6832**	**10,055.6832**	**2.8411**	**0.0000**	**10,126.7103**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**21.45**	**60.56**	**-8.41**	**0.00**	**62.95**	**71.61**	**65.93**	**62.95**	**71.76**	**67.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845	891.1474	2,880.2151	3,771.3625	4.2412	0.0524	3,893.0115
Energy	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
Mobile	5.5928	6.7601	24.2809	0.0810	7.4721	0.0775	7.5495	1.9985	0.0731	2.0716		8,520.5515	8,520.5515	0.3014	0.5523	8,692.6573
Total	**16.2592**	**10.8078**	**74.5675**	**0.2235**	**7.4721**	**6.4483**	**13.9203**	**1.9985**	**6.4439**	**8.4424**	**891.1474**	**12,763.8508**	**13,654.9982**	**4.5688**	**0.6297**	**13,956.8531**

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	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845	891.1474	2,880.2151	3,771.3625	4.2412	0.0524	3,893.0115
Energy	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
Mobile	5.5928	6.7601	24.2809	0.0810	7.4721	0.0775	7.5495	1.9985	0.0731	2.0716		8,520.5515	8,520.5515	0.3014	0.5523	8,692.6573
Total	**16.2592**	**10.8078**	**74.5675**	**0.2235**	**7.4721**	**6.4483**	**13.9203**	**1.9985**	**6.4439**	**8.4424**	**891.1474**	**12,763.8508**	**13,654.9982**	**4.5688**	**0.6297**	**13,956.8531**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	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	Building Construction	Building Construction	1/13/2021	6/1/2023	5	622	
2	Paving	Paving	1/13/2021	3/23/2021	5	50	
3	Architectural Coating	Architectural Coating	1/13/2021	6/1/2021	5	100	
4	Site Preparation and Grading	Grading	6/1/2021	8/27/2021	5	64	
5	Trenching/utilities	Trenching	8/28/2021	1/12/2022	5	98	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 160

Acres of Paving: 0

Residential Indoor: 550,395; Residential Outdoor: 183,465; 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
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Off-Highway Trucks	1	2.00	402	0.38
Building Construction	Other Construction Equipment	1	8.00	800	0.42

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

Building Construction	Other Material Handling Equipment	1	8.00	250	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation and Grading	Excavators	0	8.00	158	0.38
Site Preparation and Grading	Graders	3	8.00	187	0.41
Site Preparation and Grading	Off-Highway Trucks	1	2.00	402	0.38
Site Preparation and Grading	Rollers	1	8.00	80	0.38
Site Preparation and Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation and Grading	Scrapers	2	8.00	367	0.48
Site Preparation and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching/utilities	Excavators	1	8.00	158	0.38
Trenching/utilities	Off-Highway Trucks	1	4.00	402	0.38
Trenching/utilities	Off-Highway Trucks	1	2.00	402	0.38
Trenching/utilities	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Building Construction	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation and Grading	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/utilities	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 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					
Off-Road	1.7777	18.5282	14.5025	0.0335		0.7595	0.7595		0.7256	0.7256		3,211.3879	3,211.3879	0.6992		3,228.8682
Total	**1.7777**	**18.5282**	**14.5025**	**0.0335**		**0.7595**	**0.7595**		**0.7256**	**0.7256**		**3,211.3879**	**3,211.3879**	**0.6992**		**3,228.8682**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.2 Building Construction - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9029	9.4779	16.1460	0.0335		0.2602	0.2602		0.2419	0.2419	0.0000	3,211.3879	3,211.3879	0.6992		3,228.8682
Total	**0.9029**	**9.4779**	**16.1460**	**0.0335**		**0.2602**	**0.2602**		**0.2419**	**0.2419**	**0.0000**	**3,211.3879**	**3,211.3879**	**0.6992**		**3,228.8682**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.2 Building Construction - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5941	15.9194	14.2209	0.0335		0.6488	0.6488		0.6204	0.6204		3,211.5836	3,211.5836	0.6949		3,228.9558
Total	**1.5941**	**15.9194**	**14.2209**	**0.0335**		**0.6488**	**0.6488**		**0.6204**	**0.6204**		**3,211.5836**	**3,211.5836**	**0.6949**		**3,228.9558**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.2 Building Construction - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8119	8.0076	15.9613	0.0335		0.2135	0.2135		0.1990	0.1990	0.0000	3,211.5836	3,211.5836	0.6949		3,228.9558
Total	**0.8119**	**8.0076**	**15.9613**	**0.0335**		**0.2135**	**0.2135**		**0.1990**	**0.1990**	**0.0000**	**3,211.5836**	**3,211.5836**	**0.6949**		**3,228.9558**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.2 Building Construction - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4794	14.2620	14.0826	0.0335		0.5684	0.5684		0.5434	0.5434		3,211.7997	3,211.7997	0.6906		3,229.0640
Total	**1.4794**	**14.2620**	**14.0826**	**0.0335**		**0.5684**	**0.5684**		**0.5434**	**0.5434**		**3,211.7997**	**3,211.7997**	**0.6906**		**3,229.0640**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.2 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7672	7.1523	15.8908	0.0335		0.1853	0.1853		0.1730	0.1730	0.0000	3,211.7997	3,211.7997	0.6906		3,229.0640
Total	**0.7672**	**7.1523**	**15.8908**	**0.0335**		**0.1853**	**0.1853**		**0.1730**	**0.1730**	**0.0000**	**3,211.7997**	**3,211.7997**	**0.6906**		**3,229.0640**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.2 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Paving - 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					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.3 Paving - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2805**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.3 Paving - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Architectural Coating - 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					
Archit. Coating	17.0072					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**17.2261**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.4 Architectural Coating - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	17.0072					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**17.0369**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

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

3.4 Architectural Coating - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Site Preparation and 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7924	55.2865	28.3905	0.0678		2.2060	2.2060		2.0295	2.0295		6,562.8473	6,562.8473	2.1226		6,615.9112
Total	**4.7924**	**55.2865**	**28.3905**	**0.0678**	**8.6733**	**2.2060**	**10.8793**	**3.5965**	**2.0295**	**5.6260**		**6,562.8473**	**6,562.8473**	**2.1226**		**6,615.9112**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.5 Site Preparation and 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					3.2135	0.0000	3.2135	1.3325	0.0000	1.3325			0.0000			0.0000
Off-Road	1.6898	15.9449	29.2282	0.0678		0.5092	0.5092		0.4752	0.4752	0.0000	6,562.8473	6,562.8473	2.1226		6,615.9112
Total	**1.6898**	**15.9449**	**29.2282**	**0.0678**	**3.2135**	**0.5092**	**3.7227**	**1.3325**	**0.4752**	**1.8077**	**0.0000**	**6,562.8473**	**6,562.8473**	**2.1226**		**6,615.9112**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.5 Site Preparation and 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Trenching/utilities - 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					
Off-Road	0.8709	7.9967	8.2353	0.0182		0.3610	0.3610		0.3321	0.3321		1,759.9843	1,759.9843	0.5692		1,774.2147
Total	**0.8709**	**7.9967**	**8.2353**	**0.0182**		**0.3610**	**0.3610**		**0.3321**	**0.3321**		**1,759.9843**	**1,759.9843**	**0.5692**		**1,774.2147**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.6 Trenching/utilities - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5559	4.3874	8.9634	0.0182		0.1583	0.1583		0.1468	0.1468	0.0000	1,759.9843	1,759.9843	0.5692		1,774.2147
Total	**0.5559**	**4.3874**	**8.9634**	**0.0182**		**0.1583**	**0.1583**		**0.1468**	**0.1468**	**0.0000**	**1,759.9843**	**1,759.9843**	**0.5692**		**1,774.2147**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.6 Trenching/utilities - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Trenching/utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7634	6.4629	8.0121	0.0182		0.2855	0.2855		0.2627	0.2627		1,760.4932	1,760.4932	0.5694		1,774.7277
Total	**0.7634**	**6.4629**	**8.0121**	**0.0182**		**0.2855**	**0.2855**		**0.2627**	**0.2627**		**1,760.4932**	**1,760.4932**	**0.5694**		**1,774.7277**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.6 Trenching/utilities - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4978	3.4502	8.7791	0.0182		0.1230	0.1230		0.1142	0.1142	0.0000	1,760.4932	1,760.4932	0.5694		1,774.7277
Total	**0.4978**	**3.4502**	**8.7791**	**0.0182**		**0.1230**	**0.1230**		**0.1142**	**0.1142**	**0.0000**	**1,760.4932**	**1,760.4932**	**0.5694**		**1,774.7277**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

