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Air Quality Technical Report

Los Coches Plaza Project

PDS2020-MUP-20-006; PDS2021-TPM-21293

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Prepared for:

NLA Lakeside, LLC
105 Tallapoosa Street, Suite 307
Montgomery, Alabama 36104
Contact: Chad Williams

County of San Diego

Prepared by:

Harris & Associates

600 B Street, Suite 2000
San Diego, California 92101
(619) 236-1778
Contact: Sharon Toland

Sharon Toland, County-Approved Air Quality Consultant

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Table of Contents

Figures

Tables

Appendices

Acronyms and Abbreviations

°F	degrees Fahrenheit
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CO	carbon monoxide
County	County of San Diego
DPM	diesel particulate matter
EMFAC	Emission Factor model
GHG	greenhouse gas
LOS	level of service
mg/m^3	micrograms per cubic meter
NAAQS	National Ambient Air Quality Standards
NO	nitric oxide
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
O_3	ozone
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
ppb	parts per billion
ppm	parts per million
project	Los Coches Plaza Project
RAQS	Regional Air Quality Strategy
SAFE Rule	Safer Affordable Fuel-Efficient Vehicles Part One: National Program
SANDAG	San Diego Association of Governments
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	state implementation plan
SO_2	sulfur dioxide
SO_x	sulfur oxides
TAC	toxic air contaminant
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
$\mu g/m^3$	micrograms per cubic meter

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Executive Summary

Implementation of the proposed Los Coches Plaza Project (project) would result in emissions of air pollutants for both the construction and operational phases of the project. Implementation of the proposed project would be consistent with regional growth projections. Therefore, implementation of the proposed project would not conflict with or obstruct the implementation of the Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP).

Construction emissions would include emissions associated with fugitive dust, heavy construction equipment, and construction workers commuting to and from the site. The emissions associated with construction would be temporary and would not exceed the screening level thresholds for criteria pollutants. The increase in operational air pollutant emissions (both area and mobile [vehicles]) associated with the proposed project would not exceed the screening level thresholds established by the County of San Diego (County).

Impacts associated with exposure of sensitive receptors to substantial pollutant concentrations were analyzed for carbon monoxide (CO) and diesel particulate matter (DPM). Based on vehicle volumes at the most congested roadway intersection, the project would not result in a CO hot spot. In addition, based on the types of land uses proposed in the project, and considering existing San Diego County Air Pollution Control District (SDAPCD) requirements, impacts associated with the exposure of sensitive receptors to toxic air contaminants (TACs) would be less than significant. The project would not result in a source of significant odors compared to existing conditions.

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Section 1 Introduction

1.1 Purpose of the Report

This Air Quality Technical Report provides information on existing conditions in the County of San Diego (County), the regulatory setting, and potential impacts associated with implementation of the proposed Los Coches Plaza Project (project). The air quality analysis for the proposed project takes into account air emissions that would be associated with implementation of the proposed project compared to existing conditions.

1.2 Project Location and Description

The project site is approximately 3 acres in the northeastern quadrant of the Interstate 8/Los Coches Road interchange in the County (Figure 1). The project includes development of a 2,660-square-foot fast-food restaurant with a drive-through, a 7,385-square-foot auto parts store, and a car wash. The existing four-pump, eight-fueling-space gas station and solar panels would remain as is on site. Access to the project site is proposed opposite of the Los Coches Road and Ora Belle Lane intersection.

The project site is partially developed with an existing gas station in the southwestern portion of the site (Figure 2). The majority of the site was previously disturbed and used for storage and parking of vehicles and other equipment associated with the existing gas station. The project site is relatively flat, with a gently sloping hill down to the northern and eastern edges of the project site. Vegetation on the project site is dominated by Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, eucalyptus woodland, disturbed land, and developed land.

The project site is currently designated in the County General Plan for commercial use and zoned for General Commercial (C36) with a "B" Special Use Area Regulation Designator.

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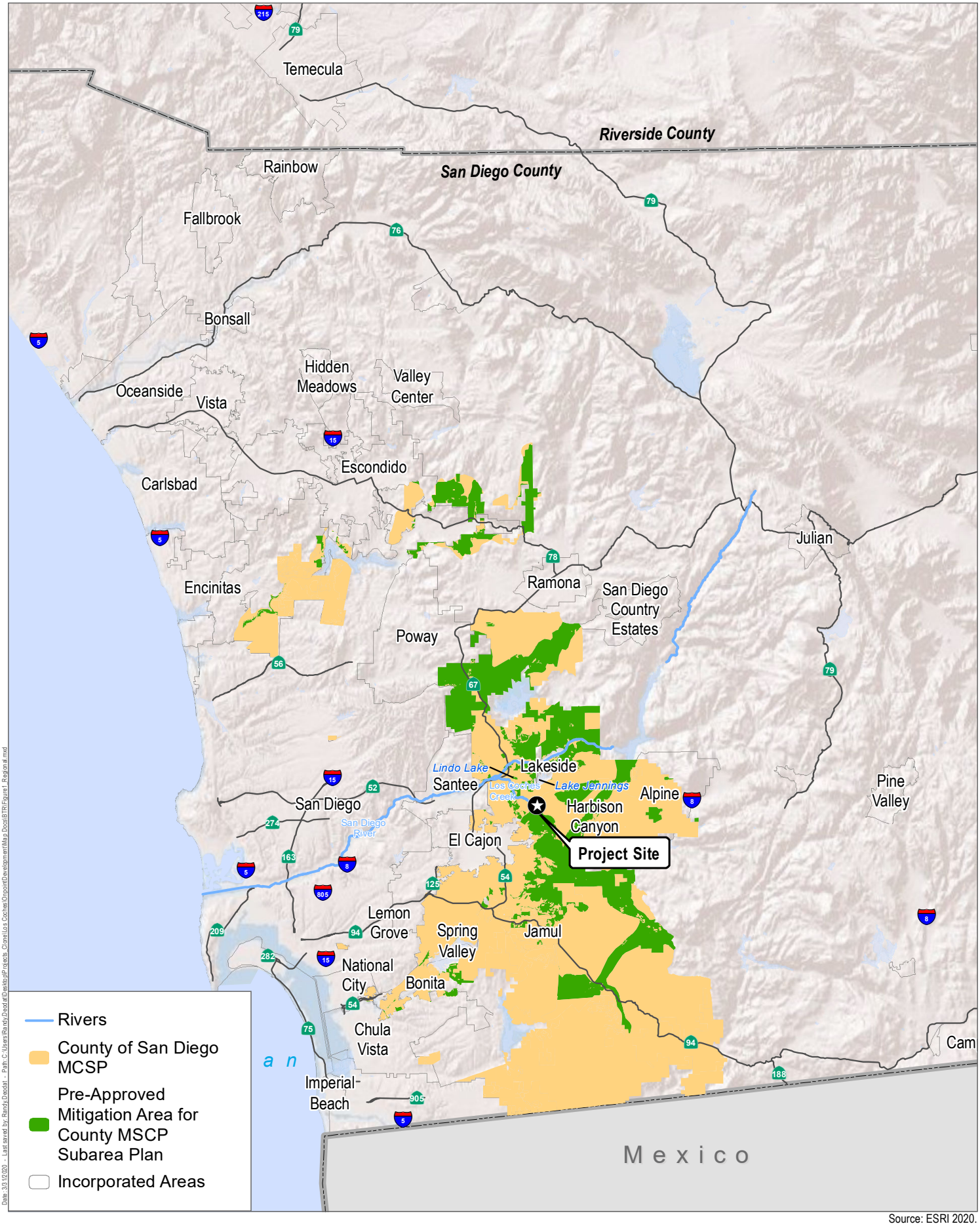

Source: ESRI 2020.

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Figure 1

Regional Location

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Source: SanGIS Imagery 2017.

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N

0 100 200 Feet

Figure 2

Project Site

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Section 2 Existing Conditions

The following section describes the existing climate and meteorology, regulatory framework, and air quality background relevant to the project site.

2.1 Existing Setting

The project site is partially developed with an existing gas station in the southwestern portion of the site (Figure 2). The majority of the site was previously disturbed and used for storage and parking of vehicles and other equipment associated with the existing gas station. The project site is relatively flat, with a gently sloping hill down to the northern and eastern edges of the project site. Vegetation on the project site is dominated by Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, eucalyptus woodland, disturbed land, and developed land.

The project site is in an area primarily developed with residential land uses. Multi-family residential development is across Los Coches Road west of the project site, and single-family residences are northwest, northeast, and east of the project site. Interstate 8 is south of the project site and separates the site from commercial development. The nearest residences to the project site are directly northeast from the project site boundary, approximately 20 feet from the property line.

2.2 Climate and Meteorology

Regional climate and local meteorological conditions influence ambient air quality. The project site is in the San Diego Air Basin (SDAB). The boundaries of the SDAB are contiguous with the political boundaries of the County. This high-pressure cell typically creates a pattern of late-night and early morning low clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The climatic classification for the County is a Mediterranean climate, with warm, dry summers and mild, wet winters (County of San Diego 2007). Meteorological data on the project site and in the surrounding area are gathered at the East El Cajon station, approximately 3 miles south of the project site (WRCC 2020). On the project site and in the surrounding area, the normal daily maximum temperature is 88.2 degrees Fahrenheit (°F) in August, and the normal daily minimum temperature is 37.2°F in January. The normal precipitation on the project site and in the surrounding area is approximately 13.5 inches annually, occurring primarily from November through March (WRCC 2020).

