

## **4.2 AIR QUALITY**

This section describes the existing air quality conditions, identifies associated regulatory requirements, evaluates potential impacts, and establishes mitigation measures related to implementation of the Cypress Point project (proposed project). The following analysis is based on the Air Quality Assessment Technical Report prepared for the proposed project by Ldn Consulting, Inc. in January 2021, which is included as Appendix B of this EIR.

### **4.2.1 Existing Conditions**

#### **Environmental Setting**

The project site is located within the San Diego Air Basin (SDAB) and is subject to San Diego County Air Pollution Control District (SDAPCD) guidelines and regulations. The SDAB is 1 of 15 air basins that geographically divide California. The SDAB lies in the southwest corner of California. The SDAB comprises the entire San Diego region and covers approximately 4,260 square miles.

#### **Climate and Topography**

The primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted. Meteorological and topographical conditions, however, are also important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of air pollutants. Meteorological and topographical factors that affect air quality in the SDAB are described below.

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

The topography in the San Diego region varies greatly, from beaches on the west to mountains and desert on the east; along with local weather, it influences the dispersal and movement of pollutants in the SDAB. The mountains to the east prevent dispersal of pollutants in that direction and help trap them in inversion layers.

The interaction of ocean, land, and the Pacific High Pressure Zone maintains clear skies for much of the year and influences the direction of prevailing winds (westerly to northwesterly). Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

### **Site-Specific Meteorological Conditions**

Meteorological trends within Oceanside produce daytime highs typically ranging between 65°F in the winter to approximately 78°F in the summer with August usually being the hottest month. Median temperatures range from approximately 55°F in the winter to approximately 70°F in the summer. The average humidity is approximately 64% in the winter and about 72% in the summer (Appendix B).

### **Air Pollution Climatology**

The SDAB is currently classified as a federal nonattainment area for 8-hour ozone (O<sub>3</sub>) and a state nonattainment area for coarse particulate matter (particulate matter less than or equal to 10 microns in diameter; PM<sub>10</sub>), fine particulate matter (particulate matter less than or equal to 2.5 microns in diameter; PM<sub>2.5</sub>, and O<sub>3</sub>).

The SDAB lies in the southwest corner of California and comprises the entire San Diego region, covering 4,260 square miles, and is an area of high air pollution potential. The SDAB experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The SDAB experiences frequent temperature inversions. Subsidence inversions occur during the warmer months as descending air associated with the Pacific High Pressure Zone meets cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. Another type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce O<sub>3</sub>, commonly known as smog.

Light daytime winds, predominantly from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and oxides of nitrogen (NO<sub>x</sub>) emissions. CO concentrations are generally higher in the morning and late evening. In the morning, CO levels are elevated due to cold temperatures and the large number of motor vehicles traveling. Higher CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since

CO is produced almost entirely from automobiles, the highest CO concentrations in the SDAB are associated with heavy traffic. Nitrogen dioxide (NO<sub>2</sub>) levels are also generally higher during fall and winter days.

Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County. This often produces high O<sub>3</sub> concentrations, as measured at air pollutant monitoring stations within the County. The transport of air pollutants from Los Angeles to San Diego has also occurred within the stable layer of the elevated subsidence inversion, where high levels of O<sub>3</sub> are transported.

### ***Sensitive Receptors***

Reduced visibility, eye irritation, and adverse health impacts upon those persons termed sensitive receptors are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, as identified by the California Air Resources Board (CARB), include children, the elderly, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes. Because hotels have the potential to house children, the elderly, and people with cardiovascular and chronic respiratory diseases, although for a temporary period, patrons of the proposed hotel are considered sensitive receptors. The closest existing sensitive receptors consist of single-family residential development located east and south of the project site, see Figure 3-A of Appendix B.

### ***Pollutants and Effects***

“Criteria air pollutants” are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O<sub>3</sub>, NO<sub>2</sub>, CO, sulfur dioxide (SO<sub>2</sub>), PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. These pollutants, as well as toxic air contaminants (TACs), are discussed in this section. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

***Ozone.*** O<sub>3</sub> is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.

***Nitrogen Dioxide.*** NO<sub>2</sub> is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO<sub>2</sub> is usually visible as a reddish-brown air layer over urban areas. NO<sub>2</sub> along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO<sub>2</sub> above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO<sub>2</sub> exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.

***Carbon Monoxide.*** CO is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.

***Sulfur Dioxide.*** SO<sub>2</sub> is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO<sub>2</sub> is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO<sub>2</sub> exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO<sub>2</sub> results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

***Particulate Matter.*** Particulate matter is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM<sub>10</sub> particles are 10 microns (µm) or less and PM<sub>2.5</sub> particles are 2.5 µm or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to particulate matter levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.