3.6 Trenching/utilities - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.5928	6.7601	24.2809	0.0810	7.4721	0.0775	7.5495	1.9985	0.0731	2.0716		8,520.5515	8,520.5515	0.3014	0.5523	8,692.6573
Unmitigated	5.5928	6.7601	24.2809	0.0810	7.4721	0.0775	7.5495	1.9985	0.0731	2.0716		8,520.5515	8,520.5515	0.3014	0.5523	8,692.6573

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,359.36	1,359.36	1359.36	3,505,832	3,505,832
Total	1,359.36	1,359.36	1,359.36	3,505,832	3,505,832

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Single Family Housing	7.98	7.98	7.98	40.00	20.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.532351	0.053415	0.168457	0.124686	0.021544	0.005961	0.018186	0.067156	0.000867	0.001081	0.004327	0.000964	0.001005

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

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	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
NaturalGas Unmitigated	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844

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					
Single Family Housing	11586.2	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
Total		**0.1250**	**1.0678**	**0.4544**	**6.8200e-003**		**0.0863**	**0.0863**		**0.0863**	**0.0863**		**1,363.0843**	**1,363.0843**	**0.0261**	**0.0250**	**1,371.1844**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	11.5862	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
Total		**0.1250**	**1.0678**	**0.4544**	**6.8200e-003**		**0.0863**	**0.0863**		**0.0863**	**0.0863**		**1,363.0843**	**1,363.0843**	**0.0261**	**0.0250**	**1,371.1844**

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	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845	891.1474	2,880.2151	3,771.3625	4.2412	0.0524	3,893.0115
Unmitigated	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845	891.1474	2,880.2151	3,771.3625	4.2412	0.0524	3,893.0115

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

6.2 Area by SubCategory

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	0.4660					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.3816					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.3374	2.8432	37.9633	0.1351		6.2186	6.2186		6.2186	6.2186	891.1474	2,858.8235	3,749.9709	4.2207	0.0524	3,871.1078
Landscaping	0.3564	0.1367	11.8689	6.3000e-004		0.0659	0.0659		0.0659	0.0659		21.3915	21.3915	0.0205		21.9037
Total	**10.5414**	**2.9799**	**49.8323**	**0.1357**		**6.2845**	**6.2845**		**6.2845**	**6.2845**	**891.1474**	**2,880.2151**	**3,771.3625**	**4.2412**	**0.0524**	**3,893.0115**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4660					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.3816					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.3374	2.8432	37.9633	0.1351		6.2186	6.2186		6.2186	6.2186	891.1474	2,858.8235	3,749.9709	4.2207	0.0524	3,871.1078
Landscaping	0.3564	0.1367	11.8689	6.3000e-004		0.0659	0.0659		0.0659	0.0659		21.3915	21.3915	0.0205		21.9037
Total	**10.5414**	**2.9799**	**49.8323**	**0.1357**		**6.2845**	**6.2845**		**6.2845**	**6.2845**	**891.1474**	**2,880.2151**	**3,771.3625**	**4.2412**	**0.0524**	**3,893.0115**

7.0 Water Detail

7.1 Mitigation Measures Water

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Summer

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Hemet 30 Unmitigated and Tier 4 equipment

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	144.00	Dwelling Unit	29.00	271,800.00	432

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	401.15	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Trips and VMT - Modeled outside of CalEEMod to incorporate EMFAC2017

Grading - See Assumptions

Vehicle Trips - See Assumptions

Woodstoves - See Assumptions

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

Energy Use - See Assumptions

Solid Waste - See Assumptions

Construction Off-road Equipment Mitigation - See Assumptions

Water And Wastewater -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	440.00	622.00
tblConstructionPhase	NumDays	35.00	50.00
tblConstructionPhase	NumDays	35.00	100.00
tblConstructionPhase	NumDays	45.00	64.00
tblEnergyUse	T24E	199.85	932.64
tblEnergyUse	T24NG	22,256.94	23,337.84
tblFireplaces	NumberGas	122.40	135.00
tblFireplaces	NumberNoFireplace	14.40	16.00
tblFireplaces	NumberWood	7.20	0.00
tblFleetMix	HHD	0.02	0.07
tblFleetMix	LDA	0.54	0.53
tblFleetMix	LDT1	0.06	0.05
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.03	0.02
tblFleetMix	LHD2	7.0740e-003	5.9610e-003
tblFleetMix	MCY	0.02	4.3270e-003
tblFleetMix	MDV	0.14	0.12
tblFleetMix	MH	4.9320e-003	1.0050e-003
tblFleetMix	MHD	0.01	0.02
tblFleetMix	OBUS	6.1000e-004	8.6700e-004
tblFleetMix	SBUS	1.0940e-003	9.6400e-004
tblFleetMix	UBUS	3.0400e-004	1.0810e-003
tblGrading	AcresOfGrading	256.00	160.00
tblLandUse	LandUseSquareFeet	259,200.00	271,800.00
tblLandUse	LotAcreage	46.75	29.00
tblLandUse	Population	412.00	432.00
tblOffRoadEquipment	HorsePower	172.00	800.00

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblOffRoadEquipment	HorsePower	168.00	250.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.029
tblProjectCharacteristics	CO2IntensityFactor	390.98	401.15
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.006
tblSolidWaste	SolidWasteGenerationRate	177.12	99.19
tblTripsAndVMT	VendorTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	52.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleEF	HHD	4.0000e-005	3.9000e-005
tblVehicleEF	HHD	1.5000e-005	1.8000e-004
tblVehicleEF	HHD	4.0000e-005	3.9000e-005
tblVehicleEF	HHD	1.5000e-005	1.8000e-004
tblVehicleEF	HHD	1.5000e-005	1.8200e-004
tblVehicleEF	HHD	1.5000e-005	1.8200e-004
tblVehicleEF	HHD	1.6000e-005	1.9200e-004
tblVehicleEF	HHD	1.6000e-005	1.9200e-004
tblVehicleEF	LDA	0.51	0.52
tblVehicleEF	LDA	1.86	1.87
tblVehicleEF	LDA	234.14	241.67

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

tblVehicleEF	LDA	48.28	49.77
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003
tblVehicleEF	LDA	0.05	0.25
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	5.5010e-003	5.5070e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	0.05	0.25
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	7.9980e-003	8.0210e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.17	0.17
tblVehicleEF	LDA	0.63	0.63
tblVehicleEF	LDA	1.64	1.65
tblVehicleEF	LDA	254.48	262.67
tblVehicleEF	LDA	47.87	49.35
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.14	0.14
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003

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

tblVehicleEF	LDA	0.10	0.49
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.08	0.37
tblVehicleEF	LDA	6.2070e-003	6.2140e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.14	0.14
tblVehicleEF	LDA	0.10	0.49
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.08	0.37
tblVehicleEF	LDA	9.0270e-003	9.0540e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	0.48	0.48
tblVehicleEF	LDA	1.89	1.90
tblVehicleEF	LDA	228.58	235.93
tblVehicleEF	LDA	48.35	49.84
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.15	0.15
tblVehicleEF	LDA	1.1970e-003	1.2060e-003
tblVehicleEF	LDA	1.6220e-003	1.6340e-003
tblVehicleEF	LDA	1.1020e-003	1.1110e-003
tblVehicleEF	LDA	1.4920e-003	1.5030e-003
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.17
tblVehicleEF	LDA	5.3160e-003	5.3220e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.16	0.16
tblVehicleEF	LDA	0.04	0.20