The high-pressure cell creates subsidence inversions, also known as “temperature inversions,” which occur during the warmer months as descending air associated with the Pacific high-pressure cell encounters cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. In addition, the region experiences daytime onshore flow and nighttime offshore flow, which leads to emissions being blown out to sea at night and returning to land the following day. Under certain conditions, this atmospheric oscillation results in the offshore transportation of air and

pollutants from the Los Angeles region to the County, which typically results in higher ozone (O_3) concentrations being measured in the County (County of San Diego 2007).

2.3 Regulatory Setting

The following sections provide a brief summary of applicable federal, state, and local regulations related to air quality.

2.3.1 Federal

2.3.1.1 Clean Air Act

The Clean Air Act (CAA) of 1970 is the comprehensive federal law that regulates air emissions from stationary and mobile sources. The CAA authorizes the U.S. Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and welfare and to regulate emissions of hazardous air pollutants. Current NAAQS are listed in Table 1. The USEPA classifies air basins (or portions of air basins) as being in "attainment," "nonattainment," or "unclassified" for each criteria air pollutant based on whether or not the NAAQS have been achieved. If an area is designated as unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. The attainment status of the County for the criteria air pollutants is addressed in Section 2.4, Background Air Quality.

Table 1. State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[a]	Federal Standards[b]	
		Concentration[c]	Primary[c, d]	Secondary[c, e]
O_3[f]	1-hour	0.09 ppm (180 µg/m^3)	—	Same as primary standards
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
PM_{10}[g]	24-hour	50 µg/m^3	150 µg/m^3	Same as primary standards
	Annual arithmetic mean	20 µg/m^3	—	
$PM_{2.5}$[g]	24-hour	—	35 µg/m^3	Same as primary standards
	Annual arithmetic mean	12 µg/m^3	12 µg/m^3	15 µg/m^3
CO	8-hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
NO_2[h]	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (470 mg/m^3)	100 ppb (188 µg/m^3)	

Table 1. State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[a]	Federal Standards[b]	
		Concentration[c]	Primary[c, d]	Secondary[c, e]
SO_2[i]	Annual arithmetic mean	—	0.030 ppm (for certain areas)	—
	24-hour	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)	—
	3-hour	—	—	0.5 ppm (1,300 µg/m³)
	1-hour	0.25 ppm (655 µg/m³)	75 ppb (196 µg/m³)	—
Lead[j, k]	30-day average	1.5 µg/m³	—	—
	Calendar quarter	—	1.5 µg/m³ (for certain areas)	Same as primary standard
	Rolling 3-month average[g]	—	0.15 µg/m³	
Visibility-reducing particles[l]	8-hour	See note l	No federal standards	
Sulfates	24-hour	25 µg/m³	No federal standards	
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m³)	No federal standards	
Vinyl chloride[j]	24-hour	0.01 ppm (26 µg/m³)	No federal standards	

Source: CARB 2016.

Notes: µg/m³ = micrograms per cubic meter; CO = carbon monoxide; mg/m³ = micrograms per cubic meter; NO_2 = nitrogen dioxide; O_3 = ozone; $PM_{2.5}$ = fine particulate matter; PM_{10} = respirable particulate matter; ppb = parts per billion; ppm = parts per million; SO_2 = sulfur dioxide

[a] State standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility-reducing particles are values that are not to be exceeded. The standards for sulfates, lead, hydrogen sulfide, and vinyl chloride standards are not to be equaled or exceeded. California Ambient Air Quality Standards (CAAQS) are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] Federal standards (other than O_3, particulate matter, and those based on annual averages) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations averaged over 3 years are equal to or less than the standard. Contact the USEPA for further clarification and current national policies.

[c] Concentration is first expressed in units in which it was promulgated. Equivalent units given in parentheses are based on 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] National Primary Standards: The levels of air quality necessary with an adequate margin of safety to protect the public health.

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

[f] On October 1, 2015, the federal 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[h] To attain the 1-hour federal 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 ppb. State standards are in units of ppm. To directly compare the national 1-hour standard to the state standards, the units can be converted from ppb to ppm. In this case, the federal standard of 100 ppb is identical to 0.100 ppm.

[i] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour federal standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 federal standards (24-hour and annual) remain in effect until 1 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 federal standard is in units of ppb. State standards are in units of ppm. To directly compare the 1-hour federal standard to the state standard, the units can be converted to ppm. In this case, the federal standard of 75 ppb is identical to 0.075 ppm.

[j] The California Air Resources Board (CARB) had identified lead and vinyl chloride as TACs with no determined threshold level of exposure for adverse health effects. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The federal standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until 1 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.

[l] In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe Air Basin 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.

The CAA requires states to develop a plan to attain and maintain the NAAQS in all areas of the country and a specific plan to attain the standards for each area designated as nonattainment for the NAAQS. These plans, known as "state implementation plans (SIPs)," are developed by state and local air quality management agencies and submitted to the USEPA for approval. SIPs include strategies and control measures to attain the NAAQS by deadlines established by the CAA. SIPs are modified periodically to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them.

2.3.2 State

2.3.2.1 California Ambient Air Quality Standards

The California Air Resources Board (CARB) is part of the California Environmental Protection Agency and is responsible for the coordination and administration of both federal and state air pollution control programs in California. The CAA allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. California has adopted ambient standards, the California Ambient Air Quality Standards (CAAQS), that are equal to or stricter than the federal standards for six criteria air pollutants and include a reasonable margin of safety to protect the more sensitive receptors in the population. The CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations and are provided in Table 1. Similar to the CAA, areas have been designated as attainment, nonattainment, or unclassified with respect to the state ambient air quality standards. The attainment status of the County for the criteria air pollutants is addressed in Section 2.4.

2.3.3 Local

2.3.3.1 Measures to Reduce Particulate Matter in the County of San Diego

The San Diego County Air Pollution Control District (SDAPCD) prepared the Measures to Reduce Particulate Matter in San Diego County in December 2005. The report identifies existing federal, state, and local measures to control particulates in the SDAB and outlines potential measures for particulate matter control that the SDAPCD may further evaluate for future rule adoption. The report does not outline a plan for ambient air quality standards compliance with which the project would need to implement or demonstrate compliance. As such, the report is not discussed further in this analysis.

2.3.3.2 Regional Air Quality Strategy

CARB requires air districts to attempt, achieve, and maintain the CAAQS by the earliest practicable date. To this end, districts are required to develop plans for attaining the CAAQS. A regional air quality strategy was initially adopted by the SDAPCD in 1992 and has generally been updated on a triennial basis in accordance with state requirements. The SDAPCD most recently adopted the 2022 Revision of the Regional Air Quality Strategy for San Diego County (RAQS) (SDAPCD 2023a). The County is in nonattainment for 8-hour O_3 NAAQS. The RAQS was developed pursuant to California Clean Air Act requirements and identifies feasible emission control measures to provide progress toward attaining the state O_3 standard in the County. The pollutants addressed are volatile organic compounds (VOCs) and nitrogen oxides (NO_x), which are precursors to the photochemical formation of O_3 (the primary component of smog). The RAQS control measures focus on emission sources under the SDAPCD's authority, specifically stationary emission sources (such as power plants and manufacturing and industrial facilities) and some area-wide sources (such as water heaters, architectural coatings, and consumer products). However, the emission inventories and projections in the RAQS reflect the impact of all emission sources and control measures, including those under the jurisdiction of CARB (on-road and off-road motor vehicles) and the USEPA (aircraft, ships, and trains). Thus, while legal authority to control various pollution sources is divided among agencies, the SDAPCD is responsible for reflecting federal, state, and local measures in a single plan to achieve state O_3 standards in the County.

2.3.3.3 San Diego County Air Pollution Control District Rules

The SDAPCD is also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws. Development projects in the County may be subject to the following SDAPCD rules (as well as others):

- **Rule 50, Visible Emissions**: Sets limitations on the discharge of visible emissions into the atmosphere.
- **Rule 51, Nuisance:** Prohibits emissions that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or cause injury or damage to business or property
- **Rule 52, Particulate Matter:** Establishes limits to the discharge of any particulate matter from non-stationary sources
- **Rule 54, Dust and Fumes:** Establishes limits to the amount of dust or fume discharged into the atmosphere in any 1 hour
- **Rule 55, Fugitive Dust Control:** Sets restrictions on visible fugitive dust from construction and demolition projects
- **Rule 67, Architectural Coatings:** Establishes limits to the VOC content for coatings applied in the SDAPCD

Rules 61.3, 61.4, 61.3.1, and 61.4.1 are the SDAPCD rules applicable to gasoline-dispensing facilities. They regulate aboveground and underground storage tanks. These rules implement CARB Executive Orders that require gas stations to be equipped with vapor recovery systems.

In addition, Rule 1200 applies to any new, relocated, or modified emission unit that may increase emissions of one or more TACs. Rule 1210 implements the public notification and risk reduction requirements of the state's Air Toxics "Hot Spots" Information and Assessment Act and requires facilities to reduce risks to acceptable levels within 5 years.

2.3.3.4 San Diego County General Plan

The Conservation and Open Space Element of the County General Plan includes the following goals and policies that address air quality and climate change:

- **Goal COS-14. Sustainable Land Development.** Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs [greenhouse gases] through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment.
  - **COS 14.1. Land Use Development Form.** Require that development be located and designed to reduce vehicular trips (and associated air pollution) by utilizing compact regional and community-level development patterns while maintaining community character.
  - **COS 14.2. Villages and Rural Villages.** Incorporate a mixture of uses within Villages and Rural Villages that encourage people to walk, bicycle, or use public transit to reduce air pollution and GHG emissions.
  - **COS 14.3. Sustainable Development.** Require design of residential subdivisions and nonresidential development through "green" and sustainable land development practices to conserve energy, water, open space, and natural resources.
  - **COS 14.8. Minimize Air Pollution.** Minimize land use conflicts that expose people to significant amounts of air pollutants.
  - **COS 14.9. Significant Producers of Air Pollutants.** Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.
  - **COS 14.10. Low-Emission Construction Vehicles and Equipment.** Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.