***Lead.*** Lead is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead

can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.

***Toxic Air Contaminants.*** A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. 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. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC.

## 4.2.2 Regulatory Setting

### Federal

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. Primary Standards set limits for the intention of protecting public health, which includes sensitive populations such as people with asthma, children and elderly. Secondary Standards set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the standards within mandated time frames.

## State

The California Clean Air Act was adopted in 1988 and establishes the state’s air quality goals, planning mechanisms, regulatory strategies, and standards of progress.

Under the Clean Air Act, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB is responsible for ensuring implementation of the California Clean Air Act, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products. Pursuant to the authority granted to it, CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS.

## Standards and Definitions

Table 4.2-1 identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

**Visibility Reducing Particles:** Particles in the air that obstruct visibility.

**Sulfates:** are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.

**Hydrogen Sulfide (H<sub>2</sub>S):** is a colorless, toxic, and flammable gas with a recognizable smell of rotten eggs or flatulence. H<sub>2</sub>S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H<sub>2</sub>S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some people with asthma. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death.

**Vinyl Chloride:** also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).

**Table 4.2-1  
Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards <sup>a</sup>	National Standards <sup>b</sup>	
		Concentration <sup>c</sup>	Primary <sup>c,d</sup>	Secondary <sup>c,e</sup>
O <sub>3</sub>	1 hour	0.09 ppm (180 µg/m <sup>3</sup> )	—	Same as Primary Standard <sup>f</sup>
	8 hours	0.070 ppm (137 µg/m <sup>3</sup> )	0.070 ppm (137 µg/m <sup>3</sup> ) <sup>f</sup>	

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		Concentration <sup>c</sup>	Primary <sup>c,d</sup>	Secondary <sup>c,e</sup>
NO <sub>2</sub> <sup>g</sup>	1 hour	0.18 ppm (339 µg/m <sup>3</sup> )	0.100 ppm (188 µg/m <sup>3</sup> )	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	
CO	1 hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	None
	8 hours	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	
SO <sub>2</sub> <sup>h</sup>	1 hour	0.25 ppm (655 µg/m <sup>3</sup> )	0.075 ppm (196 µg/m <sup>3</sup> )	—
	3 hours	—	—	0.5 ppm (1,300 µg/m <sup>3</sup> )
	24 hours	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (for certain areas) <sup>g</sup>	—
	Annual	—	0.030 ppm (for certain areas) <sup>g</sup>	—
PM <sub>10</sub> <sup>i</sup>	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	—	
PM <sub>2.5</sub> <sup>i</sup>	24 hours	—	35 µg/m <sup>3</sup>	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup>
Lead <sup>j,k</sup>	30-day Average	1.5 µg/m <sup>3</sup>	—	—
	Calendar Quarter	—	1.5 µg/m <sup>3</sup> (for certain areas) <sup>k</sup>	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m <sup>3</sup>	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m <sup>3</sup> )	—	—
Vinyl chloride <sup>l</sup>	24 hours	0.01 ppm (26 µg/m <sup>3</sup> )	—	—
Sulfates	24- hours	25 µg/m <sup>3</sup>	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: CARB 2016.

Notes: ppm = parts per million by volume; µg/m<sup>3</sup> = micrograms per cubic meter; mg/m<sup>3</sup> = milligrams per cubic meter.

<sup>a</sup> California standards for O<sub>3</sub>, CO, SO<sub>2</sub> (1-hour and 24-hour), NO<sub>2</sub>, suspended particulate matter—PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility-reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>b</sup> National standards (other than O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> 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<sub>10</sub>, the 24-hour standard is attained when the expected number

- of days per calendar year with a 24-hour average concentration above  $150 \mu\text{g}/\text{m}^3$  is equal to or less than 1. For  $\text{PM}_{2.5}$ , the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
- c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of  $25^\circ\text{C}$  and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of  $25^\circ\text{C}$  and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
  - 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 primary and secondary NAAQS for  $\text{O}_3$  were lowered from 0.075 ppm to 0.070 ppm.
  - g To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
  - h On June 2, 2010, a new 1-hour  $\text{SO}_2$  standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971  $\text{SO}_2$  national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
  - i On December 14, 2012, the national annual  $\text{PM}_{2.5}$  primary standard was lowered from  $15 \mu\text{g}/\text{m}^3$  to  $12.0 \mu\text{g}/\text{m}^3$ . The existing national 24-hour  $\text{PM}_{2.5}$  standards (primary and secondary) were retained at  $35 \mu\text{g}/\text{m}^3$ , as was the annual secondary standard of  $15 \mu\text{g}/\text{m}^3$ . The existing 24-hour  $\text{PM}_{10}$  standards (primary and secondary) of  $150 \mu\text{g}/\text{m}^3$  also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
  - j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
  - k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard ( $1.5 \mu\text{g}/\text{m}^3$  as a quarterly average) remains in effect until 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.