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

tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.17
tblVehicleEF	LDA	7.7270e-003	7.7490e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.18	0.18
tblVehicleEF	LDT1	1.03	1.04
tblVehicleEF	LDT1	2.06	2.08
tblVehicleEF	LDT1	281.46	290.50
tblVehicleEF	LDT1	58.94	60.77
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.22	0.22
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003
tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.16	0.72
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.11	0.51
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.28	0.28
tblVehicleEF	LDT1	0.16	0.72
tblVehicleEF	LDT1	0.19	0.19
tblVehicleEF	LDT1	0.11	0.51
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.31	0.31
tblVehicleEF	LDT1	1.26	1.27
tblVehicleEF	LDT1	1.83	1.84

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

tblVehicleEF	LDT1	303.12	312.86
tblVehicleEF	LDT1	58.46	60.26
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003
tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.30	1.40
tblVehicleEF	LDT1	0.23	0.24
tblVehicleEF	LDT1	0.21	0.96
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.08	0.64
tblVehicleEF	LDT1	0.25	0.25
tblVehicleEF	LDT1	0.30	1.40
tblVehicleEF	LDT1	0.23	0.24
tblVehicleEF	LDT1	0.21	0.96
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.08	0.64
tblVehicleEF	LDT1	0.27	0.27
tblVehicleEF	LDT1	0.97	0.97
tblVehicleEF	LDT1	2.11	2.13
tblVehicleEF	LDT1	274.85	283.68
tblVehicleEF	LDT1	59.05	60.87
tblVehicleEF	LDT1	0.08	0.08
tblVehicleEF	LDT1	0.22	0.22
tblVehicleEF	LDT1	1.6560e-003	1.6740e-003
tblVehicleEF	LDT1	2.1980e-003	2.2140e-003
tblVehicleEF	LDT1	1.5230e-003	1.5400e-003

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	LDT1	2.0210e-003	2.0360e-003
tblVehicleEF	LDT1	0.13	0.60
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	0.09	0.43
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.09	0.73
tblVehicleEF	LDT1	0.29	0.29
tblVehicleEF	LDT1	0.13	0.60
tblVehicleEF	LDT1	0.21	0.21
tblVehicleEF	LDT1	0.09	0.43
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.09	0.73
tblVehicleEF	LDT1	0.32	0.32
tblVehicleEF	LDT2	0.73	0.73
tblVehicleEF	LDT2	2.37	2.38
tblVehicleEF	LDT2	292.27	299.82
tblVehicleEF	LDT2	61.49	63.39
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.09	0.44
tblVehicleEF	LDT2	0.11	0.11
tblVehicleEF	LDT2	0.08	0.36
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.24	0.24

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	LDT2	0.09	0.44
tblVehicleEF	LDT2	0.11	0.11
tblVehicleEF	LDT2	0.08	0.36
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.26	0.26
tblVehicleEF	LDT2	0.90	0.90
tblVehicleEF	LDT2	2.10	2.11
tblVehicleEF	LDT2	312.64	320.73
tblVehicleEF	LDT2	60.97	62.85
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.18	0.85
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.14	0.67
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.21	0.21
tblVehicleEF	LDT2	0.18	0.85
tblVehicleEF	LDT2	0.13	0.13
tblVehicleEF	LDT2	0.14	0.67
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.39
tblVehicleEF	LDT2	0.23	0.23
tblVehicleEF	LDT2	0.68	0.68

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	LDT2	2.43	2.44
tblVehicleEF	LDT2	286.05	293.44
tblVehicleEF	LDT2	61.61	63.51
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.21	0.22
tblVehicleEF	LDT2	1.2700e-003	1.2720e-003
tblVehicleEF	LDT2	1.6790e-003	1.6920e-003
tblVehicleEF	LDT2	1.1690e-003	1.1700e-003
tblVehicleEF	LDT2	1.5440e-003	1.5550e-003
tblVehicleEF	LDT2	0.07	0.34
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.07	0.31
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.24	0.24
tblVehicleEF	LDT2	0.07	0.34
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.07	0.31
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.27	0.27
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	604.48	617.86
tblVehicleEF	LHD1	1.05	0.97
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	2.5860e-003	0.04
tblVehicleEF	LHD1	1.3190e-003	0.02
tblVehicleEF	LHD1	0.18	0.42

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	LHD1	2.5860e-003	0.04
tblVehicleEF	LHD1	1.3190e-003	0.02
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.18	0.42
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	604.49	617.87
tblVehicleEF	LHD1	0.99	0.91
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	4.8140e-003	0.07
tblVehicleEF	LHD1	2.4810e-003	0.04
tblVehicleEF	LHD1	0.18	0.43
tblVehicleEF	LHD1	4.8140e-003	0.07
tblVehicleEF	LHD1	2.4810e-003	0.04
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.18	0.43
tblVehicleEF	LHD1	0.48	0.49
tblVehicleEF	LHD1	604.48	617.86
tblVehicleEF	LHD1	1.04	0.96
tblVehicleEF	LHD1	8.7160e-003	8.0320e-003
tblVehicleEF	LHD1	8.3200e-003	7.6650e-003
tblVehicleEF	LHD1	2.2460e-003	0.03
tblVehicleEF	LHD1	1.1970e-003	0.02
tblVehicleEF	LHD1	0.19	0.45
tblVehicleEF	LHD1	2.2460e-003	0.03
tblVehicleEF	LHD1	1.1970e-003	0.02
tblVehicleEF	LHD1	0.05	0.05
tblVehicleEF	LHD1	0.19	0.45
tblVehicleEF	LHD2	0.37	0.37

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	LHD2	604.15	619.03
tblVehicleEF	LHD2	1.17	1.11
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	1.3880e-003	0.02
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.08	0.19
tblVehicleEF	LHD2	1.3880e-003	0.02
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.08	0.19
tblVehicleEF	LHD2	0.38	0.37
tblVehicleEF	LHD2	604.15	619.03
tblVehicleEF	LHD2	1.11	1.05
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	2.6120e-003	0.04
tblVehicleEF	LHD2	1.3770e-003	0.02
tblVehicleEF	LHD2	0.08	0.20
tblVehicleEF	LHD2	2.6120e-003	0.04
tblVehicleEF	LHD2	1.3770e-003	0.02
tblVehicleEF	LHD2	0.06	0.05
tblVehicleEF	LHD2	0.08	0.20
tblVehicleEF	LHD2	0.37	0.37
tblVehicleEF	LHD2	604.15	619.02
tblVehicleEF	LHD2	1.16	1.10
tblVehicleEF	LHD2	0.01	0.01

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.3000e-005	9.2000e-005
tblVehicleEF	LHD2	1.0560e-003	0.02
tblVehicleEF	LHD2	6.1700e-004	9.1860e-003
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	1.0560e-003	0.02
tblVehicleEF	LHD2	6.1700e-004	9.1860e-003
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	MCY	1.68	3.36
tblVehicleEF	MCY	0.90	1.81
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	1.68	3.36
tblVehicleEF	MCY	0.90	1.81
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	3.32	6.64
tblVehicleEF	MCY	2.05	4.09
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	3.32	6.64
tblVehicleEF	MCY	2.05	4.09
tblVehicleEF	MCY	0.47	1.66
tblVehicleEF	MCY	1.59	3.18
tblVehicleEF	MCY	0.72	1.45
tblVehicleEF	MCY	0.54	1.89
tblVehicleEF	MCY	1.59	3.18
tblVehicleEF	MCY	0.72	1.45
tblVehicleEF	MCY	0.54	1.89
tblVehicleEF	MDV	0.81	0.81
tblVehicleEF	MDV	2.65	2.67