2.3.3.5 San Diego County Grading Ordinance

Section 87.428, Dust Control Measures, of the County Grading Ordinance requires that clearing and grading be carried out with dust control measures adequate to prevent the creation of a nuisance to people or public or private property. Clearing, grading, or improvement plans are required to include measures such as the following to achieve this result: watering, application of surfactants, shrouding, control of vehicle speeds, paving of access areas, or other operational or technological measures to reduce the dispersion of dust. These project design measures are to be incorporated into all earth-disturbing activities to minimize the amount of particulate matter emissions from construction.

2.3.3.6 State Implementation Plan

The CAA requires plans that identify how nonattainment areas will attain or maintain the NAAQS. The CAA requires the USEPA to review each plan and any plan revisions and to approve the plan or revisions if consistent with the CAA. Key elements of these plans include emissions inventories, emission control strategies and rules, air quality data analyses, modeling, air quality progress, and attainment or maintenance demonstrations. Individual district plans are submitted to CARB as part of the SIP. As mentioned previously, the County is currently designated as a nonattainment area for the 8-hour O_3 NAAQS. The SDAPCD adopted its Ozone Attainment Plan in December 2016.

2.4 Background Air Quality

Historically, air quality laws and regulations have divided air pollutants into two broad categories: criteria air pollutants and non-criteria pollutants, or TACs. Criteria air pollutants are a group of common air pollutants regulated by the federal and state governments by means of ambient standards based on criteria regarding health and environmental effects of pollution (USEPA 2022a). TACs are pollutants with the potential to cause significant adverse health effects. Unlike the air quality standards for criteria pollutants to protect health and the environment, in California, CARB identifies exposure thresholds for TACs that indicate levels below which no significant adverse health effects are anticipated from exposure to the identified substance. However, no thresholds are specified for TACs found to have no safe exposure level or where insufficient data are available to identify an exposure threshold (CARB 2023a).

2.4.1 Criteria Air Pollutants

The criteria air pollutants pertinent to the analysis in this report are CO, NO_x, O_3, particulate matter, and sulfur dioxide (SO_2). The following describes the health effects for each of these criteria air pollutants. Emissions from lead typically result from industrial processes such as ore and metals processing and leaded aviation gasoline (USEPA 2022b). These sources are not proposed as part of the project; therefore, lead emissions are not included in this analysis.

Carbon Monoxide (CO). CO is a colorless, odorless, poisonous gas produced by combustion processes, primarily mobile sources. When CO gets into the body, it combines with chemicals in the blood and prevents blood from providing oxygen to cells, tissues, and organs. Because the body requires oxygen for energy, high-level exposure to CO can cause serious health effects, including death (USEPA 2022c).

Nitrogen Oxides (NO_x). NO_x is a general term pertaining to compounds including nitric oxide (NO), nitrogen dioxide (NO_2), and other oxides of nitrogen. NO_x is produced from burning fuels, including gasoline, diesel, and coal. NO_x reacts with VOCs to form ground-level O_3 (smog). NO_x is linked to a number of adverse respiratory systems effects (USEPA 2023a).

Ozone (O_3). Ground-level O_3 is not emitted directly into the air but is formed by chemical reactions of "precursor" pollutants (NO_x and VOCs) in the presence of sunlight. Major emissions sources include NO_x and VOC emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents. O_3 can trigger a variety of health problems, particularly for sensitive receptors, including children, the elderly, and people of all ages who have lung diseases, such as asthma (USEPA 2023b).

Particulate Matter (PM_{10} and $PM_{2.5}$). Particulate matter includes dust, metals, organic compounds, and other tiny particles of solid materials that are released into and move around in the air. Particulates are produced by many sources, including the burning of diesel fuels by trucks and buses, industrial processes, and fires. Particulate pollution can cause nose and throat irritation and heart and lung problems. Particulate matter is measured in microns, which are 1 millionth of a meter in length (or 1 thousandth of a millimeter). PM_{10} is small (i.e., respirable) particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter (CARB 2023b).

Sulfur Dioxide (SO_2). SO_2 is formed primarily by the combustion of sulfur-containing fossil fuels, especially at power plants and industrial facilities. SO_2 is linked to a number of adverse effects on the respiratory system (USEPA 2023c).

2.4.2 Non-Criteria Pollutants

2.4.2.1 Toxic Air Contaminants

TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. The two primary emissions of concern regarding health effects for land development projects are CO and diesel particulate matter (DPM). The health effects of CO are described previously. DPM is a mixture of many exhaust particles and gases that is produced when an engine burns diesel fuel. Compounds found in diesel exhaust are carcinogenic. Some short-term (acute) effects of diesel exhaust exposure include eye, nose, throat, and lung irritation and headaches and dizziness. Long-term exposure is linked to increased risk of cardiovascular, cardiopulmonary, and respiratory disease and lung cancer (OSHA 2013).

2.4.3 Air Quality Monitoring Data

The closest air quality monitoring station to the project site is the East El Cajon station at Lexington Elementary School, approximately 4 miles southwest of the project site. This station monitors ambient O_3, NO_2, PM_{10}, and $PM_{2.5}$ concentrations. Table 2 presents a summary of the highest pollutant concentrations monitored during the 3 most recent years (2017 through 2019) for which the SDAPCD has reported data. No CO data is available from any monitoring site in the SDAB after 2012, and no data is available for SO_2 after 2013. However, with one exception for CO during the firestorms of October 2003, the SDAB has not violated the state or federal standards for CO or SO_2 in the last 20 years (SDAPCD 2017).

As shown in Table 2, the 1-hour O_3 concentration exceeded the state standard once in 2017. The 8-hour O_3 concentration exceeded the state standard multiple times in 2017, 2018, and 2019. The daily PM_{10} concentration did not exceed the state or federal standard during the 2017 to 2019 period. The federal 24-hour $PM_{2.5}$ standard was violated 1 day in 2018 but was not exceeded in 2017 or 2019. The state standard for NO_2 was not exceeded from 2017 through 2019.

Table 2. Air Quality Monitoring Data

Pollutant	Monitoring Station	2017	2018	2019
O_3				
Maximum 1-hour concentration (ppm)	East El Cajon – Lexington Elementary School	0.096	0.087	0.094
Days above 1-hour state standard (>0.09 ppm)		1	0	0
Maximum 8-hour concentration (ppm)		0.081	0.079	0.074
Days above 8-hour state standard (>0.07 ppm)		9	2	2
PM_{10}				
Peak 24-hour concentration ($\mu g/m^3$)	East El Cajon – Lexington Elementary School	50	43	38.7
Days above state standard (>50 $\mu g/m^3$)		0	0	0
Days above federal standard (>150 $\mu g/m^3$)		0	0	0
$PM_{2.5}$				
Peak 24-hour concentration ($\mu g/m^3$)	East El Cajon – Lexington Elementary School	31.8	36.2	23.8
Days above federal standard (>35 $\mu g/m^3$)		0	1	0
NO_2				
Peak 1-hour concentration (ppm)	East El Cajon – Lexington Elementary School	0.045	0.045	—[1]
Days above state 1-hour standard (0.18 ppm)		0	0	—[1]

Source: CARB 2023c.

Notes: NO_2 = nitrogen dioxide; O3 = ozone; $PM_{2.5}$ = fine particulate matter; PM_{10} = respirable particulate matter; ppm = parts per million, $\mu g/m^3$ = micrograms per cubic meter

[1] No data is available for NO_2 in 2019.

2.4.4 Basin Attainment Status

The USEPA classifies the SDAB as an attainment or maintenance area for the federal CO, NO_2, lead, $PM_{2.5}$, and SO_2 standards. It is unclassifiable for PM_{10} with respect to federal air quality standards. The SDAB is classified as in moderate nonattainment for O_3. The County is in nonattainment with the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. The County is designated as an attainment area for the state CO, NO, SO_2, lead, and sulfates standards. Hydrogen sulfide and visibility-reducing particles are unclassified in the County. Table 3 lists the attainment status of the County for the criteria air pollutants.

Table 3. County of San Diego Attainment Status

Pollutant	Averaging Time	State Standards	Federal Standards
O_3	1-hour	Nonattainment	No federal standard
	8-hour		Nonattainment (moderate)
PM_{10}	Annual arithmetic mean	Nonattainment	No federal standard
	24-hour		Unclassified[a]
$PM_{2.5}$	Annual arithmetic mean	Nonattainment	Attainment
	24-hour	No state standard	
CO	8-hour	Attainment	Maintenance
	1-hour		
NO_2	Annual arithmetic mean	No state standard	Attainment
	1-hour	Attainment	No federal standard
Lead	Calendar quarter	No state standard	Attainment
	30-day average	Attainment	No federal standard
	Rolling 3-month average	No state standard	Attainment
SO_2	Annual arithmetic mean	No state standard	Attainment
	24-hour	Attainment	Attainment
	1-hour	Attainment	No federal standard
Sulfates	24-hour	Attainment	No federal standard
Hydrogen sulfide	1-hour	Unclassified	No federal standard
Visibility-reducing particulates	8-hour (10:00 a.m. to 6:00 p.m. [PST])	Unclassified	No federal standard

Sources: USEPA 2023d; SDAPCD 2023b.