### ***Toxic Air Contaminants***

The state Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. DPM is typically composed of carbon particles (“soot,” also called black carbon, or BC) and numerous organic compounds, including over 40 known cancer-causing organic substances. The CARB classified “particulate emissions from diesel-fueled engines” (i.e., DPM; 17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines including locomotives, marine vessels, and

heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000).

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000 (CARB 2000). Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel powered equipment. Several Airborne Toxic Control Measures (ATCMs) that reduce diesel emissions including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

Health risk assessments (HRAs) are used to estimate health risk impacts to existing sensitive receptors from exposure to toxic air contaminant (TAC) emissions from construction of a project. HRAs also predict the potential exposure to future residents of the project from TAC emissions related to motor vehicles. HRA analyses use air dispersion modeling and Hotspots Analysis and Reporting Program Version 2 (HARP2) to evaluate potential health risks associated with a particular project.

### ***California Health and Safety Code Section 41700***

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

## **Local**

### ***San Diego Air Pollution Control District***

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as “non-attainment areas” for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the PM<sub>2.5</sub> standard and many areas are in non-attainment for PM<sub>10</sub> as well.

California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The SDAPCD is the government agency which regulates sources of air pollution within County and all Cities within. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>). Currently, San Diego is in “nonattainment” status for federal and state O<sub>3</sub> and State PM<sub>10</sub> and PM<sub>2.5</sub>. An attainment plan is available for O<sub>3</sub>. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered NO<sub>x</sub> and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NO<sub>x</sub> reduction measures. NO<sub>x</sub> and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years.

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the Project produces unmitigable air quality emissions or if the Project produces cumulative impacts

In December 2005, SDAPCD prepared a report titled Measures to Reduce Particulate Matter in San Diego County to address implementation of Senate Bill 656 in San Diego County (Senate Bill 656 required additional controls to reduce ambient concentrations of PM<sub>10</sub> and PM<sub>2.5</sub>) (SDAPCD 2005). In the report, SDAPCD evaluated the implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities including earthmoving, demolition, and grading; bulk material storage and handling; carryout and trackout removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust.

As stated previously, the SDAPCD is responsible for planning, implementing, and enforcing the CAAQS and NAAQS in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD:

### SDAPCD Rules and Regulations

As stated above, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD, and would apply to the proposed project:

***SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions.*** Prohibits discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).

***SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance.*** Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1967).

***SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust.*** Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009).

***SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings.*** Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015).

***SDAPCD Regulation XII: Toxic Air Contaminants; Rule 1200: Toxic Air Contaminants - New Source Review.*** Requires new or modified stationary source units with the potential to emit TACs above rule threshold levels to either demonstrate that they will not increase the maximum incremental cancer risk above 1 in 1 million at every receptor location, or demonstrate that toxics best available control technology (T-BACT) will be employed if maximum incremental cancer risk is equal to or less than 10 in 1 million, or demonstrate compliance with SDAPCD's protocol for those sources with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in 1 million but less than 100 in 1 million (SDAPCD 2017a).

***SDAPCD Regulation XII: Toxic Air Contaminants; Rule 1210: Toxic Air Contaminant Public Health Risks – Public Notification and Risk Reduction.*** Requires each stationary source that is required to prepare a public risk assessment to provide written public notice of risks at or above the following levels: maximum incremental cancer risks equal to or greater than 10 in 1 million,

or cancer burden equal to or greater than 1.0, or total acute noncancer health hazard index equal to or greater than 1.0, or total chronic noncancer health hazard index equal to or greater than 1.0 (SDAPCD 2017b).

### *San Diego Association of Governments*

SANDAG is the regional planning agency for the County and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SANDAG serves as the federally designated metropolitan planning organization (MPO) for the County. With respect to air quality planning and other regional issues, SANDAG has prepared San Diego Forward: The Regional Plan (Regional Plan) for the San Diego region (SANDAG 2015). The Regional Plan combines the big-picture vision for how the San Diego region will grow over the next 35 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy (SCS), is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050.

In regard to air quality, the Regional Plan sets the policy context in which SANDAG participates and responds to the air district's air quality plans and builds off plan processes that are designed to meet health-based criteria pollutant standards in several ways (SANDAG 2015). First, it complements air quality plans by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in air quality plans. Second, the Regional Plan emphasizes the need for better coordination of land use and transportation planning, which heavily influence the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution.