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	MDV	367.15	376.98
tblVehicleEF	MDV	76.81	79.18
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.12	0.54
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.10	0.47
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.12	0.54
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.10	0.47
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.33	0.33
tblVehicleEF	MDV	0.99	0.99
tblVehicleEF	MDV	2.34	2.35
tblVehicleEF	MDV	388.58	399.03
tblVehicleEF	MDV	76.18	78.54
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.26	0.26
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.23	1.05

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	MDV	0.17	0.17
tblVehicleEF	MDV	0.19	0.86
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	0.23	1.05
tblVehicleEF	MDV	0.17	0.17
tblVehicleEF	MDV	0.19	0.86
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.45
tblVehicleEF	MDV	0.29	0.29
tblVehicleEF	MDV	0.75	0.76
tblVehicleEF	MDV	2.71	2.73
tblVehicleEF	MDV	360.65	370.29
tblVehicleEF	MDV	76.94	79.31
tblVehicleEF	MDV	0.07	0.07
tblVehicleEF	MDV	0.27	0.27
tblVehicleEF	MDV	1.6990e-003	1.7110e-003
tblVehicleEF	MDV	1.2110e-003	1.2120e-003
tblVehicleEF	MDV	1.5620e-003	1.5730e-003
tblVehicleEF	MDV	0.09	0.42
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.09	0.40
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.07	0.51
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.09	0.42
tblVehicleEF	MDV	0.15	0.15
tblVehicleEF	MDV	0.09	0.40

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.07	0.51
tblVehicleEF	MDV	0.34	0.34
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.01	1.13
tblVehicleEF	MH	0.02	1.18
tblVehicleEF	MH	0.02	1.18
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.02	0.08
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	MHD	0.02	0.09
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.27
tblVehicleEF	OBUS	0.08	0.28
tblVehicleEF	OBUS	0.08	0.28
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	5.7000e-005	5.6000e-005
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	UBUS	3.36	3.36

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

tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	26.11	26.10
tblVehicleEF	UBUS	1.46	1.46
tblVehicleEF	UBUS	1,591.71	1,591.16
tblVehicleEF	UBUS	17.32	17.29
tblVehicleEF	UBUS	0.31	0.31
tblVehicleEF	UBUS	0.17	0.17
tblVehicleEF	UBUS	0.09	0.09
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	2.6660e-003	2.6650e-003
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	5.4780e-003	5.4790e-003
tblVehicleEF	UBUS	2.5330e-003	2.5320e-003
tblVehicleEF	UBUS	1.3310e-003	1.3280e-003
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	8.1200e-004	8.1100e-004
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	1.7510e-003	0.06
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	4.6610e-003	4.6590e-003
tblVehicleEF	UBUS	1.3310e-003	1.3280e-003
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	8.1200e-004	8.1100e-004
tblVehicleEF	UBUS	3.43	3.43
tblVehicleEF	UBUS	1.7510e-003	0.06
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	1.6940e-003	0.06
tblVehicleEF	UBUS	1.6940e-003	0.06
tblVehicleEF	UBUS	2.0810e-003	0.07

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

tblVehicleEF	UBUS	2.0810e-003	0.07
tblVehicleTrips	HO_TL	8.70	7.98
tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TL	5.90	7.98
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TL	14.70	7.98
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	9.54	9.44
tblVehicleTrips	SU_TR	8.55	9.44
tblWoodstoves	NumberCatalytic	7.20	7.55
tblWoodstoves	NumberNoncatalytic	7.20	7.55

2.0 Emissions Summary

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	23.7963	75.3414	44.7105	0.1042	8.6733	3.0596	11.7329	3.5965	2.8492	6.4457	0.0000	10,055.6833	10,055.6833	2.8411	0.0000	10,126.7103
2022	2.3576	22.3823	22.2330	0.0517	0.0000	0.9343	0.9343	0.0000	0.8831	0.8831	0.0000	4,972.0768	4,972.0768	1.2643	0.0000	5,003.6835
2023	1.4794	14.2620	14.0826	0.0335	0.0000	0.5684	0.5684	0.0000	0.5434	0.5434	0.0000	3,211.7997	3,211.7997	0.6906	0.0000	3,229.0640
Maximum	**23.7963**	**75.3414**	**44.7105**	**0.1042**	**8.6733**	**3.0596**	**11.7329**	**3.5965**	**2.8492**	**6.4457**	**0.0000**	**10,055.6833**	**10,055.6833**	**2.8411**	**0.0000**	**10,126.7103**

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	19.6296	25.5516	47.2067	0.1042	3.2135	0.7734	3.9869	1.3325	0.7211	2.0535	0.0000	10,055.6832	10,055.6832	2.8411	0.0000	10,126.7103
2022	1.3097	11.4578	24.7404	0.0517	0.0000	0.3365	0.3365	0.0000	0.3132	0.3132	0.0000	4,972.0768	4,972.0768	1.2643	0.0000	5,003.6835
2023	0.7672	7.1523	15.8908	0.0335	0.0000	0.1853	0.1853	0.0000	0.1730	0.1730	0.0000	3,211.7997	3,211.7997	0.6906	0.0000	3,229.0640
Maximum	**19.6296**	**25.5516**	**47.2067**	**0.1042**	**3.2135**	**0.7734**	**3.9869**	**1.3325**	**0.7211**	**2.0535**	**0.0000**	**10,055.6832**	**10,055.6832**	**2.8411**	**0.0000**	**10,126.7103**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**21.45**	**60.56**	**-8.41**	**0.00**	**62.95**	**71.61**	**65.93**	**62.95**	**71.76**	**67.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845	891.1474	2,880.2151	3,771.3625	4.2412	0.0524	3,893.0115
Energy	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
Mobile	3.7986	7.1614	21.5912	0.0762	7.4721	0.0776	7.5497	1.9985	0.0732	2.0718		8,020.9236	8,020.9236	0.3111	0.5579	8,194.9526
Total	**14.4650**	**11.2090**	**71.8778**	**0.2187**	**7.4721**	**6.4484**	**13.9205**	**1.9985**	**6.4441**	**8.4426**	**891.1474**	**12,264.2230**	**13,155.3704**	**4.5784**	**0.6353**	**13,459.1485**

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	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845	891.1474	2,880.2151	3,771.3625	4.2412	0.0524	3,893.0115
Energy	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
Mobile	3.7986	7.1614	21.5912	0.0762	7.4721	0.0776	7.5497	1.9985	0.0732	2.0718		8,020.9236	8,020.9236	0.3111	0.5579	8,194.9526
Total	**14.4650**	**11.2090**	**71.8778**	**0.2187**	**7.4721**	**6.4484**	**13.9205**	**1.9985**	**6.4441**	**8.4426**	**891.1474**	**12,264.2230**	**13,155.3704**	**4.5784**	**0.6353**	**13,459.1485**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	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	Building Construction	Building Construction	1/13/2021	6/1/2023	5	622	
2	Paving	Paving	1/13/2021	3/23/2021	5	50	
3	Architectural Coating	Architectural Coating	1/13/2021	6/1/2021	5	100	
4	Site Preparation and Grading	Grading	6/1/2021	8/27/2021	5	64	
5	Trenching/utilities	Trenching	8/28/2021	1/12/2022	5	98	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 160

Acres of Paving: 0

Residential Indoor: 550,395; Residential Outdoor: 183,465; 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
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Off-Highway Trucks	1	2.00	402	0.38
Building Construction	Other Construction Equipment	1	8.00	800	0.42

