2.4 Air Quality

This section includes a discussion of existing air quality conditions, a summary of applicable regulations, and an analysis of potential construction and operational air quality impacts caused by proposed development of the Cannabis Program. Mitigation is developed as necessary to reduce significant air quality impacts to the extent feasible.

Comment letters regarding air quality were received in response to the notice of preparation (NOP) that identified concerns regarding construction and operational air quality impacts, dust emissions, and odors. These issues are addressed in this section. All comments received in response to the NOP are presented in Appendix A of this PEIR.

A summary of the impacts to air quality identified in this section is provided in Table 2.4.1.

Table 2.4.1 Air Quality Summary of Impacts

Issue Number	Issue Topic	Project Direct Impact	Project Cumulative Impact	Impact after Mitigation
1	Conflict with Air Quality Plans	Alternatives 1–5: Less than Significant	Alternatives 1–5: Less than Significant	Alternatives 1–5: Less than Significant
2	Result in a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant	Alternatives 1–5: Less than Significant	Alternatives 1–5: Less than Significant	Alternatives 1–5: Less than Significant
3	Result in Emissions of Odors Adversely Affecting a Substantial Number of People	Alternatives 1 and 4: Less than Significant. Alternatives 2, 3, and 5: Significant	Alternatives 1–5: Less than Significant.	Alternatives 1 and 4: Less than Significant. Alternatives 2, 3, and 5: Significant and Unavoidable

2.4.1 Existing Conditions

The program area is within San Diego County, which comprises the San Diego Air Basin (SDAB). The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by natural factors, such as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

2.4.1.1 *Climate, Meteorology, and Topography*

The climate in Southern California, including the SDAB in which the program area is located, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast, including the program area, experience moderate temperatures and comfortable humidity.

Due to its climate, the SDAB experiences frequent temperature inversions (temperature increases as altitude increases, which is the opposite of general patterns). Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. In addition, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland toward the foothills. During fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter on days with summer-like conditions.

2.4.1.2 *Ambient Air Quality Standards*

Air quality in the program area is regulated through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policymaking, education, and a variety of programs. The agencies responsible for improving the air quality within the air basins are discussed below. The national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) are summarized in Table 2.4.2, presented at the end of this section.

2.4.1.3 *Criteria Air Pollutants*

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. A brief description of key criteria air pollutants in the SDAB is provided below. Emission source types and health effects are summarized in Table 2.4.3, presented at the end of this section. San Diego County's attainment status for the CAAQS and the NAAQS are shown in Table 2.4.2, presented at the end of this section.

Ozone

Ground-level ozone is not emitted directly into the air but is created by chemical reactions between volatile organic compounds (VOCs) and oxides of nitrogen (NO_X). This happens when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources react chemically in the presence of sunlight. Ozone at ground level is a harmful air pollutant because of its effects on people and the environment and is the main ingredient in smog (EPA 2024).

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of permanent lung impairment (EPA 2024). Emissions of the ozone precursors VOCs and NO_X have decreased over the past 2 decades because of more stringent motor vehicle standards and cleaner burning fuels (CARB 2013).

Nitrogen Dioxide

NO_2 is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NO_X and are reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO_2 concentration in a particular geographical area may not be representative of the local sources of NO_X emissions (EPA 2024).

Acute health effects of exposure to NO_X include coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis, pulmonary edema, breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include chronic bronchitis and decreased lung function (EPA 2024).

Particulate Matter

Respirable particulate matter (PM_{10}) is emitted directly into the air and includes fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere by reaction of gaseous precursors (CARB 2013). Fine particulate matter ($PM_{2.5}$) includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less. PM_{10} emissions in the SDAB are dominated by emissions from area sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, farming operations, construction and demolition, and particles from residential fuel combustion. Direct emissions of PM_{10} are projected to remain relatively constant through 2035. Direct emissions of $PM_{2.5}$ have steadily declined in the SDAB between 2000 and 2010 and are projected to increase slightly through 2035. Emissions of $PM_{2.5}$ in the SDAB are dominated by the same sources as emissions of PM_{10} (CARB 2013).

Acute health effects of exposure to PM_{10} include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, including asthma and chronic obstructive pulmonary disease, and premature death. Chronic health effects include alternations to the immune system and carcinogenesis (EPA 2024). For $PM_{2.5}$, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. Long-term (months to years) exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function in children.