Notes: CO = carbon monoxide; NO_2 = nitrogen dioxide; O_3 = ozone; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SO_2 = sulfur dioxide

[a] "Unclassified" indicates data are not sufficient for determining attainment or nonattainment.

Section 3 Significance Criteria and Analysis Methodologies

3.1 Guidelines for Determining Significance

The State of California has developed guidelines to address the significance of air quality impacts that are contained in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Additionally, the County has approved guidelines for determining significance in the County of San Diego Planning and Development Services Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality (County Guidelines for Determining Significance – Air Quality) (County of San Diego 2007). Based on these guidelines, a project would have a significant air quality impact if it would:

- **Guideline 1:** Conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP.
- **Guideline 2:** Contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.
- **Guideline 3:** Expose sensitive receptors to substantial pollutant concentrations.
- **Guideline 4:** Propose a use, which would expose a considerable number of persons to objectionable odors.

3.2 Methodology and Assumptions

The air quality analysis in this report was prepared in accordance with the methods in the County Guidelines for Determining Significance – Air Quality provided by the County (County of San Diego 2007).

Daily air pollutant emissions during construction were estimated using the assumed worst-case activity data and the emission factors included in the California Emissions Estimator Model (CalEEMod), version 2020.4.0. For the purposes of modeling a worst-case construction scenario, it was assumed that project construction would take 10 months. A starting year of 2021 is assumed, which is conservative because default construction emissions assumptions decrease over time. Table 4 shows the anticipated construction phases and assumed length of each phase. Each phase of construction would occur sequentially with no overlap between the phases.

Table 4. Construction Phases

Construction Phase	Time Period
Site Preparation	1 month
Grading	2.5 months
Building Construction	5.5 months
Paving	2 weeks
Architectural Coating	2 weeks

It is assumed that 3 acres would be disturbed during grading. Approximately 11,000 cubic yards of net import would be required. It is assumed that approximately 73,450 square feet of paving would be required. Model defaults were used to estimate emissions associated with construction equipment, daily vehicle trips, and haul trip distance. A complete listing of the assumptions used in the analysis and model output is provided in Appendix A, CalEEMod Outputs, of this report.

Operational emissions were also estimated using CalEEMod. Modeling output files are provided in Appendix A of this report. Only proposed new uses were included in the model to calculate the net change in emissions. Operation of the existing gas station would remain the same with project implementation. CalEEMod default assumptions for energy demand and area sources are assumed for all land uses. Trip generation rates were obtained from LLG (2021a). To represent the project's net increase in vehicle trips on area roadways, only primary trips were modeled. Vehicle miles from pass-by and diverted trips would generally occur without project implementation. The project proposes uses similar to those that already exist in the area, and it is likely that customers in the area are currently using similar services and would select the project site due to its convenience. This would generally reduce trip lengths from diverted trips compared to existing trips to similar uses because it is assumed that customers would generally select the project site if it provided similar services closer to the customer. If the project were to provide new uses where they do not currently exist, it is assumed that customers from a wider area would drive to the site to access these services, increasing trip lengths. Primary trips were provided by LLG (2021b) based on the SANDAG (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (2002). It is likely that these rates are conservative because, as noted, similar uses currently exist in the area. The proposed project would not create a new area destination that would generate new primary trips. For example, an existing car wash on the same site as a gas station is 0.3 mile south of the project site on the opposite side of Interstate 8. Therefore, the proposed project would not introduce a new service that is not currently available in the project vicinity that would generate new trips specific to the proposed uses.

Average trip length for the car wash and auto parts store have been modified from CalEEMod default assumptions for primary trips to reflect the proximity of similar uses. It is assumed that the project site would primarily be selected when it would provide a more convenient option compared to nearby similar uses. Average distance from the site to the closest similar uses is assumed for car wash and auto parts store trips. The closest existing drive-through automatic car washes to the project site are approximately 0.3 mile south, 2.5 miles northwest, and 4.3 miles west of the project site, or an average driving distance of 2.4 miles. The closest existing auto parts stores to the project site are 1.6 miles southwest, 1.8 miles southwest, and 2.6 miles north, or an average driving distance of 2 miles. Because the fast-food tenant is currently unknown, the nearest restaurant with similar menu options could not be determined, and the SANDAG recommended trip length was assumed. Modeling conservatively does not account for use of transit and existing sidewalks to access the site. The proposed project would be within walking distance of existing residences.

CalEEMod uses the inventory from Emission Factor (EMFAC) 2017 to estimate vehicle emissions and includes the option to take into account implementation of the federal Safer Affordable Fuel-Efficient Vehicles (SAFE) Rule. This option was applied to the proposed project but is conservative because California's ability to implement its own fuel economy standards has been restored since modeling was completed.

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Section 4 Project Impact Analysis

4.1 Conformance to the Regional Air Quality Strategy

4.1.1 Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and the County Guidelines for Determining Significance – Air Quality, the proposed project would have a significant impact if it would conflict with or obstruct the implementation of the RAQS or applicable portions of the SIP.

4.1.2 Significance of Impacts Prior to Mitigation

The applicable air quality planning documents for the SDAPCD are the 2022 RAQS (SDAPCD 2023a) and the Ozone Attainment Plan (SDAPCD 2016), which is the SDAPCD portion of the SIP. The RAQS and Ozone Attainment Plan were prepared by the SDAPCD for CARB to be included as part of the SIP. These plans demonstrate how the SDAB would either maintain or strive to attain the NAAQS. Both documents were developed in conjunction with each other by the SDAPCD to reduce regional O_3 emissions.

The SDAPCD relies on information from CARB and SANDAG, including projected growth in the County and resulting mobile, area, and other source emissions to project future emissions and to develop appropriate strategies for the reduction of source emissions through regulatory controls. The majority of regional ozone precursor emissions (over 60 percent) result from motor vehicle emissions (SDAPCD 2023a). These emissions are reduced primarily through emissions standards, which are established by CARB, but are further reduced at the district level through incentive programs to encourage the use of alternative transportation (SDAPCD 2023a). Because of the limited jurisdiction that SDAPCD has over mobile source emissions and the limited control that individual projects have on influencing the public's ultimate use of motor vehicles, compliance with the RAQS is based on whether or not an individual project would comply with the emissions projections contained in the RAQS. Reduction strategies were applied to the region as a whole and determined to adequately meet the NAAQS based on the regional emissions projections. A project that proposes growth that exceeds growth assumptions would potentially conflict with the RAQS and SIP because it would potentially result in mobile source emissions that would exceed the projected emissions inventory.

CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and the County. That is, the emissions estimates that CARB and the SDAPCD use to plan for achieving ambient air quality standards compliance are based on the land uses projected by SANDAG. The use of construction equipment in the RAQS is estimated for the region on an annual basis, and construction-related emissions are estimated as an aggregate in the RAQS. Therefore, the project would not increase the assumptions for off-road equipment use in the RAQS.

Assumptions for land use development used in the RAQS were taken from local and regional planning documents. Emission forecasts rely on projections of vehicle miles traveled by the metropolitan planning organizations, such as SANDAG, and population, employment, and land use projections made by local jurisdictions during development of the area and General Plans. As such, as determined in the County Guidelines for Determining Significance – Air Quality, projects that propose development consistent with or less than the growth projections anticipated by a General Plan would be consistent with the RAQS and the SIP because the emissions resulting from these projects have been accounted for in the air quality plans (County of San Diego 2007).

The project site is currently designated in the County General Plan for commercial use and zoned for General Commercial (C36) with a "B" Special Use Area Regulation Designator. The project proposes commercial development on the site, which is consistent with the existing County General Plan regional category, land use designation, and General Commercial (C36) and "B" Special Use Area Regulation Designator. Commercial uses that would generate criteria pollutant emissions were anticipated in the existing General Commercial (C36) zoning and are consistent with this zoning designation. Therefore, implementation of the proposed project would not exceed the County General Plan growth projections for the site, and the project would not conflict with the RAQS or SIP.

4.1.3 Mitigation Measures and Design Considerations

None required.

4.1.4 Cumulative Impacts

The RAQS and SIP are intended to address cumulative impacts in the SDAB based on future growth predicted by SANDAG. As described previously, implementation of the proposed project would be consistent with the growth projections in the RAQS and SIP. According to the Transportation Impact Analysis prepared by LLG (2021a), no new or planned substantial individual projects were identified within the project vicinity. Therefore, cumulative development is not expected to result in a significant impact in terms of conflicting with the SDAPCD Air Quality Management Plans and the SIP because no cumulative projects are planned within the project vicinity that would propose development that is inconsistent with the applicable growth projections incorporated into local Air Quality Management Plans. Implementation of the project, in combination with other cumulative projects, would not conflict with or obstruct implementation of the RAQS or SIP. A cumulative impact would not occur.

4.1.5 Conclusions

The proposed project would not conflict with or obstruct the implementation of the RAQS or applicable portions of the SIP. This impact is less than significant without mitigation.

4.2 Conformance to Federal and State Ambient Air Quality Standards

4.2.1 Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and the County Guidelines for Determining Significance – Air Quality, the proposed project would have a significant impact if it would exceed the thresholds in Table 5.

Table 5. County of San Diego Pollutant Thresholds

Pollutant	Pounds/Day
CO	550
NO_x	250
PM_{10}	100
$PM_{2.5}$	55[a]
SO_x	250
VOC	75[b]

Source: County of San Diego 2007.

Notes: CO = carbon monoxide; NO_x = nitrogen oxides; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SO_x = sulfur oxides; VOC = volatile organic compound

[a] Based on the USEPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 2005.

[b] Based on the VOCs threshold from the South Coast Air Quality Management District.