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

Building Construction	Other Material Handling Equipment	1	8.00	250	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation and Grading	Excavators	0	8.00	158	0.38
Site Preparation and Grading	Graders	3	8.00	187	0.41
Site Preparation and Grading	Off-Highway Trucks	1	2.00	402	0.38
Site Preparation and Grading	Rollers	1	8.00	80	0.38
Site Preparation and Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation and Grading	Scrapers	2	8.00	367	0.48
Site Preparation and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Trenching/utilities	Excavators	1	8.00	158	0.38
Trenching/utilities	Off-Highway Trucks	1	4.00	402	0.38
Trenching/utilities	Off-Highway Trucks	1	2.00	402	0.38
Trenching/utilities	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Building Construction	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation and Grading	9	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/utilities	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 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					
Off-Road	1.7777	18.5282	14.5025	0.0335		0.7595	0.7595		0.7256	0.7256		3,211.3879	3,211.3879	0.6992		3,228.8682
Total	**1.7777**	**18.5282**	**14.5025**	**0.0335**		**0.7595**	**0.7595**		**0.7256**	**0.7256**		**3,211.3879**	**3,211.3879**	**0.6992**		**3,228.8682**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.2 Building Construction - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9029	9.4779	16.1460	0.0335		0.2602	0.2602		0.2419	0.2419	0.0000	3,211.3879	3,211.3879	0.6992		3,228.8682
Total	**0.9029**	**9.4779**	**16.1460**	**0.0335**		**0.2602**	**0.2602**		**0.2419**	**0.2419**	**0.0000**	**3,211.3879**	**3,211.3879**	**0.6992**		**3,228.8682**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.2 Building Construction - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5941	15.9194	14.2209	0.0335		0.6488	0.6488		0.6204	0.6204		3,211.5836	3,211.5836	0.6949		3,228.9558
Total	**1.5941**	**15.9194**	**14.2209**	**0.0335**		**0.6488**	**0.6488**		**0.6204**	**0.6204**		**3,211.5836**	**3,211.5836**	**0.6949**		**3,228.9558**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.2 Building Construction - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8119	8.0076	15.9613	0.0335		0.2135	0.2135		0.1990	0.1990	0.0000	3,211.5836	3,211.5836	0.6949		3,228.9558
Total	**0.8119**	**8.0076**	**15.9613**	**0.0335**		**0.2135**	**0.2135**		**0.1990**	**0.1990**	**0.0000**	**3,211.5836**	**3,211.5836**	**0.6949**		**3,228.9558**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.2 Building Construction - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4794	14.2620	14.0826	0.0335		0.5684	0.5684		0.5434	0.5434		3,211.7997	3,211.7997	0.6906		3,229.0640
Total	**1.4794**	**14.2620**	**14.0826**	**0.0335**		**0.5684**	**0.5684**		**0.5434**	**0.5434**		**3,211.7997**	**3,211.7997**	**0.6906**		**3,229.0640**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.2 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7672	7.1523	15.8908	0.0335		0.1853	0.1853		0.1730	0.1730	0.0000	3,211.7997	3,211.7997	0.6906		3,229.0640
Total	**0.7672**	**7.1523**	**15.8908**	**0.0335**		**0.1853**	**0.1853**		**0.1730**	**0.1730**	**0.0000**	**3,211.7997**	**3,211.7997**	**0.6906**		**3,229.0640**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.2 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Paving - 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					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.3 Paving - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2805**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.3 Paving - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Architectural Coating - 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					
Archit. Coating	17.0072					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**17.2261**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.4 Architectural Coating - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	17.0072					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**17.0369**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.4 Architectural Coating - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Site Preparation and 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.7924	55.2865	28.3905	0.0678		2.2060	2.2060		2.0295	2.0295		6,562.8473	6,562.8473	2.1226		6,615.9112
Total	**4.7924**	**55.2865**	**28.3905**	**0.0678**	**8.6733**	**2.2060**	**10.8793**	**3.5965**	**2.0295**	**5.6260**		**6,562.8473**	**6,562.8473**	**2.1226**		**6,615.9112**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.5 Site Preparation and 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					3.2135	0.0000	3.2135	1.3325	0.0000	1.3325			0.0000			0.0000
Off-Road	1.6898	15.9449	29.2282	0.0678		0.5092	0.5092		0.4752	0.4752	0.0000	6,562.8473	6,562.8473	2.1226		6,615.9112
Total	**1.6898**	**15.9449**	**29.2282**	**0.0678**	**3.2135**	**0.5092**	**3.7227**	**1.3325**	**0.4752**	**1.8077**	**0.0000**	**6,562.8473**	**6,562.8473**	**2.1226**		**6,615.9112**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.5 Site Preparation and 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Trenching/utilities - 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					
Off-Road	0.8709	7.9967	8.2353	0.0182		0.3610	0.3610		0.3321	0.3321		1,759.9843	1,759.9843	0.5692		1,774.2147
Total	**0.8709**	**7.9967**	**8.2353**	**0.0182**		**0.3610**	**0.3610**		**0.3321**	**0.3321**		**1,759.9843**	**1,759.9843**	**0.5692**		**1,774.2147**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.6 Trenching/utilities - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5559	4.3874	8.9634	0.0182		0.1583	0.1583		0.1468	0.1468	0.0000	1,759.9843	1,759.9843	0.5692		1,774.2147
Total	**0.5559**	**4.3874**	**8.9634**	**0.0182**		**0.1583**	**0.1583**		**0.1468**	**0.1468**	**0.0000**	**1,759.9843**	**1,759.9843**	**0.5692**		**1,774.2147**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.6 Trenching/utilities - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Trenching/utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7634	6.4629	8.0121	0.0182		0.2855	0.2855		0.2627	0.2627		1,760.4932	1,760.4932	0.5694		1,774.7277
Total	**0.7634**	**6.4629**	**8.0121**	**0.0182**		**0.2855**	**0.2855**		**0.2627**	**0.2627**		**1,760.4932**	**1,760.4932**	**0.5694**		**1,774.7277**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.6 Trenching/utilities - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4978	3.4502	8.7791	0.0182		0.1230	0.1230		0.1142	0.1142	0.0000	1,760.4932	1,760.4932	0.5694		1,774.7277
Total	**0.4978**	**3.4502**	**8.7791**	**0.0182**		**0.1230**	**0.1230**		**0.1142**	**0.1142**	**0.0000**	**1,760.4932**	**1,760.4932**	**0.5694**		**1,774.7277**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

3.6 Trenching/utilities - 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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7986	7.1614	21.5912	0.0762	7.4721	0.0776	7.5497	1.9985	0.0732	2.0718		8,020.9236	8,020.9236	0.3111	0.5579	8,194.9526
Unmitigated	3.7986	7.1614	21.5912	0.0762	7.4721	0.0776	7.5497	1.9985	0.0732	2.0718		8,020.9236	8,020.9236	0.3111	0.5579	8,194.9526

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,359.36	1,359.36	1359.36	3,505,832	3,505,832
Total	1,359.36	1,359.36	1,359.36	3,505,832	3,505,832

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Single Family Housing	7.98	7.98	7.98	40.00	20.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.532351	0.053415	0.168457	0.124686	0.021544	0.005961	0.018186	0.067156	0.000867	0.001081	0.004327	0.000964	0.001005

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

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	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
NaturalGas Unmitigated	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844

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					
Single Family Housing	11586.2	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
Total		**0.1250**	**1.0678**	**0.4544**	**6.8200e-003**		**0.0863**	**0.0863**		**0.0863**	**0.0863**		**1,363.0843**	**1,363.0843**	**0.0261**	**0.0250**	**1,371.1844**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	11.5862	0.1250	1.0678	0.4544	6.8200e-003		0.0863	0.0863		0.0863	0.0863		1,363.0843	1,363.0843	0.0261	0.0250	1,371.1844
Total		**0.1250**	**1.0678**	**0.4544**	**6.8200e-003**		**0.0863**	**0.0863**		**0.0863**	**0.0863**		**1,363.0843**	**1,363.0843**	**0.0261**	**0.0250**	**1,371.1844**

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	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845	891.1474	2,880.2151	3,771.3625	4.2412	0.0524	3,893.0115
Unmitigated	10.5414	2.9799	49.8323	0.1357		6.2845	6.2845		6.2845	6.2845	891.1474	2,880.2151	3,771.3625	4.2412	0.0524	3,893.0115