2.4.1.4 *Monitoring Station Data and Attainment Designations*

The San Diego Air Pollution Control District (SDAPCD) operates and maintains 9 regional monitoring stations throughout the SDAB, with 2 new sites planned to open in the near future (SDAPCD 2022). The Alpine–2300 Victoria Drive monitoring station is the only station located in unincorporated San Diego County. Alpine is the SDAPCD's easternmost monitoring station and measures for ozone and $PM_{2.5}$ concentrations downwind of the region's major metropolitan areas. The Escondido–600 East Valley Parkway monitoring station closed in

2015 and has not yet been replaced (SDAPCD 2022). The next-closest monitoring station is the El Cajon–Lexington Elementary station, which is located within the city of El Cajon near unincorporated areas. The El Cajon–Lexington Elementary station reports ozone and $PM_{2.5}$ concentrations. Data from the El Cajon–Lexington Elementary station is included below. In general, the local ambient air quality measurements from these stations are representative of the air quality within the unincorporated county. Table 2.4.4, presented at the end of this section, summarizes the air quality data for the 3 most recent calendar years for which data are available (i.e., 2021 through 2023). Notably, between 2021 and 2024, no monitoring data were available for PM_{10} in the county.

Both the California Air Resources Board (CARB) and US Environmental Protection Agency (EPA) use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and thereby initiate planning efforts for improvement. The 3 basic designation categories are “nonattainment,” “attainment,” and “unclassified.” In addition, the California designations include a subcategory of the nonattainment designation, called “nonattainment-transitional.” The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment. Unclassified is designated in an area that cannot be classified as meeting or not meeting the standards based on available information. Attainment designations for San Diego County are shown in Table 2.4.2, presented at the end of this section, for each criteria air pollutant. San Diego County is a nonattainment area for ozone (NAAQS and CAAQS), PM_{10} (CAAQS), and $PM_{2.5}$ (CAAQS).

2.4.1.5 *Toxic Air Contaminants*

According to the 2013 edition of the *California Almanac of Emissions and Air Quality*, health risks from toxic air contaminants (TACs) can largely be attributed to relatively few compounds, the most important being diesel particulate matter (PM) (CARB 2013: 5-2 through 5-4). Diesel PM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Diesel PM poses the greatest health risk among the TACs mentioned. Overall, statewide emissions of diesel PM are forecasted to decline by 71 percent between 2000 and 2035 (CARB 2013: 3-8).

2.4.1.6 *Odors*

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Odor is inherently complex because it is often caused by a mixture of chemical substances and has subjective components associated with human perception by the olfactory senses. Odorants (odor-causing chemicals) are often complex mixtures of chemical substances, and even slight changes in the chemical composition of the mixtures can

greatly affect how humans perceive a particular odor. Some odors can also be caused by very minute levels of odorants (sometimes in the parts-per-trillion range) that can be detected by human noses but are well below instrumental or laboratory detection levels. Human noses are well-adapted at distinguishing specific odors in complex environments.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. Traditional odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, and food packaging plants.

Cannabis Odor Research

The typical smell of cannabis originates from roughly 140 different terpenes. A terpene is a volatile unsaturated hydrocarbon that is found in essential oils of plants, especially conifers and citrus trees. Some terpenes are identified explicitly in research (myrcene, pinene, limonene). The “skunk” odor is primarily volatile thiols. Cannabis contains alpha-linolenic acid, which may break down under ultraviolet rays of sunlight into methyl and butyl thiols (Yolo County 2019).

Some researchers define an “odor activity value” (OAV), which is the chemical compound concentration divided by the chemical compound odor detection threshold (which is a literature-based value). A higher OAV could mean a more significant odor. One shortcoming of the OAV is that the quality of the odor detection thresholds may be low. Highly odorous compounds in low concentrations, which may have a more potent OAV, include nonanal, decanol, o-cymene, and benzaldehyde. Other research findings suggest that the majority of the odor in cannabis flowers is linked to pinene, limonene, and terpinolene. Terpenes that are commonly identified and thought to warrant further evaluation for odor impacts include myrcene, pinene, limonene, b-caryophyllene, terpinolene, nonanal, decanol, o-cymene, and benzaldehyde. (Yolo County 2019)

Currently, there is not a clear or consistent numerical threshold to use for cannabis odors. Because odor is a perception-based phenomenon and involves complex mixtures of substances rather than singular chemical molecules, it is important to evaluate odors comprehensively (in terms of odor) rather than breaking down individual chemical compounds of the odor. Dispersion modeling has been conducted to determine the distance from which cannabis odor may be detected. The results of modeling by Kern County indicated that specific cannabis compounds may be detectable at a distance of 2 miles or more depending on weather conditions (Kern County 2017). Nevada County released an EIR for its Commercial Cannabis Cultivation Ordinance in 2019, and the odor detection modeling identified that cannabis odors could be detected in some circumstances between 100 feet and as far 1 mile from the source of the odor (Nevada County 2019).