On February 26, 2021, SANDAG's Board of Directors adopted the final 2021 Regional Transportation Improvement Program (RTIP). The 2021 RTIP covers five fiscal years (FY 2021 through FY 2025) and incrementally implements the SANDAG 2019 Federal Regional Transportation Plan. The 2021 RTIP is designed to implement the region's overall strategy for providing mobility and improving the safety, condition, and efficiency of the transportation system while reducing transportation related air pollution. The 2021 RTIP incrementally implements San Diego Forward: The 2019 Federal Regional Transportation Plan (2019 Federal RTP), the long-range transportation plan for the San Diego region approved by the SANDAG Board of Directors on October 25, 2019.

### *San Diego Air Basin Attainment Designation*

An area is designated in attainment when it is in compliance with the NAAQS and/or CAAQS. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare.

Pursuant to the 1990 federal Clean Air Act Amendments, the EPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as “attainment” for that pollutant. If an area exceeds the standard, the area is classified as “nonattainment” for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as “unclassified” or “unclassifiable.” The designation of “unclassifiable/attainment” means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are redesignated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as “attainment” or “nonattainment,” but based on the CAAQS rather than the NAAQS. The criteria pollutants of primary concern that are considered in this analysis are O<sub>3</sub>, NO<sub>2</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Table 4.2-2 summarizes the SDAB’s federal and state attainment designations for each of the criteria pollutants.

**Table 4.2-2**  
**San Diego Air Basin Attainment Classification**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone (O <sub>3</sub> ) – 1 hour <sup>a</sup>	Attainment <sup>a</sup>	<b>Nonattainment</b>
O <sub>3</sub> (8-hour – 2008)	<b>Nonattainment</b>	<b>Nonattainment</b>
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment	Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Attainment
Coarse Particulate Matter (PM <sub>10</sub> )	Unclassifiable	<b>Nonattainment</b>
Fine Particulate Matter (PM <sub>2.5</sub> )	Attainment	<b>Nonattainment</b>
Lead (Pb)	Attainment	Attainment
Hydrogen Sulfide	No federal standard	Unclassified
Sulfates	No federal standard	Attainment
Visibility-Reducing Particles	No federal standard	Unclassified

**Sources:** Appendix B

**Notes:** Attainment = meets the standards; Attainment/Maintenance = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or Unclassifiable = insufficient data to classify; Unclassifiable/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

<sup>a</sup> The federal 1-hour standard of 0.12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in state implementation plans (SIPs).

### ***SDAPCD Rule 20.2- Air Quality Impact Assessment Screening Thresholds***

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources. The County’s Guidelines for Determining Significance and Report Format and Content Requirements incorporate screening level thresholds from Rule 20.2 for use in all County related Air Quality Impact Assessments (AQIA) and for determining CEQA air quality impacts. These screening criteria can be used to demonstrate that a project’s total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not have air quality impact threshold for VOCs, it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District (SCAQMD). Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project’s total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 4.2-3.

Non-Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants – New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions to one of more toxic air contaminants. The rule requires that projects that propose to increase cancer risk to between 1 and 10 in a million need to implement toxics best available control technology (T-BACT) or import the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the incremental cancer risk to over 10 in one million or a health hazard index (chronic and acute) greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. EPA uses the term VOC and the CARB’s Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to define essentially the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because Air Quality models directly calculate ROG in place of VOC.

**Table 4.2-3  
Screening Level Thresholds for Criteria Pollutants**

<b>Pollutant</b>	<b>Total Emissions (Pounds per Day)</b>
<i>Construction Emissions</i>	
Respirable Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	100 and 55
Nitrogen Oxide (NO <sub>x</sub> )	250
Sulfur Oxide (SO <sub>x</sub> )	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75

**Table 4.2-3  
Screening Level Thresholds for Criteria Pollutants**

Pollutant	Total Emissions (Pounds per Day)
Reactive Organic Gases (ROG) SCAQMD	75
<i>Operational Emissions</i>	
Respirable Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	100 and 55
Nitrogen Oxide (NO <sub>x</sub> )	250
Sulfur Oxide (SO <sub>x</sub> )	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

### *Air Quality Monitoring Data*

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County, which measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. Local ambient air quality is monitored by the SDAPCD.

The nearest SDAPCD-operated monitoring stations are the Camp Pendleton and Escondido monitoring stations, which are located approximately 3.5 miles west of the project site and 16 miles to the southeast of the project site, respectively. The most recent background ambient air quality data and number of days exceeding the ambient air quality standards from 2015 to 2017 are presented in Table 4.2-4.