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

6.2 Area by SubCategory

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	0.4660					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.3816					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.3374	2.8432	37.9633	0.1351		6.2186	6.2186		6.2186	6.2186	891.1474	2,858.8235	3,749.9709	4.2207	0.0524	3,871.1078
Landscaping	0.3564	0.1367	11.8689	6.3000e-004		0.0659	0.0659		0.0659	0.0659		21.3915	21.3915	0.0205		21.9037
Total	**10.5414**	**2.9799**	**49.8323**	**0.1357**		**6.2845**	**6.2845**		**6.2845**	**6.2845**	**891.1474**	**2,880.2151**	**3,771.3625**	**4.2412**	**0.0524**	**3,893.0115**

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4660					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.3816					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.3374	2.8432	37.9633	0.1351		6.2186	6.2186		6.2186	6.2186	891.1474	2,858.8235	3,749.9709	4.2207	0.0524	3,871.1078
Landscaping	0.3564	0.1367	11.8689	6.3000e-004		0.0659	0.0659		0.0659	0.0659		21.3915	21.3915	0.0205		21.9037
Total	**10.5414**	**2.9799**	**49.8323**	**0.1357**		**6.2845**	**6.2845**		**6.2845**	**6.2845**	**891.1474**	**2,880.2151**	**3,771.3625**	**4.2412**	**0.0524**	**3,893.0115**

7.0 Water Detail

7.1 Mitigation Measures Water

Hemet 30 Unmitigated and Tier 4 equipment - Riverside-South Coast County, Winter

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX F

EMFAC2017

Hemet 30

Total On-Road Emissions

Date: 2/8/2022

260 Max construction days per year

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)
Site Preparation/Grading	2021				
Total Haul Trips	0				
Hauling	0	64	10	30	15
Vendor	8	64	10	6.9	15
Worker	36	64	10	14.7	0
Trenching/Utilities	2021				
Total Haul Trips	0				
Hauling	0	98	10	30	15
Vendor	8	98	10	6.9	15
Worker	20	98	10	14.7	0
Building Construction	2021				
Total Haul Trips					
Hauling	0	622	10	30	15
Vendor	16	622	10	6.9	15
Worker	60	622	10	14.7	0
Paving	2021				
Total Haul Trips	0				
Hauling	0	50	10	30	15
Vendor	4	50	10	6.9	15
Worker	30	50	10	14.7	0
Architectural Coating	2021				
Total Haul Trips	0				
Hauling	0	100	10	30	15
Vendor	4	100	10	6.9	15
Worker	22	100	10	14.7	0

Hemet 30

Total On-Road Emissions

Construction Phase	Regional Emissions (pounds/day)										(MT/yr)	
	ROG	NOX	CO	SO2	PM10 Dust	PM10 Exh	Total PM10	PM2.5 Dust	PM2.5 Exh	Total PM2.5	Total CO2e	
Site Preparation/Grading												
Total Haul Trips												
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S
Vendor	0.05	0.81	0.53	0.00	0.05	0.01	0.06	0.01	0.01	0.02	7.04	
Worker	0.02	0.09	1.14	0.00	0.40	0.00	0.40	0.11	0.00	0.11	10.14	
Trenching/Utilities												
Total Haul Trips												
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Vendor	0.05	0.81	0.53	0.00	0.05	0.01	0.06	0.01	0.01	0.02	10.79	
Worker	0.01	0.05	0.64	0.00	0.22	0.00	0.22	0.06	0.00	0.06	8.63	
Building Construction												
Total Haul Trips												
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Vendor	0.09	1.62	1.06	0.00	0.10	0.02	0.12	0.03	0.02	0.05	136.92	
Worker	0.03	0.15	1.91	0.01	0.67	0.00	0.67	0.18	0.00	0.18	164.24	
Paving												
Total Haul Trips												
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Vendor	0.02	0.41	0.27	0.00	0.03	0.00	0.03	0.01	0.00	0.01	2.75	
Worker	0.02	0.08	0.95	0.00	0.34	0.00	0.34	0.09	0.00	0.09	6.60	
Architectural Coating												
Total Haul Trips												
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Vendor	0.02	0.41	0.27	0.00	0.03	0.00	0.03	0.01	0.00	0.01	5.50	
Worker	0.01	0.06	0.70	0.00	0.25	0.00	0.25	0.07	0.00	0.07	9.68	

Hemet 30
Running Emissions

2/8/2022

	Running Emissions Factor (grams/mile)					
	ROG	NOX	CO	SO2	PM10	PM2.5
2021Hauling Hauling	0.07010246	3.049249417	0.36083093	0.01266286	0.05430029	0.05195128
2021Vendor Vendor	0.08763398	2.710290589	0.46418048	0.011096	0.06810134	0.06515358
2021Worker Worker	0.01793474	0.07806957	0.97984598	0.00293732	0.00167251	0.00154007
2025Hauling Hauling	0.01932149	1.905162407	0.22030466	0.01132005	0.02687871	0.02571594
2025Vendor Vendor	0.01476188	1.397959324	0.1800181	0.01001009	0.01813411	0.01734777
2025Worker Worker	0.01032135	0.046540856	0.70227664	0.00257725	0.00133954	0.00123303
2017Hauling Hauling	0.16549804	4.841117658	0.6928911	0.01364454	0.10861742	0.10391866
2017Vendor Vendor	0.19701852	4.602872554	0.93500726	0.01187455	0.13645363	0.13054877
2017Worker Worker	0.03724423	0.146302216	1.58943282	0.00328879	0.00194238	0.00179106
0Hauling Hauling	0.02402351	2.689787743	0.47666471	0.01223847	0.01862862	0.01782272
0Vendor Vendor	0.01822972	1.888185974	0.34201743	0.01087074	0.01242057	0.01188001
0Worker Worker	#N/A	#N/A	#N/A	0.00270062	#N/A	#N/A
GWP	N/A	N/A	N/A	N/A	N/A	N/A

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					
					ROG	NOX	CO	SO2	PM10	PM2.5
Site Preparation/Grading	2021									
Total Haul Trips	0									
Hauling	0	64	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	8	64	10	6.9	0.01	0.33	0.06	0.00	0.01	0.01
Worker	36	64	10	14.7	0.02	0.09	1.14	0.00	0.00	0.00
Trenching/Utilities	2021									
Total Haul Trips	0									
Hauling	0	98	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	8	98	10	6.9	0.01	0.33	0.06	0.00	0.01	0.01
Worker	20	98	10	14.7	0.01	0.05	0.64	0.00	0.00	0.00
Building Construction	2021									
Total Haul Trips	0									
Hauling	0	622	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	16	622	10	6.9	0.02	0.66	0.11	0.00	0.02	0.02
Worker	60	622	10	14.7	0.03	0.15	1.91	0.01	0.00	0.00
Paving	2021									
Total Haul Trips	0									
Hauling	0	50	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	50	10	6.9	0.01	0.16	0.03	0.00	0.00	0.00
Worker	30	50	10	14.7	0.02	0.08	0.95	0.00	0.00	0.00
Architectural Coating	2021									
Total Haul Trips	0									
Hauling	0	100	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	100	10	6.9	0.01	0.16	0.03	0.00	0.00	0.00
Worker	22	100	10	14.7	0.01	0.06	0.70	0.00	0.00	0.00