When cannabis is grown in enclosed indoor environments (buildings and greenhouses), odor-causing chemicals are concentrated and have been found to generate significant odors within the air space. Cannabis grown in greenhouses can generate odor with strengths ranging from 30,000 to 50,000 odor units (First Canadian Odour Conference 2018).

Public Health/Nuisance Issues

A review of scientific publications identified no studies that evaluated the health effects associated with exposure to cannabis odors. An evidence brief prepared by Public Health Ontario (2018) states that "most substances responsible for odors in the outdoor air are not present at levels that can cause long-term health effects. However, exposure to unpleasant odors may affect an individual's quality of life and sense of well-being." This statement was made in reference to odors in general and not cannabis odors in particular. The City of Denver prepared the *Cannabis Environmental Best Management Practices* document (City of Denver 2018), which states that "the rate of VOC [volatile organic compound] emissions from cannabis cultivation facilities is relatively unknown….[T]hese VOCs from the cannabis industry typically do not pose a direct threat to human health." Although research is limited, it is anticipated that the concentration of cannabis odors is not significant enough to create a public health concern for off-property residential receptors.

As noted above, cannabis odors are attributed to terpenes that include beta-myrcene. Beta-myrcene is listed as a chemical that causes cancer under Proposition 65. This listing was based on the use of beta-myrcene as a refined component in essential oils to produce aroma and flavor chemicals; as a flavoring agent in food and beverages; and as a fragrance in cosmetics, soaps, and detergents (Office of Environmental Health Hazard Assessment 2012). This differs from the natural occurrence and associated concentration of beta-myrcene in cannabis that generates detectable odors near harvest. Impact from outdoor exposure to concentrated cannabis odors near harvest is limited because cannabis odor dissipates over distance and may also be affected by intervening conditions, such as vegetation, topography, and wind patterns. California Code of Regulations (CCR), Title 27, Section 25501 states that human consumption of a food shall not constitute an "exposure" for purposes of Section 25249.6 of the Safe Drinking Water and Toxic Enforcement Act to a listed chemical in the food to the extent that the person responsible for the exposure can show that the chemical is naturally occurring in the food.

2.4.1.7 *Sensitive Receptors*

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the older population. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants or the potential for increased and prolonged exposure of individuals to pollutants. Sensitive receptors can be found throughout the county.

2.4.2 Regulatory Framework

2.4.2.1 *Federal*

EPA has been charged with implementing national air quality programs. EPA's air quality mandates draw primarily from the federal Clean Air Act (CAA) (42 US Code [USC] Section 7401 et seq.), which was enacted in 1970. The most recent major amendments were made by Congress in 1990. EPA's air quality efforts address both criteria air pollutants and hazardous air pollutants.

Clean Air Act and National Ambient Air Quality Standards

The CAA required EPA to establish the NAAQS (42 USC Section 7409). EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO_2, sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. The primary standards protect the public health, and the secondary standards protect public welfare. The CAA also requires each state to prepare a state implementation plan (SIP) for attaining and maintaining the NAAQS. The federal CAA amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. Individual SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Emission Standards for On-Road Vehicles

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the country. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. According to information generated under the CAFE program, the US Department of Transportation is authorized to assess penalties for noncompliance.

In 2024, CAFE standards were finalized for model years (MYs) 2027 through 2031. The final rule establishes standards that require an industry-wide fleet average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks. The final rule establishes standards that would require an industry-wide fleet average of approximately 50.4 mpg in MY 2031 for passenger cars and light trucks and an industry fleet-wide average for heavy-duty pickup trucks and vans (HDPUVs) of roughly 2.851 gallons per 100 miles in MY 2035. The final CAFE standards increase at a rate of 2 percent per year for passenger cars in MYs 2027–2031 and 2 percent per year for light trucks in model years 2029–2031. The final HDPUV fuel efficiency standards increase at a rate of 10 percent per year in MYs 2030–2032 and 8 percent per year in MYs 2033–2035 (NHSTA 2024).

National Emission Standards for Hazardous Air Pollutants

TACs, or in federal parlance, hazardous air pollutants, are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects, such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects, such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (see Table 2.4.2, presented below). Cancer risk from TACs is expressed as excess cancer cases per 1 million exposed individuals, typically over a lifetime of exposure.

EPA regulates hazardous air pollutants through its National Emission Standards for Hazardous Air Pollutants. The standards for a particular source category require the maximum degree of emission reduction that the EPA determines to be achievable, which is known as the Maximum Achievable Control Technology standards. These standards are authorized by Section 112 of the 1970 CAA, and the regulations are published in Code of Federal Regulations (CFR) Title 40, Parts 61 and 63.