**Table 4.2-4  
Three-Year Ambient Air Quality Summary near the Project Site**

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2015	2016	2017	Days Exceeded over 3 Years
O <sub>3</sub> (ppm)	Camp Pendleton or Escondido Monitoring Station	1 Hour	0.09 ppm	No Standard	0.09	0.08	0.09	0
		8 Hour	0.070 ppm	0.070 ppm	0.08	0.07	0.08	10
* PM <sub>10</sub> (µg/m <sup>3</sup> )		24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	30	–	–	N/A
Annual Arithmetic Mean		20 µg/m <sup>3</sup>	No Standard	19.4	–	–	N/A	

**Table 4.2-4  
Three-Year Ambient Air Quality Summary near the Project Site**

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2015	2016	2017	Days Exceeded over 3 Years
* PM <sub>2.5</sub> (µg/m <sup>3</sup> )		24 Hour	No Standard	35 µg/m <sup>3</sup>	29.4	–	–	N/A
		Annual Arithmetic Mean	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	8.6	–	–	N/A
NO <sub>2</sub> (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.006	0.006	0.006	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.060	0.072	0.063	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	3.1	–	–	N/A
		8 Hour	9 ppm	9 ppm	2.0	–	–	N/A

**Notes:**

- Yearly maximums marked with “-” indicated data was not available for either monitoring station.
- Days exceeded marked with “N/A” indicate no data available.
- \* Data was selected from the Escondido Monitoring Station. All other data presented was collected at the Camp Pendleton Monitoring Station.
- SO<sub>2</sub> is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO<sub>2</sub> emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is .004 ppm and the most restrictive standard (CAAQS for SO<sub>2</sub>) is 0.25 ppm.
- Three years of data from 2015 to 2017 is shown since Escondido no longer collects data. The data for 2018 and 2019 is similar

***Oceanside General Plan***

The City of Oceanside General Plan includes various policies related to improving air quality (both directly and indirectly) (City of Oceanside 2002). Applicable policies include the following.

**Land Use Element*****Bicycle Facilities***

**Policy A:** Development shall provide Class II Bikeways (Bike Lanes) on all secondary, major, and prime arterials.

**Policy B:** Collector streets which function as links for Bicycle Circulation System shall require Class II Bikeways (Bike Lanes). In such cases the City shall reduce hazards to cyclists on collector streets by eliminating on-street parking.

**Policy D:** The use of land shall integrate the Bicycle Circulation System with auto, pedestrian, and transit systems:

1. Development shall provide short-term bicycle parking and long-term bicycle storage facilities such as bicycle racks, pedestal posts, and rental bicycle lockers.
2. Development shall provide safe and convenient bicycle access to high activity land uses, such as schools, parks, shopping, employment, and entertainment centers.

*Pedestrian*

**Policy A:** The construction of five (5) foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.

*Energy*

**Policy A:** The City shall encourage the design, installation, and use of passive and active solar collection systems.

**Policy B:** The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land developments or uses.

**Policy C:** The City shall encourage the use of long-term lower cost energy sources.

*Grading and Excavation*

**Policy A:** Investigation and evaluation of affected areas will indicate the measures to be included, such as the following measures:

1. Keep Grading to a minimum; leave vegetation and soils undisturbed wherever possible.
2. Plant bare slopes and cleared areas with appropriate vegetation immediately after grading.
3. Chemically treat soils to increase and resistance to erosion.
4. Install retaining structures where appropriate.
5. Construct drainage systems to direct and control rate of surface runoff.
6. Construct silt traps and settling basins in drainage systems.
7. Construct weirs and check dams on streams.

## Circulation Element

### Transportation Demand Management

The City shall:

**Policy A:** Encourage the reduction of vehicle miles, reduction of the total number of daily and peak hour vehicle trips, and provide better utilization of the circulation system through development and implementation of Transportation Demand Management and Transportation System Management programs. These may include implementation of mandatory peak-hour trip reduction, requirements for staggered work hours, telecommunication, increased development of employment centers where transit usage is highly viable, encouragement of ride sharing in the public and private sector, provision of park-and-ride facilities adjacent to the regional transportation system, and provision for transit subsidies.

**Policy B:** Maintain and implement the policies and recommendations of the Bicycle Master Plan as part of the Recreational Trails Element. These facilities shall connect residential areas with schools, parks, recreation areas, major employment centers, and neighborhood commercial areas.

**Policy C:** Maintain and implement the policies and recommendations of the Pedestrian Master Plan as part of the Recreational Trails Element to ensure pedestrian access along streets and other locations throughout the City are properly maintained and provided.

**Policy D:** Support parking policies that increase the cost of parking and/or reduce the supply of off-street parking to encourage drivers to consider using alternative modes of transportation or carpool/vanpool opportunities where transit facilities are available.

**Policy E:** Encourage businesses to offer financial incentives to use modes of transportation other than the single occupant vehicle by way of subsidized transit, carpool/vanpool programs, bike to work programs, parking cash-out programs, or some combination of these.

**Policy F:** Encourage new developments to provide on-site facilities such as showers, lockers, carpool stalls, and bicycle racks.