Hemet 30
Running Emissions

	Running Emissions Factor (grams/mile)		
	CO2	CH4	N2O
2021Hauling Hauling	1350.00304	0.01751236	0.21262812
2021Vendor Vendor	1175.51639	0.01174591	0.17370356
2021Worker Worker	297.287678	0.00429909	0.00686489
2025Hauling Hauling	1211.264	0.01945058	0.19097236
2025Vendor Vendor	1062.1774	0.01026121	0.15518636
2025Worker Worker	268.416436	0.00260276	0.00486138
2017Hauling Hauling	1449.66423	0.01763335	0.22810651
2017Vendor Vendor	1255.83644	0.01524137	0.18732874
2017Worker Worker	332.254282	0.00802974	0.01081684
0Hauling Hauling	1349.96343	0.08018655	0.21460127
0Vendor Vendor	1172.0935	0.04086716	0.16736985
0Worker Worker	#N/A	0.00326623	0.00505458
GWP	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (MT/year)			
					CO2	CH4	N2O	CO2e
Site Preparation/Grading	2021							
Total Haul Trips	0							
Hauling	0	64	10	30	0.00	0.00	0.00	0.00
Vendor	8	64	10	6.9	4.15	0.00	0.18	4.33
Worker	36	64	10	14.7	10.07	0.00	0.07	10.14
Trenching/Utilities	2021							
Total Haul Trips	0							
Hauling	0	98	10	30	0.00	0.00	0.00	0.00
Vendor	8	98	10	6.9	6.36	0.00	0.27	6.63
Worker	20	98	10	14.7	8.57	0.00	0.06	8.63
Building Construction	2021							
Total Haul Trips	0							
Hauling	0	622	10	30	0.00	0.00	0.00	0.00
Vendor	16	622	10	6.9	80.72	0.02	3.46	84.20
Worker	60	622	10	14.7	163.09	0.06	1.09	164.24
Paving	2021							
Total Haul Trips	0							
Hauling	0	50	10	30	0.00	0.00	0.00	0.00
Vendor	4	50	10	6.9	1.62	0.00	0.07	1.69
Worker	30	50	10	14.7	6.56	0.00	0.04	6.60
Architectural Coating	2021							
Total Haul Trips	0							
Hauling	0	100	10	30	0.00	0.00	0.00	0.00
Vendor	4	100	10	6.9	3.24	0.00	0.14	3.38
Worker	22	100	10	14.7	9.61	0.00	0.06	9.68

Hemet 30
Idling Emissions

2/8/2022

	Idling Emissions Factor (grams/minute)					
	ROG	NOX	CO	SO2	PM10	PM2.5
2021Hauling Hauling	0.26422438	3.350283273	3.44790822	0.0060607	0.00489969	0.00468773
2021Vendor Vendor	0.13649723	1.822789995	1.79794629	0.00318302	0.00296944	0.00284098
2021Worker Worker	0	0	0	0	0	0
2025Hauling Hauling	0.25845694	3.096066844	3.82216357	0.00572277	0.00121779	0.00116511
2025Vendor Vendor	0.13283052	1.628421424	1.98848066	0.00299815	0.00067716	0.00064786
2025Worker Worker	0	0	0	0	0	0
2017Hauling Hauling	0.27558989	3.431252953	2.74502944	0.00569144	0.0153981	0.01473199
2017Vendor Vendor	0.14357218	1.919865379	1.4476654	0.00300861	0.0088264	0.00844457
2017Worker Worker	0	0	0	0	0	0
0Hauling Hauling	0.1799481	2.255748874	2.67230058	0.00403645	0.00115622	0.00110621
0Vendor Vendor	0.09457039	1.204925318	1.42790277	0.00215711	0.00063484	0.00060738
0Worker Worker	0	0	0	0	0	0
GWP	N/A	N/A	N/A	N/A	N/A	N/A

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Idling minutes per Day (miles)	Regional Emissions (pounds/day) ROG	NOX	CO	SO2	PM10	PM2.5
Site Preparation/Grading	2021									
Total Haul Trips	0									
Hauling	0	64	10	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	8	64	10	15	0.04	0.48	0.48	0.00	0.00	0.00
Worker	36	64	10	0	0.00	0.00	0.00	0.00	0.00	0.00
Trenching/Utilities	2021									
Total Haul Trips	0									
Hauling	0	98	10	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	8	98	10	15	0.04	0.48	0.48	0.00	0.00	0.00
Worker	20	98	10	0	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	2021									
Total Haul Trips	0									
Hauling	0	622	10	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	16	622	10	15	0.07	0.96	0.95	0.00	0.00	0.00
Worker	60	622	10	0	0.00	0.00	0.00	0.00	0.00	0.00
Paving	2021									
Total Haul Trips	0									
Hauling	0	50	10	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	50	10	15	0.02	0.24	0.24	0.00	0.00	0.00
Worker	30	50	10	0	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	2021									
Total Haul Trips	0									
Hauling	0	100	10	15	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	100	10	15	0.02	0.24	0.24	0.00	0.00	0.00
Worker	22	100	10	0	0.00	0.00	0.00	0.00	0.00	0.00

Hemet 30
Idling Emissions

	Idling Emissions Factor (grams/minute)		
	CO2	CH4	N2O
2021Hauling Hauling	643.085079	0.01279034	0.10115739
2021Vendor Vendor	337.645249	0.00707203	0.05293544
2021Worker Worker	0	0	0
2025Hauling Hauling	607.833029	0.01270522	0.09564039
2025Vendor Vendor	318.333252	0.00706308	0.04990657
2025Worker Worker	0	0	0
2017Hauling Hauling	603.380506	0.01314162	0.09488749
2017Vendor Vendor	318.875233	0.00725278	0.04997104
2017Worker Worker	0	0	0
0Hauling Hauling	434.717751	0.01075647	0.06868006
0Vendor Vendor	231.973247	0.00636636	0.0363802
0Worker Worker	0	0	0
GWP	1	25	290

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	Idling minutes per Day (miles)	Regional Emissions (MT/year) CO2	CH4	N2O	CO2e
Site Preparation/Grading	2021							
Total Haul Trips	0							
Hauling	0	64	10	15	0.00	0.00	0.00	0.00
Vendor	8	64	10	15	2.59	0.00	0.12	2.71
Worker	36	64	10	0	0.00	0.00	0.00	0.00
Trenching/Utilities	2021							
Total Haul Trips	0							
Hauling	0	98	10	15	0.00	0.00	0.00	0.00
Vendor	8	98	10	15	3.97	0.00	0.18	4.15
Worker	20	98	10	0	0.00	0.00	0.00	0.00
Building Construction	2021							
Total Haul Trips	0							
Hauling	0	622	10	15	0.00	0.00	0.00	0.00
Vendor	16	622	10	15	50.40	0.03	2.29	52.72
Worker	60	622	10	0	0.00	0.00	0.00	0.00
Paving	2021							
Total Haul Trips	0							
Hauling	0	50	10	15	0.00	0.00	0.00	0.00
Vendor	4	50	10	15	1.01	0.00	0.05	1.06
Worker	30	50	10	0	0.00	0.00	0.00	0.00
Architectural Coating	2021							
Total Haul Trips	0							
Hauling	0	100	10	15	0.00	0.00	0.00	0.00
Vendor	4	100	10	15	2.03	0.00	0.09	2.12
Worker	22	100	10	0	0.00	0.00	0.00	0.00

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Road Dust, Break Wear, and Tire wear Emissions

2/8/2022

	Emission Factors (grams/mile)					
	PM10			PM2.5		
	RD	BW	TW	RD	BW	TW
2021Hauling Hauling	3.00E-01	0.061044808	0.03559193	7.36E-02	0.02616206	0.00889798
2021Vendor Vendor	3.00E-01	0.095692423	0.02379597	7.36E-02	0.04101104	0.00594899
2021Worker Worker	3.00E-01	0.036750011	0.008	7.36E-02	0.01575	0.002
2025Hauling Hauling	3.00E-01	0.061002101	0.0355666	7.36E-02	0.02614376	0.00889165
2025Vendor Vendor	3.00E-01	0.095671069	0.0237833	7.36E-02	0.04100189	0.00594583
2025Worker Worker	3.00E-01	0.036750011	0.008	7.36E-02	0.01575	0.002
2017Hauling Hauling	3.00E-01	0.061100802	0.03562389	7.36E-02	0.02618606	0.00890597
2017Vendor Vendor	3.00E-01	0.09572042	0.02381195	7.36E-02	0.04102304	0.00595299
2017Worker Worker	3.00E-01	0.036750011	0.008	7.36E-02	0.01575	0.002
0Hauling Hauling	3.00E-01	0.061075887	0.03559921	7.36E-02	0.02617538	0.0088998
0Vendor Vendor	3.00E-01	0.095707962	0.02379961	7.36E-02	0.0410177	0.0059499
0Worker Worker	3.00E-01	0.036750011	0.008	7.36E-02	0.01575	0.002