2.4.2.2 *State*

California Clean Air Act and Ambient Air Quality Standards

CARB is the agency responsible for coordinating and providing oversight of state and local air pollution control programs in California. The California Clean Air Act (CCAA) (California Health and Safety Code Section 42501) requires CARB to establish health-based air quality standards at the state level. The CAAQS were established for the following criteria pollutants: ozone, CO, SO_2, NO_2, PM_{10}, $PM_{2.5}$, lead, sulfate, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. Areas of the state are designated as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the CCAA. CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. It specifies that local air districts should focus particular

attention on reducing the emissions from transportation and areawide emission sources, and it provides air districts with the authority to regulate indirect emission sources.

CARB regulates emission of criteria air pollutants through several programs, regulations, and plans. The 2022 State SIP Strategy (2022 SIP) serves as a compilation document of all actions taken by CARB and local air districts to further the attainment of the NAAQS (CARB 2022). Pertinent regulations to the Cannabis Program in the 2022 SIP include the Advanced Clean Cars II Program, Advanced Clean Fleets, and Zero-Emissions Trucks Measure, which all serve to electrify the transportation sector through sales requirements for benchmark years.

Advanced Clean Cars Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012. The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot, and greenhouse gas (GHG) emissions. This program includes the low-emissions vehicle regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles and the zero-emission vehicle (ZEV) regulations to require manufacturers to produce an increasing number of pure ZEVs (i.e., battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles between 2018 and 2025. CARB adopted the new Advanced Clean Car II regulations in August 2022, which dramatically reduce emissions from passenger vehicles for MYs 2026–2035. Advanced Clean Cars II requires more aggressive tailpipe emission standards for gasoline cars and heavier passenger trucks and require all new vehicles sold by 2035 be ZEVs (CARB 2023).

Mobile Source Strategy

CARB's 2020 Mobile Source Strategy includes an expansion of the Advanced Clean Cars program and further increases the stringency of GHG emissions for all light-duty vehicles and 4.2 million zero-emission and plug-in hybrid light-duty vehicles by 2030. It also calls for more stringent GHG requirements for light-duty vehicles beyond 2025, as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero-emission trucks primarily for classes 3 through 7 "last mile" delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45-percent reduction in GHG emissions and a 50-percent reduction in the consumption of petroleum-based fuels. CARB's Mobile Source Strategy includes measures to reduce total light-duty vehicle miles traveled by 15 percent compared to business-as usual in 2050 (CARB 2021).

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Hot Spots Act) (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of hazardous air pollutants as TACs. Diesel particular matter (PM) was the most recent TAC added to CARB's list of TACs in 1998.

After a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no

toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate the best available control technology for toxins to minimize emissions.

The Hot Spots Act requires that facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

CARB has adopted diesel-exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With the implementation of CARB's Risk Reduction Plan and other regulatory programs, it is estimated that emissions of diesel PM will be less than half of those in 2010 by 2035 (CARB n.d.). CARB's Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rates 50 Horsepower (hp) and Greater regulation also subjects diesel-powered generators exceeding 50 hp through local permitting requirements that reduce the generation of diesel PM. Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

California Code of Regulations

The following requirements are included in the Department of Cannabis Control regulations, CCR, Title 4, Division 19, Chapter 9 and pertain to cultivation sites.

Section 16306: Generator Requirements

(a) For the purposes of this section, "generator" is defined as a stationary or portable compression ignition engine pursuant to title 17, division 3, chapter 1, subchapter 7.5, section 93115.4 of the California Code of Regulations.

(b) Licensees using generators rated at 50 horsepower and greater shall demonstrate compliance with either, as applicable, the Airborne Toxic Control Measure for stationary engines pursuant to title 17, division 3, chapter 1, subchapter 7.5, sections 93115 through 93115.15 of the California Code of Regulations, or the Airborne Toxic Control Measure for portable engines pursuant to title 17, division 3, chapter 1, subchapter 7.5, sections 93116 through 93116.5 of the California Code of Regulations. Compliance shall be demonstrated by providing a copy of one of the following to the department upon request:

(1) For portable engines, a Portable Equipment Registration Certificate provided by the California Air Resources Board; or

(2) For portable or stationary engines, a Permit to Operate, or other proof of engine registration, obtained from the Local Air District with jurisdiction over the licensed premises.

(c) Licensees using generators rated below 50 horsepower shall comply with the following by 2023:

(1) Either (A) or (B):

(A) Meet the "emergency definition for portable engines in title 17, division 3, chapter 1, subchapter 7.5, sections 93116.2(a)(12) of the California Code of Regulations, or the "emergency use" definition for stationary engines in title 17, division 3, chapter 1, subchapter 7.5, section 93115.4(a)(30); or

(B) Operate 80 hours or less in a calendar year; and

(2) Either (A) or (B):

(A) Meet Tier 3 with Level 3 diesel particulate filter requirements pursuant to title 13, division 3, chapter 14, sections 2700 through 2711 of the California Code of Regulations;

(B) Meet Tier 4, or current engines requirements if more stringent, pursuant to title 40, chapter 1, subchapter U, part 1039, subpart B, section 1039.101 of the Code of Federal Regulations.