The nonattainment status of regional pollutants is a result of past and present development in the SDAB, and this regional impact is largely cumulative rather than attributable to any one source and is representative of an existing air quality violation. A project's emissions may be individually limited but cumulatively considerable when taken in combination with past, present, and probable future development projects. The standards of significance are relevant to whether a project's individual emissions would result in a cumulatively considerable incremental contribution to the existing cumulative air quality conditions.

The standards in Table 5 are designed to identify those projects that would result in significant levels of air pollution, assist the region in attaining the applicable state and federal ambient air quality standards, and protect human health. Regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant (USEPA 2019). Projects that would not exceed the standards of significance would not contribute a considerable amount of criteria air pollutant emissions to local emissions or the region's emissions profile and would not impede attainment and maintenance of ambient air quality standards. However, if the region is in nonattainment status for a particular criteria pollutant, and if a project's individual emissions exceed the threshold levels, the project's incremental contribution could be considered cumulatively considerable.

The USEPA classifies the SDAB as an attainment area for the federal CO, NO_2, lead, $PM_{2.5}$, and SO_2 standards and moderate nonattainment for O_3. It is unclassifiable for PM_{10} with respect to federal air quality standards. The SDAB is listed as nonattainment with the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. Therefore, there is a significant cumulative impact to air quality resulting from air quality violations of PM_{10}, $PM_{2.5}$, and O_3 precursor (VOC and NO_x) emissions.

If the project would result in net emissions that exceed the thresholds in Table 5 for CO or SO_x, the project would result in a potentially significant air quality violation. If the project would result in net emissions that exceed the thresholds in Table 5 for PM_{10}, $PM_{2.5}$, or an O_3 precursor (VOC and NO_x), the impact would be considered a potentially significant air quality violation in addition to being a cumulatively considerable impact.

4.2.2 Significance of Impacts Prior to Mitigation

The following section quantifies the proposed project's emissions of criteria air pollutants during construction and operation and compares the emissions to applicable thresholds.

4.2.2.1 Construction Impacts

Construction activities would result in temporary increases in air pollutant emissions. These emissions would be generated as fugitive dust emissions from earth disturbance during fine site grading and exhaust emissions from operation of heavy equipment and vehicles during construction. Paving activities would emit VOCs during off-gassing.

Table 6 presents a summary of estimated maximum daily air pollutant emissions for each construction phase associated with the proposed project. It is assumed that each phase of construction would occur sequentially with no overlap between the phases.

Table 6. Construction Daily Maximum Air Pollutant Emissions

	Maximum Daily Emissions (pounds/day)							
					PM_{10}		$PM_{2.5}$	
Construction Phase	**VOC**	**NO_x**	**CO**	**SO_x**	**Fugitive**	**Exhaust**	**Fugitive**	**Exhaust**
Site Preparation	2	18	11	<1	<1	1	<1	1
Grading	2	25	12	<1	7	1	3	1
Building Construction	2	17	16	<1	<1	1	<1	1
Paving	1	9	12	<1	<1	<1	<1	<1
Architectural Coating	38	1	2	<1	<1	<1	<1	<1
Significance Threshold	**75**	**250**	**550**	**250**	**100**		**55**	
Significant Impact?	*No*	*No*	*No*	*No*	*No*		*No*	

Source: CalEEMod, version 2020.4.0. See Appendix A for model output.

Notes: CO = carbon monoxide; NO_x = nitrogen oxides; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SO_x = sulfur oxides; VOC = volatile organic compound

Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix A.

The construction emissions estimates indicate that the proposed project would not exceed the significance thresholds for any criteria air pollutants during any phase of construction. The proposed project would result in a less than significant impact related to air pollutant emissions during construction.

As discussed previously, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant (USEPA 2019). Because emissions of criteria pollutants during construction of the project would be below the applicable thresholds, it would not contribute to regional acute and long-term health impacts related to nonattainment of the ambient air quality standards.

As discussed in Section 2.4.1, Criteria Air Pollutants, criteria pollutants also have the potential to result in health impacts, such as headaches or throat irritation, at the time of exposure. However, individual exposure levels and individual reactions to localized short-term exposure to pollutant emissions from project construction cannot be feasibly determined. The localized level of O_3 that receptors may be exposed to from VOC emissions cannot be determined because the formation of O_3 is not directly determined by the quantity of VOC and NO_x emissions generated by a project (San Joaquin Valley APCD 2015). The amount of O_3 formed depends on heat and sunlight exposure, and once formed, O_3 is likely to be dispersed or carried away from the site by wind. Conversely, O_3 exposure on the site could have been transported to the site by wind and be attributable to another source (USEPA 2023b). Currently, there are no known methods that can feasibly ascertain the ultimate locations of O_3 formation associated with the emissions of O_3 precursors such as VOC and NO_x (San Joaquin Valley APCD 2015). However, the County has set screening level thresholds (Table 5) for both VOC and NO_x. These screening levels are based on CAAQS attainment and are intended to protect public health. If projects are set to be below these thresholds, it is assumed that a localized health impact would not occur. In addition, the project would result in some emissions that would result in fugitive dust. However, fugitive dust emissions are low relative to the threshold. The project would be required to comply with SDAPCD's Rule 55 and dust control measures in the County Grading Ordinance. With compliance with these measures, the project would not be anticipated to result in localized dust exposure that cause health impacts. Project construction emissions are anticipated to be below the significance thresholds, and because those emissions would be spread out across the project site and off site on haul routes, significant adverse acute health impacts as a result of project construction are not anticipated.

4.2.2.2 Operational Impacts

Area sources of air pollutant emissions associated with the proposed project include fuel combustion emissions from space and water heating, fuel combustion emissions from landscape maintenance equipment, VOC emissions from periodic repainting of interior and exterior surfaces, and natural gas use. Increased volumes of vehicles also contribute to regional emissions of criteria pollutants. The total estimated operational emissions from the proposed project are provided in Table 7. Table 7 also includes the total criteria pollutant emissions from existing operation of the gas station at the project

site and calculates the project's net increase in emissions. As shown in Table 7, operational emissions from the proposed project would not exceed any of the significance thresholds for maximum daily emissions. The County thresholds were designed to reduce potential health impacts; therefore, similar to construction emissions, the project is not anticipated to cause a health impact because it does not exceed these thresholds. As stated in Section 4.2.2.1, individual exposure levels and individual reactions to localized short-term exposure to pollutant emissions from project operation cannot be feasibly determined. Additionally, as shown in Table 7, the majority of project emissions would come from vehicular sources, which would be unlikely to result in localized emissions because emissions from driving vehicles would be spread out throughout the region. Therefore, air quality impacts associated with operation of the project would be less than significant.

Table 7. Operational Daily Maximum Air Pollutant Emissions

Emission Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Natural Gas	<1	<1	<1	<1	<1	<1
Landscape	<1	0	0	0	0	0
Consumer Products	<1	0	0	0	0	0
Architectural Coatings	<1	0	0	0	0	0
Vehicular Sources	3	3	21	<1	4	1
Total Operational Emissions	**3**	**3**	**21**	**<1**	**4**	**1**
Significance Threshold	***75***	***250***	***550***	***250***	***100***	***55***
Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*

Source: CalEEMod, version 2020.4.0. See Appendix A for model output.

Notes: CO = carbon monoxide; NO_x = nitrogen oxides; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SO_2 = sulfur dioxide; VOC = volatile organic compound

Emission quantities are rounded to the nearest whole number. Exact values are provided in Appendix A.

4.2.3 Mitigation Measures and Design Considerations

None required.

4.2.4 Cumulative Impacts

An existing cumulative impact exists in the SDAB related to PM_{10}, $PM_{2.5}$, and O_3 precursors (NO_x and VOC). As previously described, the thresholds listed in Table 5 reflect the potential for the proposed project to result in a potentially significant contribution of criteria pollutant emissions to regional air quality and ambient air quality standards attainment. A project that is consistent with the thresholds in Table 5 is considered to result in less than cumulatively considerable emissions. As demonstrated previously, construction and operation of the project would not exceed the significance thresholds and would not result in a cumulatively considerable impact.

4.2.5 Conclusions

Construction and operation of the project would not exceed the significance thresholds, as demonstrated in Tables 6 and 7. This impact would be less than significant, and no mitigation is required.

4.3 Impacts to Sensitive Receptors

4.3.1 Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines, and the County Guidelines for Determining Significance – Air Quality, the proposed project would have a significant impact if it would:

- Place sensitive receptors near CO hot spots or create CO hot spots near sensitive receptors.
- Result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without application of Toxics-Best Available Control Technology or a health hazard index greater than 1 would be deemed as having a potentially significant impact.

4.3.2 Significance of Impacts Prior to Mitigation

Sensitive receptors typically include schools, hospitals, resident care facilities, daycare centers, or other facilities that may house individuals with health conditions who would be adversely affected by changes in air quality. Figure 2 identifies the sensitive receptors in the area surrounding the project site. The nearest receptors to the project site are northeast, approximately 20 feet from the property line and project site boundary. The two primary emissions of concern regarding health effects for land development projects are CO and DPM. These emissions of concern are addressed separately below.

4.3.2.1 Carbon Monoxide Hot Spots

CO emissions are the result of the combustion process and, therefore, are primarily associated with mobile source emissions. CO concentrations tend to be higher in urban areas where there are many mobile source emissions. CO hot spots or pockets where the CO concentration exceeds the NAAQS or CAAQS, have been found to occur only at signalized intersections that operate at or below level of service (LOS) E with peak-hour trips for that intersection exceeding 3,000 trips. Therefore, a project that would place receptors within 500 feet of a signalized intersection operating at or below LOS E (peak-hour trips exceeding 3,000 trips) would have the potential to result in a significant impact related to CO hot spots. Likewise, a project that would cause a road intersection to operate at or below LOS E (with intersection peak-hour trips exceeding 3,000) would also have the potential to result in a significant impact related to CO hot spots (County of San Diego 2007).