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Regional Emissions (pounds/day)					
					PM10			PM2.5		
					RD	BW	TW	RD	BW	TW
Site Preparation/Grading	2021									
Total Haul Trips	0									
Hauling	0	64	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	8	64	10	6.9	0.04	0.01	0.00	0.01	0.00	0.00
Worker	36	64	10	14.7	0.35	0.04	0.01	0.09	0.02	0.00
Trenching/Utilities	2021									
Total Haul Trips	0									
Hauling	0	98	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	8	98	10	6.9	0.04	0.01	0.00	0.01	0.00	0.00
Worker	20	98	10	14.7	0.19	0.02	0.01	0.05	0.01	0.00
Building Construction	2021									
Total Haul Trips	0									
Hauling	0	622	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	16	622	10	6.9	0.07	0.02	0.01	0.02	0.01	0.00
Worker	60	622	10	14.7	0.58	0.07	0.02	0.14	0.03	0.00
Paving	2021									
Total Haul Trips	0									
Hauling	0	50	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	50	10	6.9	0.02	0.01	0.00	0.00	0.00	0.00
Worker	30	50	10	14.7	0.29	0.04	0.01	0.07	0.02	0.00
Architectural Coating	2021									
Total Haul Trips	0									
Hauling	0	100	10	30	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4	100	10	6.9	0.02	0.01	0.00	0.00	0.00	0.00
Worker	22	100	10	14.7	0.21	0.03	0.01	0.05	0.01	0.00

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Total On-Road Fuel Consumption

2/8/2022

		gal/mile	gal/min
2017Hauling	Hauling	0.15231737	2.19726E-06
2017Vendor	Vendor	0.12579464	2.42192E-06
2017Worker	Worker	0.03972331	8.82157E-07

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)
Site Preparation/Grading	2021				
Total Haul Trips	0				
Hauling	0	64	10	30	15
Vendor	8	64	10	6.9	15
Worker	36	64	10	14.7	0
Trenching/Utilities	2021				
Total Haul Trips	0				
Hauling	0	98	10	30	15
Vendor	8	98	10	6.9	15
Worker	20	98	10	14.7	0
Building Construction	2021				
Total Haul Trips	0				
Hauling	0	622	10	30	15
Vendor	16	622	10	6.9	15
Worker	60	622	10	14.7	0
Paving	2021				
Total Haul Trips	0				
Hauling	0	50	10	30	15
Vendor	4	50	10	6.9	15
Worker	30	50	10	14.7	0
Architectural Coating	2021				
Total Haul Trips	0				
Hauling	0	100	10	30	15
Vendor	4	100	10	6.9	15
Worker	22	100	10	14.7	0

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T **Total On-Road Fuel Consumption**

Construction Phase	Regional Emissions (gallons)			
	gal/mile	gal/min	gal/day	Total Gallons/yr
Site Preparation/Grading				
Total Haul Trips				
Hauling	0.14	2.62E-06	0	0
Vendor	0.12	2.76E-06	7	417
Worker	0.04	1.04E-06	19	1,211
Trenching/Utilities				
Total Haul Trips				
Hauling	0.14	2.62E-06	0	0
Vendor	0.12	2.76E-06	7	639
Worker	0.04	1.04E-06	11	1,031
Building Construction				
Total Haul Trips				
Hauling	0.14	2.62E-06	0	0
Vendor	0.12	2.76E-06	13	8,111
Worker	0.04	1.04E-06	32	19,623
Paving				
Total Haul Trips				
Hauling	0.14	2.62E-06	0	0
Vendor	0.12	2.76E-06	3	163
Worker	0.04	1.04E-06	16	789
Architectural Coating				
Total Haul Trips				
Hauling	0.14	2.62E-06	0	0
Vendor	0.12	2.76E-06	3	326
Worker	0.04	1.04E-06	12	1,157

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Operational Vehicle Fuel Consumption

2/8/2022

	Op year 1
Unmitigated CO_2e (MT/year)	1,369
Mitigated CO_2e (MT/year)	

Summary		Op year 1 Unmitigated	Mitigated	
	Gasolilne	106,113	0	gallons
	Diesel	41,160	0.00	gallons
	Electric	0.00	0.00	GWh
	Natural Gas	152.81	0.00	MBTU

Operational Year 1 2025

Unmitigated Calculations

	% Emissions	CO_2e (MT)	CO_2e (kg)	CO_2e (lbs)	kg CO2/gallon	Gallons	Mcf	MBTU	GWh
Gasoline	0.688893511	943.3421855	943,342	NA	8.89	106,113	NA	NA	NA
Diesel	0.305384645	418.1810597	418,181	NA	10.16	41,160	NA	NA	NA
Electric	0	0	NA	0	NA	NA	NA	NA	0.00
Natural Gas	0.005721843	7.835254826	7,835	NA	NA	NA	147.50	152.81	NA

Emissions Percentage

	2021	2025	2017
Gasoline	0.699230867	0.688893511	0.719725483
Diesel	0.296178777	0.305384645	0.276663102
Electric	0	0	0
Natural Gas	0.004590355	0.005721843	0.003611415

Conversion Factors:

1000	kg/MT		
8.89	kg CO_2/gallon gasoline	https://www.eia.gov/environment/emissions/co2_vol_mass.php	Feb. 2016
10.16	kg CO_2/gallon diesel	https://www.eia.gov/environment/emissions/co2_vol_mass.php	Feb. 2016
53.12	kg CO_2/ thousand cubic feet	https://www.eia.gov/environment/emissions/co2_vol_mass.php	Feb. 2016
1036	btu/cubic foot		
503.95	CO_2 lbs/MWh	Project Specific Existing	
401.15	CO_2 lbs/MWh	Project Specific Op Year 1	2025
	CO_2 lbs/MWh	Project Specific Op Year 2	
0.907185	MT/ton		
2000	lbs/ton		

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Road Dust

2/8/2022

Paved Road Dust Emission Factors (Assumes No Precipitation)

Formula: $EF_{Dust,P} = (k\ (sL)^{0.91} \times (W)^{1.02})$

Where:

$EF_{Dust,P}$ =	Paved Road Dust Emission Factor (having the same units as k)
k =	particle size multiplier
sL =	road surface silt loading (g/m^2)
W =	average fleet vehicle weight (tons) (CARB uses 2.4 tons as a fleet average vehicle weight factor)

	Emission Factor (grams per VMT)	
	PM10	PM2.5
k	0.9979	0.2449
sL	0.1	0.1
W	2.4	2.4
$EF_{Dust,P}$	3.00E-01	7.36E-02

Unpaved Road Dust Emission Factors (Assumes No Precipitation)

Formula: $EF_{Dust,U} = (k\ (\ s / 12)^{1} \times (Sp / 30)^{0.5} / (M / 0.5)^{0.2}) - C)$

Where:

$EF_{Dust,U}$ =	Unpaved Road Dust Emission Factor (having the same units as k)
k =	particle size multiplier
s =	surface material silt content (%)
Sp =	mean vehicle speed (mph)
M =	surface material moisture content (%)
C =	Emission Factor for 1980s vehicle fleet exhaust, brake wear, and tire wear

	Emission Factor (grams per VMT)	
	PM10	PM2.5
k	816.47	81.65
s	4.3%	4.3%
Sp	15	15
M	0.5%	0.5%
C	0.00047	0.00036
$EF_{Dust,U}$	5.20E+00	5.19E-01

Sources:

SCAQMD, CalEEMod, Version 2011.1.

CARB, *Entrained Dust from Paved Road Travel: Emission Estimation Methodology Background Document* , (1997).

USEPA, *AP-42* , Fifth Edition, Volume I, Chapter 13.2.1 - Paved Roads, (2011).

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