(d) All generators shall be equipped with non-resettable hour-meters. If a generator does not come equipped with a non-resettable hour-meter an after-market non-resettable hour-meter shall be installed.

2.4.2.3 *Local*

San Diego Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The program area is located within the SDAB and is subject to the guidelines and regulations of SDAPCD.

In San Diego County, ozone and particulate matter are the pollutants of main concern because exceedances of CAAQS for those pollutants are experienced in most years. For this reason, the SDAB has been designated as a nonattainment area for the state PM_{10}, $PM_{2.5}$, and ozone standards. The SDAB is also a federal ozone attainment (maintenance) area for 1997 8-hour ozone standard, an ozone nonattainment area for the 2008 8-hour O_3 standard, and a CO maintenance area (western and central part of the SDAB only). The program area is in the CO maintenance area (western and central part of the SDAB only, including the program area).

Rules and Regulations

As stated previously, 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:

- **SDAPCD Regulation II: Permits; Rule 10: Permits Required.** Requires that any person building, erecting, altering, or replacing any article, machine, equipment, other

contrivance that generates air contaminants shall first obtain written authorization from the SDAPCD Air Pollution Control Officer to acquire a permit to construct and a permit to operate.

- **SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions.** Prohibits any activity causing air contaminant emissions darker than 20 percent opacity for more than an aggregate of 3 minutes in any consecutive 60-minute time period. In addition, Rule 50 prohibits any diesel pile-driving hammer activity causing air contaminant emissions for a period or periods aggregating more than 4 minutes during the driving of a single pile. Construction of the project may result in visible emissions, primarily during earth-disturbing activities, which would be subject to SDAPCD Rule 50. Although visible emissions are less likely to occur during operation of the project, compliance with SDAPCD Rule 50 would be required during both construction and operational phases.
- **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. Any criteria air pollutant emissions, TAC emissions, or odors that would be generated during construction or operation of the project would be subject to SDAPCD Rule 51. Violations can be reported to the SDAPCD in the form of an air quality compliant by telephone, email, or online form. Complaints are investigated by SDAPCD as soon as possible. The provisions of this rule do not apply to agricultural operations.
- **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. Construction of the project, primarily during earth-disturbing activities, may result in fugitive dust emissions that would be subject to SDAPCD Rule 55.
- **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. Construction and operation of the project would include application of architectural coatings (e.g., paint and other finishes) that are subject to SDAPCD Rule 67.0.1. Implementation of PDF-AQ-2 would limit the VOC content for interior and exterior coatings during construction of the project's residential land use and is more restrictive than the VOC content limits identified in SDAPCD Rule 67.0.1. Architectural coatings used in the reapplication of coatings during operation of the project would be subject to the VOC content limits identified in SDAPCD Rule 67.0.1, which applies to coatings manufactured, sold, or distributed within the County.
- **SDAPCD Regulation XII: Toxic Air Contaminants; Rule 1200: Toxic Air Contaminants – New Source Review.** Regulates emissions of toxic air contaminants (TACs) from new, relocated, or modified stationary sources in San Diego County. It aims to reduce public exposure to TACs by requiring facilities to implement measures to minimize potential health risks. The rule applies when an Authority to Construct or Permit to Operate is required, including projects reviewed by the California Energy Commission.

San Diego County Regional Air Quality Strategy

SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The regional air quality strategy (RAQS) for the SDAB was initially adopted in 1991 and is updated every 3 years, most recently in 2022 (SDAPCD 2023). The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for ozone. The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the county and the cities in the county, to forecast future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The 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.

On March 9, 2023, SDAPCD adopted the revised 2022 RAQS for the county. The RAQS plan demonstrates how the San Diego region will further reduce air pollution emissions to meet state health-based standards for ground-level ozone. The 2022 RAQS guides the SDAPCD in deploying tools, strategies, and resources to continue reducing pollutants that are precursors to ground-level ozone, including NOx and VOC. The 2022 RAQS emphasizes ozone control measures but also identifies complementary measures and strategies that can reduce emissions of GHGs and PM. It also includes new analyses exploring ozone and its relationship to public health, mobile sources, under-resourced communities, and GHGs and climate change. Furthermore, the 2022 RAQS identifies strategies to expand SDAPCD regional partnerships, identifies more opportunities to engage the public and communities of concern, and integrates environmental justice and equity across all proposed measures and strategies.