The LOS of intersections in the project vicinity with and without project implementation is addressed in the project-specific Transportation Impact Analysis prepared by LLG (LLG 2021a). As reported in the Transportation Impact Analysis (LLG 2021a), one intersection is anticipated to operation at LOS E (AM peak hour) and LOS F (PM peak hour) under future conditions with the proposed project: the Ora Belle Lane (Project Driveway)/Los Coches Road intersection. This intersection would operate at an acceptable LOS without project implementation. However, maximum traffic volume during peak hours at this intersection is projected to be 1,407 vehicles

during the AM peak hour and 2,012 vehicles during the PM peak hour. Additionally, with implementation of the improvements recommended in the Transportation Impact Analysis, this intersection is calculated to operate at LOS B. Therefore, the proposed project would not cause an intersection with intersection peak-hour trips exceeding 3,000 to operate at or below a LOS E and would not place receptors within 500 feet of such an intersection. Therefore, the proposed project would not result in potential impact related to CO hot spots.

4.3.2.2 Toxic Air Contaminants

According to the County Guidelines for Determining Significance – Air Quality (County of San Diego 2007), DPM is the primary TAC of concern for typical land use projects that do not propose stationary sources of emissions regulated by the SDAPCD. The proposed restaurant, car wash, and retail uses are not subject to regulation by SDAPCD. However, gasoline-dispensing facilities are subject to regulation by the SDAPCD. The potential for exposure to DPM from the proposed land uses and TACs from the gasoline-dispensing facilities are addressed separately below.

Diesel Particulate Matter

Based on the South Coast Air Quality Management District's Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (SCAQMD 2003), projects that should be analyzed for DPM emissions include truck stops, distribution centers, and transit centers, which could be sources of DPM from heavy-duty diesel trucks. Since the proposed project includes general commercial use that does not meet this criteria, the primary source of DPM would be construction equipment. As shown in Table 6, implementation of the project would not result in particulate matter emissions above the screening level threshold during construction. Additionally, because DPM is considered to have long-term health effects, and because construction would be a short-term event, emissions would not result in a significant long-term health risk to surrounding receptors.

Operation of the proposed project would require some diesel truck trips for deliveries. In 2004, CARB adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling to reduce public exposure to DPM and other TACs and their pollutants. 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. The measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time. Potential localized air toxic impacts from on-site sources of DPM would be minimal because only a limited number of heavy-duty trucks would be required per month to supply the proposed uses, and the trucks that would frequent the area would not idle for extended periods.

Gasoline-Dispensing Facilities

Based on CARB siting recommendations within the Air Quality and Land Use Handbook: A Community Health Perspective (Air Quality and Land Use Handbook), a detailed health risk assessment should be conducted for proposed sensitive receptors within 1,000 feet of a warehouse distribution center, 300 feet of a large gas station, 50 feet of a typical gasoline-dispensing facility, or 300 feet of a dry-cleaning facility that uses perchloroethylene, among other siting recommendations (CARB 2005). Additionally, CARB recommends that a health risk assessment be prepared for any sensitive receptors proposed within 500 feet of a highway. The proposed project does not include any new land uses that would potentially require a health risk assessment, and there would be no change to existing gas station operation with project implementation. The proposed project is not considered a sensitive receptor and does not propose any sensitive land uses within the screening distances that would require a health risk assessment for existing nearby sensitive receptors. Therefore, impacts to sensitive receptors would be less than significant.

4.3.3 Mitigation Measures and Design Considerations

None required.

4.3.4 Cumulative Impacts

Cumulative growth in the planning area would have the potential to increase congestion and potentially result in CO hot spots. However, as described previously, the increase in vehicle trips associated with the implementation of the project, in combination with cumulative trips, would not result in traffic volumes at a significantly congested intersection that would result in a CO hot spot. Therefore, a significant cumulative impact related to CO hot spots would not occur.

The cumulative projects would also have the potential to result in a significant cumulative impact associated with sensitive receptors if, in combination, they would expose sensitive receptors to a substantial concentration of TACs that would significantly increase cancer risk. The project site is in a residential and resident-serving commercial area that would not be expected to result in significant emissions of TACs. As such, development in the surrounding area would not be expected to result in an increased risk to sensitive receptors from off-site TAC sources. As described previously, the proposed project would not result in a significant new source of TACs. Therefore, a cumulative impact would not occur.

4.3.5 Conclusions

Construction and operation of the project would not result in exposure of sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant without mitigation.

4.4 Odor Impacts

4.4.1 Guidelines for the Determination of Significance

Based on Appendix G of the CEQA Guidelines and the County Guidelines for Determining Significance – Air Quality, the proposed project would have a significant impact if it would expose a considerable number of persons to objectionable odors.

4.4.2 Significance of Impacts Prior to Mitigation

Construction associated with the proposed project could result in minor amounts of odor compounds associated with diesel-heavy equipment exhaust and from the application of materials, such as pavement. However, diesel equipment would not be consistently operating together at one time in one location, and construction near existing receptors would be temporary. Additionally, SO_x is the only criteria air pollutant with a strong, pungent odor (ATSDR 2015). As shown in Table 6, maximum construction emissions of SO_x would be less than 1 pound per day, which is well below the threshold of 250 pounds per day. Therefore, impacts associated with odors during construction would not result in nuisance odors that would result in a significant impact.

CARB's Air Quality and Land Use Handbook (CARB 2005) includes a list of the most common sources of odor complaints received by local air districts. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. However, odor issues are very subjective by the nature of odors themselves, and their measurements are difficult to quantify. The project proposes primarily restaurant and retail uses on the project site. These types of uses do not typically result in substantial sources of nuisance odors associated with operation. Odor sources from these types of uses would be from cooking food at the fast-food restaurant and trash receptacles. However, CARB does not list food processing equipment as facilities that would potentially emit substantial odors. Additionally, trash receptacles would be within enclosures, and routine trash pick-up would be provided by Republic Services. Due to distance (approximately 180 feet from nearest receptor to anticipated trash receptacle location), the nearby receptors are not likely to be affected by these odors. Existing conditions at the site include operation of a gas station; therefore, the proposed gas station would not result in a new source of odor compared to existing conditions. Additionally, as described in Section 4.3, Impacts to Sensitive Receptors, the gas station would be subject to SDAPCD requirements for vapor recovery systems that would limit exposure to odors from gasoline. Therefore, operational odor impacts would be less than significant.

4.4.3 Mitigation Measures and Design Considerations

None required.

4.4.4 Cumulative Impacts

Impacts relative to objectionable odors are limited to the area immediately surrounding the odor source and are not cumulative in nature because the air emissions that cause odors disperse beyond the sources of the odor. As the emissions disperse, the odor becomes decreasingly detectable. The area surrounding the project site is designated for residential and commercial projects that would not be expected to result in objectionable odors. In addition, implementation of the project would not generate a new source of objectionable odors compared to existing conditions. Therefore, implementation of the project, in combination with other cumulative projects, would not result in a cumulatively considerable contribution to a significant cumulative impact associated with objectionable odors.

4.4.5 Conclusions

The proposed project would not expose a considerable number of persons to objectionable odors. This impact would be less than significant without mitigation.

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Section 5 Summary of Recommended Project Design Features, Impacts, and Mitigation

The proposed project would result in emissions of air pollutants for both the construction and operational phases of the project. Implementation of the proposed project would be consistent with regional growth projections. Therefore, implementation of the proposed project would not conflict with or obstruct the implementation of the RAQS or applicable portions of the SIP.

Construction emissions would include emissions associated with fugitive dust, heavy construction equipment, and construction workers commuting to and from the site. The emissions associated with construction would be temporary and would not exceed the screening level thresholds for criteria pollutants. The increase in operational air pollutant emissions (both area and mobile) associated with the proposed project would not exceed the screening level thresholds established by the County.

Impacts associated with exposure of sensitive receptors to substantial pollutant concentrations were analyzed for CO and DPM. Based on vehicle volumes at the most congested roadway intersection, the project would not result in a CO hot spot. In addition, based on the types of land uses proposed in the project, and considering existing SDAPCD requirements, impacts associated with the exposure of sensitive receptors to TACs would be less than significant. The project would not result in a source of significant odors compared to existing conditions.