### Bicycle Facilities

The City shall:

**Policy A:** Integrate bicycle and pedestrian planning and safety considerations more fully into the planning and design of the roadway network, transit facilities, public buildings, and parks.

**Policy B:** Provide and maintain a safe, direct, and comprehensive bicycle network connecting neighborhoods, employment locations, public facilities, transit stations, parks and other key destinations.

**Policy C:** Plan Class II bicycle lanes into all prime arterial, major arterials, and secondary collectors where safe and appropriate as determined by City staff.

**Policy D:** Encourage large new developments to be designed with features such as secure bicycle parking and lockers, bike racks, shower facilities, and other amenities that accommodate bicycle users.

### *Pedestrian Facilities*

The City shall:

**Policy A:** Require the construction of a minimum five-foot wide sidewalk in all new developments and street improvements but will encourage sidewalk widths that go beyond the minimum five-foot ADA standards in areas with high pedestrian activity.

**Policy B:** Encourage the inclusion of public walkways, open space, or trails for pedestrian usage in large, private developments.

### *Oceanside Climate Action Plan and Energy and Climate Action Element*

On May 8, 2019, the City Council voted to adopt the Climate Action Plan (CAP) as a part of their General Plan Update, which also includes development of a policy framework to the Energy and Climate Action Element (ECAE). The CAP is intended to proactively support statewide efforts to cut GHG emissions by expanding local renewable energy generation, reducing energy use, promoting recycling and reuse, facilitating active transportation, and encouraging other sustainable practices. The CAP will build upon a variety of City projects that promote energy efficiency, increased renewable energy use, water conservation, and solid waste reduction. In accordance with Section 15183.5 of the California Environmental Quality Act (CEQA), the CAP Checklist provides for streamlined review of projects subject to environmental review, offering an alternative to project-specific analysis of GHG emissions impacts.

## **4.2.3 Thresholds of Significance**

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the proposed project would:

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

3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the proposed project would have a significant impact on air quality.

As part of its air quality permitting process, the SDAPCD and the County of San Diego has established thresholds in Rule 20.2 requiring the preparation of Air Quality Impact Assessments (AQIA) for permitted stationary sources (SDAPCD 2016). The SDAPCD sets forth quantitative emission thresholds below which a stationary source would not have a significant impact on ambient air quality. Although these trigger levels do not generally apply to mobile sources or general land development projects, for comparative purposes, these levels may be used to evaluate the increased emissions which would be discharge to the SDAB from proposed land development projects (County of San Diego 2007). Proposed-project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4.2-5, SDAPCD Air Quality Significance Thresholds, are exceeded.

**Table 4.2-5  
SDAPCD Air Quality Significance Thresholds**

<b>Construction Emissions</b>			
<i>Pollutant</i>	<i>Total Emissions (Pounds per Day)</i>		
Respirable Particulate Matter (PM <sub>10</sub> )	100		
Fine Particulate Matter (PM <sub>2.5</sub> )	55		
Oxides of Nitrogen (NO <sub>x</sub> )	250		
Oxides of Sulfur (SO <sub>x</sub> )	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOC)	75*		
<b>Operational Emissions</b>			
<i>Pollutant</i>	<i>Total Emissions</i>		
	<i>Pounds per Hour</i>	<i>Pounds per Day</i>	<i>Tons per Year</i>
Respirable Particulate Matter (PM <sub>10</sub> )	—	100	15
Fine Particulate Matter (PM <sub>2.5</sub> )	—	55	10
Oxides of Nitrogen (NO <sub>x</sub> )	25	250	40
Sulfur Oxides (SO <sub>x</sub> )	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	—	3.2	0.6
Volatile Organic Compounds (VOC)	—	75*	13.7

**Sources:** SDAPCD Rules 1501 (SDAPCD 1995) and 20.2(d)(2) (SDAPCD 2016).

\* VOC threshold based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley as stated in the San Diego County Guidelines for Determining Significance.

The thresholds listed in Table 4.2-5 represent screening-level thresholds that can be used to evaluate whether proposed-project-related emissions could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. The emissions-based thresholds for O<sub>3</sub> precursors are intended to serve as a surrogate for an “O<sub>3</sub> significance threshold” (i.e., the potential for adverse O<sub>3</sub> impacts to occur). This approach is used because O<sub>3</sub> is not emitted directly and O<sub>3</sub> levels in ambient air cannot be determined through air quality models or other quantitative methods. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 4.2-5, the proposed project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