County of San Diego Code of Regulatory Ordinances, Title 8, Division 7, Chapter 4, Section 87.428: Dust Control Measures

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

San Diego County General Plan

The General Plan policies addressing air quality that are applicable to the Cannabis Program include the following:

- **Policy 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.

- **Policy COS-14.8:** Minimize Air Pollution. Minimize land use conflicts that expose people to significant amounts of air pollutants.
- **Policy COS-15.1:** Design and Construction of New Buildings. Require that new buildings be designed and constructed in accordance with "green building" programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of GHGs and toxic air contaminants.
- **Policy COS-15.4:** Title 24 Energy Standards. Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.
- **Policy COS-15.6:** Design and Construction Methods. Require development design and construction methods to minimize impacts to air quality.
- **Policy COS-16.3:** Low-Emissions Vehicles and Equipment. Require County operations and encourage private development to provide incentives (such as priority parking) for the use of low- and zero-emission vehicles and equipment to improve air quality and reduce GHG emissions. [Refer also to Policy M-9.3 (Preferred Parking) in the Mobility Element.]
- **Policy LU-2.8:** Mitigation of Development Impacts. Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.

2.4.3 Analysis of Project Impacts and Determination of Significance

2.4.3.1 *Thresholds of Significance*

According to Appendix G of the State CEQA Guidelines, an impact on air quality is considered significant if implementation of the Cannabis Program would do any of the following:

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

SDAPCD does not provide CEQA significance thresholds for any air pollutant source it does not directly regulate. SDAPCD regulates emissions from stationary sources and not mobile sources under SDAPCD Regulation II, Rule 20.2, Table 20.2-1, Air Quality Impact Analysis Trigger Levels. Because SDAPCD does not prescribe emissions thresholds for all air pollutants during construction and operation, air quality impacts of the proposed Cannabis Program were evaluated based on the *County of San Diego's Guidelines for Determining Significance: Air Quality*, which are based on SDAPCD Regulation II. For CEQA purposes, these screening level thresholds can be used to determine if a project's total emissions (e.g., stationary and fugitive emissions, as well as emissions from mobile sources) would result in a

significant impact to air quality. The daily screening level thresholds are most appropriately used for the standard construction and operational emissions. When project emissions have the potential to approach or exceed the thresholds in Table 2.4.5, presented at the end of this section, additional air quality modeling may need to be prepared to demonstrate that ground-level concentrations resulting from project emissions (with background levels) will be below the NAAQS and CAAQS, which represent concentration limits of criteria air pollutants needed to adequately protect human health.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in Table 2.4.5, presented at the end of this section.

2.4.3.2 *Issues Not Discussed Further*

CO Hot Spots

Regarding the potential for CO "hot spots" at local intersections, these types of effects have the potential to occur only at intersections experiencing extremely high volumes of traffic. As noted above, SDAPCD does not provide CEQA significance thresholds for any air pollutant source it does not directly regulate. SDAPCD regulates emissions from stationary sources and not mobile sources. The Bay Area Air Quality Management District CEQA Guidelines address CO hot spots and have determined that CO hot spots have the potential to occur only at intersections that experience a traffic volume greater than 44,000 vehicles per hour (BAAQMD 2022). Operational activities for all new cannabis cultivation sites would generate new vehicular activity; however, as noted in Table 1.4, Alternative Development Assumptions, Alternatives 2 through 5 would require between 3,631 and 3,939 (Alternative 4 only) new employees as associated trips. Nevertheless, commercial cannabis operations would be generally spread throughout the county. Thus, it would not be anticipated that vehicle trips generated by commercial cannabis operations would result in congestion at any intersection that experiences high volumes of vehicles or long wait times. For these reasons, additional trips associated with new cannabis operations would not contribute substantially to traffic congestion at affected intersections such that local CO "hot spots" occur in exceedance of the CAAQS or NAAQS (i.e., expose sensitive receptors to substantial pollutant concentrations). This impact is not discussed further.

Toxic Air Contaminants

Construction and operation of the new licensed commercial cannabis cultivation and noncultivation operations may involve the use of diesel-powered equipment that emits diesel PM. However, the amount of construction activity at any single location would not be intensive (i.e., approximately 1 piece of off-road equipment being used at 1 specific time during overall site construction), would be temporary, and would not take place at the same site for longer than a few months. Operational activities would not include any major sources of TACs, and all operations would be required to comply with setback distances specified for the alternatives (i.e., a minimum 600-foot buffer or a 1,000-foot buffer between operations and existing sensitive land uses depending on the alternative) that would allow dispersion of TAC emissions. Given the minimal construction activities required for the Cannabis Program, the lack of newly introduced major sources of TACs, and the setback requirements, the construction and operation of new cannabis facilities would not expose existing receptors to substantial TAC concentrations (i.e., expose sensitive receptors to substantial pollutant concentrations). Individual commercial cannabis cultivation sites may include emergency

backup diesel generators but would not include new stationary sources (e.g., smokestack operations permitted through the air district subject to best available control technology) that could potentially exceed established emissions limits for reactive organic gases (ROG), NO_X, PM_{10}, $PM_{2.5}$, CO, or SO_2. Cannabis manufacturing facilities would be allowed under the Cannabis Program; however, these facilities would be subject to permitting through SDAPCD Rule 1200, which would require the use of filtration and emissions scrubbing technologies to minimize release of TACs from the facility. These impacts are not discussed further.