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Section 7 List of Preparers and Persons and Organizations Contacted

7.1 Preparers

Harris & Associates

Ryan Binns, PMP, ENV SP, Project Manager
Sharon Toland, County-Approved Air Quality Consultant
Kelsey Hawkins, Air Quality Technical Specialist
Lindsey Messner, Technical Editor
Randy Deodat, GIS Analyst

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Appendix A. CalEEMod Outputs

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Los Coches 2021

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	73.45	1000sqft	2.00	73,450.00	0
Fast Food Restaurant with Drive Thru	2.66	1000sqft	0.20	2,660.00	0
Hardware/Paint Store	7.39	1000sqft	0.50	7,385.00	0
Strip Mall	4.11	1000sqft	0.30	4,110.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	458.86	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Updated to 43% renewable

Land Use - Updated to match lot acreage of 3

Construction Phase - Revised to 5 month schedule

Grading - Information from applicant

Vehicle Trips - REvised with primary trip info from LLG

Mobile Land Use Mitigation -

Water And Wastewater - Revised to reflect car wash

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	6.00	50.00
tblConstructionPhase	NumDays	3.00	20.00
tblConstructionPhase	PhaseEndDate	6/10/2022	3/7/2022
tblConstructionPhase	PhaseEndDate	5/13/2022	2/7/2022
tblConstructionPhase	PhaseEndDate	7/9/2021	9/6/2021
tblConstructionPhase	PhaseEndDate	5/27/2022	2/21/2022
tblConstructionPhase	PhaseEndDate	7/1/2021	6/28/2021
tblConstructionPhase	PhaseStartDate	5/28/2022	2/22/2022
tblConstructionPhase	PhaseStartDate	7/10/2021	9/7/2021
tblConstructionPhase	PhaseStartDate	7/2/2021	6/29/2021
tblConstructionPhase	PhaseStartDate	5/14/2022	2/8/2022
tblConstructionPhase	PhaseStartDate	6/29/2021	6/1/2021
tblGrading	AcresOfGrading	50.00	3.00
tblGrading	AcresOfGrading	30.00	3.00
tblGrading	MaterialImported	0.00	11,000.00
tblLandUse	LotAcreage	1.69	2.00
tblLandUse	LotAcreage	0.06	0.20
tblLandUse	LotAcreage	0.17	0.50
tblLandUse	LotAcreage	0.09	0.30
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.018
tblProjectCharacteristics	CO2IntensityFactor	588.98	458.86
tblVehicleTrips	CC_TL	7.30	4.70
tblVehicleTrips	CC_TL	7.30	2.00
tblVehicleTrips	CC_TL	7.30	2.40
tblVehicleTrips	CNW_TL	7.30	4.70
tblVehicleTrips	CNW_TL	7.30	2.00
tblVehicleTrips	CNW_TL	7.30	2.40

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CW_TL	9.50	4.70
tblVehicleTrips	CW_TL	9.50	2.00
tblVehicleTrips	CW_TL	9.50	2.40
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	29.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	26.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	616.12	331.58
tblVehicleTrips	ST_TR	9.14	26.95
tblVehicleTrips	ST_TR	42.04	46.10
tblVehicleTrips	SU_TR	472.58	331.58
tblVehicleTrips	SU_TR	9.14	26.95
tblVehicleTrips	SU_TR	20.43	46.10
tblVehicleTrips	WD_TR	470.95	331.58
tblVehicleTrips	WD_TR	9.14	26.95
tblVehicleTrips	WD_TR	44.32	46.10
tblWater	IndoorWaterUseRate	304,438.06	987,983.15

2.0 Emissions Summary

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.2074	25.5123	15.8702	0.0392	6.6797	0.9948	7.6746	3.4754	0.9181	4.3935	0.0000	4,027.8594	4,027.8594	0.7694	0.3122	4,139.3948
2022	38.1370	15.4170	15.5358	0.0307	0.3906	0.7120	1.1025	0.1057	0.6824	0.7881	0.0000	2,885.5748	2,885.5748	0.5451	0.0538	2,913.0848
Maximum	**38.1370**	**25.5123**	**15.8702**	**0.0392**	**6.6797**	**0.9948**	**7.6746**	**3.4754**	**0.9181**	**4.3935**	**0.0000**	**4,027.8594**	**4,027.8594**	**0.7694**	**0.3122**	**4,139.3948**

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	2.2074	25.5123	15.8702	0.0392	6.6797	0.9948	7.6746	3.4754	0.9181	4.3935	0.0000	4,027.8594	4,027.8594	0.7694	0.3122	4,139.3948
2022	38.1370	15.4170	15.5358	0.0307	0.3906	0.7120	1.1025	0.1057	0.6824	0.7881	0.0000	2,885.5748	2,885.5748	0.5451	0.0538	2,913.0848
Maximum	**38.1370**	**25.5123**	**15.8702**	**0.0392**	**6.6797**	**0.9948**	**7.6746**	**3.4754**	**0.9181**	**4.3935**	**0.0000**	**4,027.8594**	**4,027.8594**	**0.7694**	**0.3122**	**4,139.3948**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.4336	8.0000e-005	8.9600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0192	0.0192	5.0000e-005		0.0204
Energy	0.0144	0.1312	0.1102	7.9000e-004		9.9700e-003	9.9700e-003		9.9700e-003	9.9700e-003		157.4253	157.4253	3.0200e-003	2.8900e-003	158.3608
Mobile	3.0504	2.6325	21.2293	0.0399	3.8304	0.0361	3.8665	1.0204	0.0337	1.0541		4,079.9979	4,079.9979	0.3441	0.2079	4,150.5628
Total	**3.4985**	**2.7638**	**21.3485**	**0.0407**	**3.8304**	**0.0461**	**3.8765**	**1.0204**	**0.0437**	**1.0641**		**4,237.4424**	**4,237.4424**	**0.3471**	**0.2108**	**4,308.9440**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4336	8.0000e-005	8.9600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0192	0.0192	5.0000e-005		0.0204
Energy	0.0144	0.1312	0.1102	7.9000e-004		9.9700e-003	9.9700e-003		9.9700e-003	9.9700e-003		157.4253	157.4253	3.0200e-003	2.8900e-003	158.3608
Mobile	3.0504	2.6325	21.2293	0.0399	3.8304	0.0361	3.8665	1.0204	0.0337	1.0541		4,079.9979	4,079.9979	0.3441	0.2079	4,150.5628
Total	**3.4985**	**2.7638**	**21.3485**	**0.0407**	**3.8304**	**0.0461**	**3.8765**	**1.0204**	**0.0437**	**1.0641**		**4,237.4424**	**4,237.4424**	**0.3471**	**0.2108**	**4,308.9440**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	Site Preparation	Site Preparation	6/1/2021	6/28/2021	5	20	
2	Grading	Grading	6/29/2021	9/6/2021	5	50	
3	Building Construction	Building Construction	9/7/2021	2/7/2022	5	110	
4	Paving	Paving	2/8/2022	2/21/2022	5	10	
5	Architectural Coating	Architectural Coating	2/22/2022	3/7/2022	5	10	

Acres of Grading (Site Preparation Phase): 3

Acres of Grading (Grading Phase): 3

Acres of Paving: 2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,233; Non-Residential Outdoor: 7,078; Striped Parking Area: 4,407 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

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
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	1,375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	36.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1591	0.0000	0.1591	0.0172	0.0000	0.0172			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**0.1591**	**0.7019**	**0.8610**	**0.0172**	**0.6457**	**0.6629**		**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

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	0.0250	0.0171	0.2247	6.2000e-004	0.0657	3.9000e-004	0.0661	0.0174	3.6000e-004	0.0178		62.6616	62.6616	1.9300e-003	1.7000e-003	63.2156
Total	**0.0250**	**0.0171**	**0.2247**	**6.2000e-004**	**0.0657**	**3.9000e-004**	**0.0661**	**0.0174**	**3.6000e-004**	**0.0178**		**62.6616**	**62.6616**	**1.9300e-003**	**1.7000e-003**	**63.2156**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 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	lb/day										lb/day					
Fugitive Dust					0.1591	0.0000	0.1591	0.0172	0.0000	0.0172			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457	0.0000	2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**0.1591**	**0.7019**	**0.8610**	**0.0172**	**0.6457**	**0.6629**	**0.0000**	**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

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	0.0250	0.0171	0.2247	6.2000e-004	0.0657	3.9000e-004	0.0661	0.0174	3.6000e-004	0.0178		62.6616	62.6616	1.9300e-003	1.7000e-003	63.2156
Total	**0.0250**	**0.0171**	**0.2247**	**6.2000e-004**	**0.0657**	**3.9000e-004**	**0.0661**	**0.0174**	**3.6000e-004**	**0.0178**		**62.6616**	**62.6616**	**1.9300e-003**	**1.7000e-003**	**63.2156**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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					6.1166	0.0000	6.1166	3.3218	0.0000	3.3218			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.1166**	**0.9158**	**7.0324**	**3.3218**	**0.8425**	**4.1643**		**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

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	0.2013	5.2774	1.2640	0.0178	0.4810	0.0786	0.5595	0.1318	0.0752	0.2070		1,953.9210	1,953.9210	0.0918	0.3101	2,048.6283
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	0.0312	0.0214	0.2809	7.7000e-004	0.0822	4.9000e-004	0.0826	0.0218	4.5000e-004	0.0222		78.3269	78.3269	2.4100e-003	2.1200e-003	79.0195
Total	**0.2325**	**5.2988**	**1.5449**	**0.0186**	**0.5631**	**0.0791**	**0.6422**	**0.1536**	**0.0756**	**0.2293**		**2,032.2479**	**2,032.2479**	**0.0942**	**0.3122**	**2,127.6478**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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	lb/day										lb/day					
Fugitive Dust					6.1166	0.0000	6.1166	3.3218	0.0000	3.3218			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.1166**	**0.9158**	**7.0324**	**3.3218**	**0.8425**	**4.1643**	**0.0000**	**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

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	0.2013	5.2774	1.2640	0.0178	0.4810	0.0786	0.5595	0.1318	0.0752	0.2070		1,953.9210	1,953.9210	0.0918	0.3101	2,048.6283
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	0.0312	0.0214	0.2809	7.7000e-004	0.0822	4.9000e-004	0.0826	0.0218	4.5000e-004	0.0222		78.3269	78.3269	2.4100e-003	2.1200e-003	79.0195
Total	**0.2325**	**5.2988**	**1.5449**	**0.0186**	**0.5631**	**0.0791**	**0.6422**	**0.1536**	**0.0756**	**0.2293**		**2,032.2479**	**2,032.2479**	**0.0942**	**0.3122**	**2,127.6478**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