With respect to odors, SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

#### 4.2.4 Impacts Analysis

##### *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the basin—specifically, the SIP and RAQS.<sup>1</sup> The federal O<sub>3</sub> maintenance plan, which is part of the SIP, was adopted in 2012. The most recent O<sub>3</sub> attainment plan was adopted in 2021. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the basin based on the NAAQS. The RAQS was initially adopted in 1991 and is updated on a triennial basis (most recently in 2021). The RAQS outlines SDAPCD’s plans and control measures designed to attain the state air quality standards for O<sub>3</sub>. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions as well as information regarding projected growth in the County as a whole and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

If a project involves development that is greater than that anticipated in the local plan and SANDAG’s growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality. The zoning for this project

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<sup>1</sup> For the purpose of this discussion, the relevant federal air quality plan is the ozone maintenance plan (SDAPCD 2012). The RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the basin.

site is RS – Single family Residential and the 54-unit development would not require zoning modifications. Based on this, the project would be consistent with the growth assumptions in the City’s General Plan and would not conflict with the RAQS or SIP. As, the project is consistent with the zoning designation and is anticipated in the City’s General Plan and SANDAG’s growth projections, implementation of the project would not conflict with the SIP and RAQS. Therefore, the project would not conflict with or obstruct implementation of an applicable air quality plan, and impacts would be **less than significant**.

*Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

### Construction Emissions

Construction of the project would result in the temporary addition of pollutants to the local SDAB caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). The project’s construction emissions were estimated using CalEEMod and compared to the SDAPCD Thresholds of Significance. Construction of the proposed project is expected to start in 2023 and be completed by 2024. Since the project is within a flood zone, the project would be required to import roughly 35,000 cubic yards (CY) of soil during grading operations and was modeled as such. The construction emissions are shown in Table 4.2-6. As show in in Table 4.2-6, the project would not exceed SDAPCD’s significance thresholds.

**Table 4.2-6  
Expected Construction Emissions Summary – Pounds per Day**

Year	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub> (Dust)	PM <sub>10</sub> (Exhaust)	PM <sub>10</sub> (Total)	PM <sub>2.5</sub> (Dust)	PM <sub>2.5</sub> (Exhaust)	PM <sub>2.5</sub> (Total)
2023	23.39	19.09	24.45	0.11	18.21	0.04	18.22	9.97	0.04	9.98
2024	23.39	2.85	19.92	0.03	0.23	0.01	0.24	0.06	0.01	0.07
Significance Threshold (lb/day)	75	250	550	250	–	–	100	–	–	55
<b>Impact?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	–	–	<b>No</b>	–	–	<b>No</b>

Given these findings, no direct construction impacts are expected, and mitigation measures for criteria pollutants and fugitive dust from construction are not required. The project applicant has indicated that as a design feature, all diesel equipment would be Tier 4 with DPF and that the grading contractor would follow Best Management Practices (BMPs) for grading as it relates to minimizing air quality emissions and would comply with all SDAPCD rules and regulations.

Therefore, the project’s air pollutant emission impact during construction is determined to be less than significant.

### Operational Emissions

The project would generate criteria pollutant emissions during operation from area, energy, and mobile sources. The emissions were estimated using CalEEMod and compared to SDAPCD’s significance thresholds for operation. Project full buildout operations are expected in 2025 and was modeled as such. Additionally, the model was run for the summer and winter scenarios to determine maximum daily operational impacts for operation.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by EMFAC2014; CalEEMod 2016.3.2 performs this calculation. The daily pollutants calculated for summer and winter are shown in Tables 4.2-7 and 4.2-8.

**Table 4.2-7**  
**Expected Summer Daily Pollutant Generation**

	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area	2.65	0.95	4.83	0.01	0.10	0.10
Energy	0.04	0.32	0.14	0.00	0.03	0.03
Mobile	0.62	2.26	5.98	0.02	2.01	0.55
<b>Total</b>	<b>3.31</b>	<b>3.52</b>	<b>10.95</b>	<b>0.03</b>	<b>2.13</b>	<b>0.67</b>
County Thresholds	75	250	550	250	100	55
<b>Significant?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

**Notes:** Daily pollutant generation assumes distances with CalEEMod  
The final numbers are all rounded within Excel and are reported as round numbers

**Table 4.2-8**  
**Expected Winter Daily Pollutant Generation**

	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area	2.65	0.95	4.83	0.01	0.10	0.10
Energy	0.04	0.32	0.14	0.00	0.03	0.03
Mobile	0.60	2.30	6.02	0.02	2.01	0.55
<b>Total</b>	<b>3.29</b>	<b>3.56</b>	<b>10.99</b>	<b>0.03</b>	<b>2.13</b>	<b>0.67</b>
County Thresholds	75	250	550	250	100	55
<b>Significant?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

**Notes:** Daily pollutant generation assumes distances with CalEEMod  
The final numbers are all rounded within Excel and are reported as round numbers

Based on Table 4.2-7 and 4.2-8 findings, the project would not exceed the mass emissions significance thresholds for VOC, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> during operation, and therefore, project operational impacts are determined to be less than significant.