2.4.3.3 *Approach to Analysis*

The analysis of potential impacts on air quality resources resulting from project implementation is based on the information provided previously in Section 2.4.1, "Existing Conditions." Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from odors, were assessed in accordance with SDAPCD-recommended methodologies. The project's emissions are compared to SDAPCD-adopted thresholds. Actions that would result in emissions of air pollution include ground disturbance from construction of storage ponds; installation of irrigation systems and water storage; road and building construction; extension of electrical facilities and infrastructure; fencing, planting, and harvest activities; and operation of artificial lights and generators.

Potential expansion of existing licensed and new licensed commercial cannabis cultivation and noncultivation operations could result in an increase in criteria air pollutant emissions from short-term construction-related activities and their long-term operation. As recommended by SDAPCD, both construction and operation-related emissions of criteria air pollutants were calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.26 computer program for the types and sizes of indoor, outdoor, and mixed-light commercial cannabis cultivation uses that could be licensed in the future as well as noncultivation uses. An example project-level estimate of emissions was prepared for noncultivation cannabis uses using the largest development footprint and operational features (e.g., employees, traffic, energy use) of the range of the noncultivation uses identified in Table 1.4.

Construction emissions were estimated for the construction of commercial cannabis operations using the acreage provided in Table 1.4. Several models were run to estimate emissions based on the acreage of each alternative using the average square footage of each cultivation type and number of new licenses issued as identified in Table 1.4. Emissions were estimated for the construction and operation of each commercial cannabis use, and CalEEMod was used to estimate on-site operational emissions, including emissions generated by off-road equipment, maintenance activity, and energy use. CalEEMod energy consumption rates were adjusted to account for energy efficiency improvements from the 2019 California Energy Code as a conservative assumption. Default natural gas consumption for electricity was used based on CalEEMod data for San Diego Gas and Electric Company. Off-road equipment assumed includes a utility vehicle (e.g., John Deere Gator) for commercial cannabis cultivation operations. Mobile source emissions were estimated using default trip lengths provided in CalEEMod for the assumed land use type of Research and Development, meant to represent cannabis cultivation.

As described in Section 2.4.1, "Existing Conditions," odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g.,

circulatory and respiratory effects, nausea, vomiting, and headache). Odor is inherently complex because it is often caused by a mixture of chemical substances and has subjective components associated with human perception by the olfactory senses. Thus, the impact analysis qualitatively evaluates the potential of cannabis uses to create odors that cause a public nuisance or adversely affect nearby residents or businesses.

Detailed model assumptions and inputs for these calculations are presented in Appendix C.

2.4.3.4 *Issue 1: Conflict with Air Quality Plans*

Guidelines for Determination of Significance

According to Appendix G of the State CEQA Guidelines and the *County of San Diego Guidelines for Determining Significance: Air Quality*, the proposed Cannabis Program would have a significant impact if it would conflict with or obstruct implementation of the RAQS, applicable portions of the SIP, or any local air quality plans.

Impact Analysis

The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for ozone. In addition, SDAPCD's Attainment Plan includes SDAPCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through the implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by EPA and CARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from CARB and SANDAG, including projected growth in the county, mobile, area, and all other source emissions to project future emissions and determine the strategies necessary for the reduction of stationary source emissions through regulatory controls. The 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.

As such, projects that propose development that is consistent with the growth anticipated by the local jurisdictions' general plans would be consistent with the RAQS. In the event that a project proposes development that is less dense than anticipated within a jurisdiction's general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the general plan and SANDAG's growth projections upon which the RAQS and Attainment Plan are based, the project would be in conflict with the RAQS and Attainment Plan and may have a potentially significant impact on air quality.

Adoption of the proposed Cannabis Program would require amendments to the Regulatory Code and Zoning Ordinance to establish licensing and operational regulations for a range of cannabis cultivation and noncultivation uses authorized under state law. These amendments would not alter the growth projection of the RAQS because the Cannabis Program would not introduce new or more dense residential development that would affect SDAPCD's long-term regional air quality planning. The Cannabis Program would allow for the development of commercial cannabis uses, which could be operated in existing or new development and

would generate employment opportunities within the county; however, new commercial development generally does not alter the growth projections included in an air quality plan, such as the RAQS. As described in Section 2.14, “Population and Housing,” cannabis facilities are considered local serving uses that would serve the current county population and therefore would not bring in additional people or patrons in from another region. Additional jobs created would be well within the planned employment growth for the region.