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	0.0499	0.9033	0.2961	3.0700e-003	0.0948	0.0157	0.1105	0.0273	0.0150	0.0423		330.5431	330.5431	0.0104	0.0481	345.1215
Worker	0.1124	0.0769	1.0112	2.7800e-003	0.2957	1.7700e-003	0.2975	0.0784	1.6300e-003	0.0801		281.9770	281.9770	8.6900e-003	7.6400e-003	284.4702
Total	**0.1624**	**0.9801**	**1.3072**	**5.8500e-003**	**0.3905**	**0.0175**	**0.4080**	**0.1057**	**0.0167**	**0.1224**		**612.5201**	**612.5201**	**0.0191**	**0.0557**	**629.5917**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	lb/day										lb/day					
Off-Road	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

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	0.0499	0.9033	0.2961	3.0700e-003	0.0948	0.0157	0.1105	0.0273	0.0150	0.0423		330.5431	330.5431	0.0104	0.0481	345.1215
Worker	0.1124	0.0769	1.0112	2.7800e-003	0.2957	1.7700e-003	0.2975	0.0784	1.6300e-003	0.0801		281.9770	281.9770	8.6900e-003	7.6400e-003	284.4702
Total	**0.1624**	**0.9801**	**1.3072**	**5.8500e-003**	**0.3905**	**0.0175**	**0.4080**	**0.1057**	**0.0167**	**0.1224**		**612.5201**	**612.5201**	**0.0191**	**0.0557**	**629.5917**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	0.0312	0.7445	0.2491	2.9900e-003	0.0948	8.0900e-003	0.1029	0.0273	7.7400e-003	0.0350		321.7559	321.7559	9.7800e-003	0.0467	335.9180
Worker	0.1051	0.0684	0.9335	2.7000e-003	0.2957	1.6700e-003	0.2974	0.0784	1.5400e-003	0.0800		274.5377	274.5377	7.8800e-003	7.0800e-003	276.8439
Total	**0.1363**	**0.8130**	**1.1825**	**5.6900e-003**	**0.3906**	**9.7600e-003**	**0.4003**	**0.1057**	**9.2800e-003**	**0.1150**		**596.2935**	**596.2935**	**0.0177**	**0.0538**	**612.7618**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	0.0312	0.7445	0.2491	2.9900e-003	0.0948	8.0900e-003	0.1029	0.0273	7.7400e-003	0.0350		321.7559	321.7559	9.7800e-003	0.0467	335.9180
Worker	0.1051	0.0684	0.9335	2.7000e-003	0.2957	1.6700e-003	0.2974	0.0784	1.5400e-003	0.0800		274.5377	274.5377	7.8800e-003	7.0800e-003	276.8439
Total	**0.1363**	**0.8130**	**1.1825**	**5.6900e-003**	**0.3906**	**9.7600e-003**	**0.4003**	**0.1057**	**9.2800e-003**	**0.1150**		**596.2935**	**596.2935**	**0.0177**	**0.0538**	**612.7618**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.5240					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4652**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**		**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

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	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
Total	**0.0438**	**0.0285**	**0.3889**	**1.1200e-003**	**0.1232**	**7.0000e-004**	**0.1239**	**0.0327**	**6.4000e-004**	**0.0333**		**114.3907**	**114.3907**	**3.2800e-003**	**2.9500e-003**	**115.3516**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 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	lb/day										lb/day					
Off-Road	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.5240					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4652**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**	**0.0000**	**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

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	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
Total	**0.0438**	**0.0285**	**0.3889**	**1.1200e-003**	**0.1232**	**7.0000e-004**	**0.1239**	**0.0327**	**6.4000e-004**	**0.0333**		**114.3907**	**114.3907**	**3.2800e-003**	**2.9500e-003**	**115.3516**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 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					
Archit. Coating	37.9120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**38.1165**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0204	0.0133	0.1815	5.2000e-004	0.0575	3.3000e-004	0.0578	0.0153	3.0000e-004	0.0156		53.3823	53.3823	1.5300e-003	1.3800e-003	53.8308
Total	**0.0204**	**0.0133**	**0.1815**	**5.2000e-004**	**0.0575**	**3.3000e-004**	**0.0578**	**0.0153**	**3.0000e-004**	**0.0156**		**53.3823**	**53.3823**	**1.5300e-003**	**1.3800e-003**	**53.8308**

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 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	lb/day										lb/day					
Archit. Coating	37.9120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**38.1165**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0204	0.0133	0.1815	5.2000e-004	0.0575	3.3000e-004	0.0578	0.0153	3.0000e-004	0.0156		53.3823	53.3823	1.5300e-003	1.3800e-003	53.8308
Total	**0.0204**	**0.0133**	**0.1815**	**5.2000e-004**	**0.0575**	**3.3000e-004**	**0.0578**	**0.0153**	**3.0000e-004**	**0.0156**		**53.3823**	**53.3823**	**1.5300e-003**	**1.3800e-003**	**53.8308**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	3.0504	2.6325	21.2293	0.0399	3.8304	0.0361	3.8665	1.0204	0.0337	1.0541		4,079.9979	4,079.9979	0.3441	0.2079	4,150.5628
Unmitigated	3.0504	2.6325	21.2293	0.0399	3.8304	0.0361	3.8665	1.0204	0.0337	1.0541		4,079.9979	4,079.9979	0.3441	0.2079	4,150.5628

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	882.00	882.00	882.00	1,508,930	1,508,930
Hardware/Paint Store	199.03	199.03	199.03	144,891	144,891
Parking Lot	0.00	0.00	0.00		
Strip Mall	189.47	189.47	189.47	165,522	165,522
Total	1,270.50	1,270.50	1,270.50	1,819,343	1,819,343

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
Fast Food Restaurant with Drive	4.70	4.70	4.70	2.20	78.80	19.00	100	0	0
Hardware/Paint Store	2.00	2.00	2.00	13.60	67.40	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	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
Strip Mall	2.40	2.40	2.40	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.548470	0.062992	0.183336	0.122442	0.024733	0.006148	0.008613	0.006191	0.000732	0.000545	0.029420	0.000989	0.005388
Hardware/Paint Store	0.548470	0.062992	0.183336	0.122442	0.024733	0.006148	0.008613	0.006191	0.000732	0.000545	0.029420	0.000989	0.005388
Parking Lot	0.548470	0.062992	0.183336	0.122442	0.024733	0.006148	0.008613	0.006191	0.000732	0.000545	0.029420	0.000989	0.005388
Strip Mall	0.548470	0.062992	0.183336	0.122442	0.024733	0.006148	0.008613	0.006191	0.000732	0.000545	0.029420	0.000989	0.005388

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	0.0144	0.1312	0.1102	7.9000e-004		9.9700e-003	9.9700e-003		9.9700e-003	9.9700e-003		157.4253	157.4253	3.0200e-003	2.8900e-003	158.3608
NaturalGas Unmitigated	0.0144	0.1312	0.1102	7.9000e-004		9.9700e-003	9.9700e-003		9.9700e-003	9.9700e-003		157.4253	157.4253	3.0200e-003	2.8900e-003	158.3608

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	1268.2	0.0137	0.1243	0.1044	7.5000e-004		9.4500e-003	9.4500e-003		9.4500e-003	9.4500e-003		149.2001	149.2001	2.8600e-003	2.7400e-003	150.0867
Hardware/Paint Store	44.917	4.8000e-004	4.4000e-003	3.7000e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		5.2844	5.2844	1.0000e-004	1.0000e-004	5.3158
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	24.9978	2.7000e-004	2.4500e-003	2.0600e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		2.9409	2.9409	6.0000e-005	5.0000e-005	2.9584
Total		**0.0144**	**0.1312**	**0.1102**	**7.9000e-004**		**9.9700e-003**	**9.9700e-003**		**9.9700e-003**	**9.9700e-003**		**157.4253**	**157.4253**	**3.0200e-003**	**2.8900e-003**	**158.3608**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Fast Food Restaurant with Drive Thru	1.2682	0.0137	0.1243	0.1044	7.5000e-004		9.4500e-003	9.4500e-003		9.4500e-003	9.4500e-003		149.2001	149.2001	2.8600e-003	2.7400e-003	150.0867
Hardware/Paint Store	0.044917	4.8000e-004	4.4000e-003	3.7000e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004		5.2844	5.2844	1.0000e-004	1.0000e-004	5.3158
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0249978	2.7000e-004	2.4500e-003	2.0600e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		2.9409	2.9409	6.0000e-005	5.0000e-005	2.9584
Total		**0.0144**	**0.1312**	**0.1102**	**7.9000e-004**		**9.9700e-003**	**9.9700e-003**		**9.9700e-003**	**9.9700e-003**		**157.4253**	**157.4253**	**3.0200e-003**	**2.8900e-003**	**158.3608**

6.0 Area Detail

6.1 Mitigation Measures Area

Los Coches 2021 - San Diego Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Mitigated	0.4336	8.0000e-005	8.9600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0192	0.0192	5.0000e-005		0.0204
Unmitigated	0.4336	8.0000e-005	8.9600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0192	0.0192	5.0000e-005		0.0204

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	0.1039					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3289					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.3000e-004	8.0000e-005	8.9600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0192	0.0192	5.0000e-005		0.0204
Total	**0.4336**	**8.0000e-005**	**8.9600e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0192**	**0.0192**	**5.0000e-005**		**0.0204**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1039					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3289					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.3000e-004	8.0000e-005	8.9600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0192	0.0192	5.0000e-005		0.0204
Total	**0.4336**	**8.0000e-005**	**8.9600e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0192**	**0.0192**	**5.0000e-005**		**0.0204**

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 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