Air pollution is largely a cumulative impact and is cumulatively evaluated based on the air basin. The nonattainment status of regional pollutants is a result of past and present development, and SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As discussed above, the project would not exceed SDAPCD's mass daily significance thresholds during construction or operation; therefore, the cumulative project impact would be **less than significant**.

***Would the project expose sensitive receptors to substantial pollutant concentrations?***

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed sensitive receptors are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. Sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. The closest known sensitive receptors (residences) are located adjacent to the east and south of the boundary of the project site.

The evaluation of air quality impacts to sensitive receptors is based on the potential to result in physical health issues. The proposed project consists of residential uses that are not associated with generating substantial pollutant concentrations. As project operations would not generate substantial pollutant concentrations, this analysis is primarily focused on construction-related emissions. The air quality emissions with potential to result in health issues evaluated for the project include Toxic Air Contaminants (TACs) and Valley Fever.

Project impacts may include emissions of pollutants identified by the state and federal government as TACs or hazardous air pollutants (HAPs). State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal HAPs, and is adopting appropriate control measures for sources of these TACs. The Limited Phase II Environmental Site Assessment (Appendix K) determined no significant cancer risks or non-cancer hazards are anticipated due to the concentrations of chemicals detected during the vapor risk assessment. The

greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks.

Valley fever is not highly endemic to San Diego County. The project would be consistent with SDAPCD Rule 55 which limits the amount of dust generated during construction and would also control the release of the fungus from construction activities by watering three times per day and limiting speed on unpaved roads. The closest sensitive receptors are residences located adjacent to the east and south boundary of the project site. Based on the low incidence rate of valley fever in the project area and in greater San Diego County, and the project's implementation of dust control strategies, the earth-moving activities during project construction would not result in valley fever exposure to sensitive receptors.

During project construction, DPM emissions would be emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB Airborne Toxic Control Measures to reduce DPM emissions. The AERMOD dispersion model was used to determine the concentration for air pollutants at nearby sensitive receptors. Additionally, the model predicted the maximum exposure distance and concentrations. The notable toxic air contaminant from construction is diesel exhaust since exposure to diesel exhaust is known to cause cancer and acute and chronic health effects. Diesel exhaust emissions can be estimated using the annual PM<sub>10</sub> exhaust emissions from on-site construction operations obtained from the annual CalEEMod model output by summing each on-site source for the construction duration. The AERMOD files for the Project are provided in Appendix B which include the project design feature to utilize Tier 4 diesel equipment.

The California Office of Environmental Health Hazard Assessment (OEHHA) recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans. Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years. Health risk calculations are shown in Appendix B to this EIR.

Non-Cancer risks or risks defined as chronic or acute are also known with respect to DPM and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, February 2015). Diesel Exhaust has a REL of 5 µg/m<sup>3</sup> and targets the respiratory system.

Utilizing the AERMOD dispersion model, the worst-case annual concentration of DPM from construction is estimated at 0.0931  $\mu\text{g}/\text{m}^3$ . The inhalation cancer risk for the closest residential receptor was found to be 1.85 per one million exposed which would not exceed the 10 per one million exposed significance thresholds.

There are known chronic health risks associated with diesel exhaust which are considered non-cancer risks. Risk calculations outlined in Appendix B to this EIR determined that proposed project construction would result in a Health Hazard Index of 0.0019, which is less than one, and that chronic health risk is not expected as a result of project construction. For the reasons outlined above, and calculated in Appendix B to this EIR, it is determined that potential impacts to sensitive receptors as a result of project construction would be **less than significant**.

*Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

The State of California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700 SDAPCD Rule 51, and City's Municipal Code Section 13.16, commonly referred to as public nuisance law, prohibits emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. SDAPCD also regulates project odor via SDAPCD Rule 51.

Potential on-site odor generators would only be expected during short term construction activities such as paving and possibly painting. However, the odors would be considered short term and would not result in substantial impacts as outlined in response to Threshold 3) above. During project operation, activities associated with the proposed residential development would not result in any long-term odor impacts. In addition, the project would be required to comply with the City's public nuisance law and the State of California Health and Safety Code mentioned above. Therefore, it is determined that impacts associated with odorous emissions as a result of project implementation would be **less than significant**.

#### **4.2.5 Mitigation Measures**

Impacts related to air quality as a result of project implementation are determined to be less than significant, and therefore no mitigation measures are required.

#### **4.2.6 Level of Significance After Mitigation**

No substantial impacts related to air quality were identified; therefore, no mitigation measures are required. Impacts related to air quality would be **less than significant**.