Consistent with State CEQA Guideline Section 15206(b), the project would not be considered regionally significant because it would not have the potential to substantially affect housing, employment, or population projections within the San Diego region, which are the basis of the RAQS and Attainment Plan projections. As such, the project would not conflict with or obstruct implementation of the RAQS or Attainment Plan. Furthermore, the project would not result in substantial operational emissions that would conflict with the local air quality plans. Therefore, implementation of the Cannabis Program would not conflict with the RAQS or Attainment Plan and proposed development would be consistent with the growth in the region.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona county would be allowed to continue to operate under the existing ordinances as well as expand their existing facilities and operations to a total of 10,000 square feet of building area. However, no new commercial cannabis uses would be allowed. These expansions would not generate significant growth to San Diego County that could conflict with the long-term regional air quality planning efforts of SDAPCD.

While some expansion could occur under Alternative 1 resulting in some level of criteria air pollutant emissions, growth could not be induced by these expansions. This impact would be less than significant under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

Under Alternative 2, outdoor cultivation activities could occur on up to 472 acres of land, with a total of up to 1,772,120 square feet (i.e., approximately 41 acres) of building area. Mixed-light cultivation activities could occur on up to 293 acres of land, with a total of up to 668,184 square feet (i.e., approximately 15 acres) of building area. Indoor cultivation activities could occur on up to 8 acres of land, with a total of up to 240,000 square feet (i.e., approximately 5.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, temporary agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 1,032 acres, with approximately 116 acres (4,710,704 square feet) of building area for Alternative 2. Cannabis facilities would be required to observe a 600-foot buffer from certain state-defined sensitive uses, including schools, daycares, and youth centers.

As described above, the RAQS relies on information from CARB and SANDAG, including projected growth in the county and mobile, area, and all other source emissions to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The 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. As such, projects that propose development that is consistent with the growth anticipated by the local jurisdictions' general plans would be consistent with the RAQS. Adoption of the proposed Cannabis Program under Alternative 2 would require amendments to the Regulatory Code and Zoning Ordinance to establish licensing and operational regulations for a range of cannabis cultivation and noncultivation uses authorized under state law. These amendments would not alter the growth projection of the RAQS because the Cannabis Program would not be introducing new or more dense residential development that would affect SDAPCD's long-term regional air quality planning. The Cannabis Program would allow for the development of commercial cannabis uses, which could be operated in existing or new development and would generate employment opportunities within the county. As described in Section 2.14, "Population and Housing," potential employment generation from cannabis uses are not expected to alter the growth projections included in an air quality plan, such as the RAQS. Operation of the cannabis cultivation types and noncultivation uses would generate 3,631 employment opportunities, which could be locally served.

Consistent with State CEQA Guideline Section 15206(b), Alternative 2 would not be considered regionally significant because it would not have the potential to substantially affect housing, employment, or population projections within the San Diego region, which are the basis of the RAQS and Attainment Plan projections. As such, the project would not conflict with or obstruct implementation of the RAQS or Attainment Plan. Furthermore, the Cannabis Program would not result in substantial operational emissions that would conflict with the local air quality plans.

This impact would be less than significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

The Cannabis Program under Alternative 3 is anticipated to accommodate up to 372 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions) and is the same as Alternative 2 described above. Alternative 3 additionally prohibits the development of cannabis facilities within 1,000 feet of expanded sensitive uses, including other cannabis facilities. Advertising of cannabis on billboards would also be prohibited within 1,000 feet of the expanded sensitive uses.

Alternative 3 includes the same development potential as Alternative 2. Similar to Alternative 2, Alternative 3 would not be considered regionally significant because it would not have the potential to substantially affect housing, employment, or population projections within the San Diego region, which are the basis of the RAQS and Attainment Plan projections. As such, the project would not conflict with or obstruct implementation of the RAQS or Attainment Plan. Furthermore, the project would not result in substantial operational emissions that would conflict with the local air quality plans.

This impact would be less than significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

The Cannabis Program under Alternative 4 is anticipated to accommodate up to 212 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions). This alternative would result in 2,002,524 square feet of cannabis building area

and 479 acres of land area dedicated to cannabis cultivation activity (whereas Alternatives 2, 3, and 5 would result in 2,680,304 square feet of cannabis building area and 773 acres of land area dedicated to cannabis cultivation activity). Alternative 4 would allow mixed-light and indoor cannabis cultivation only when contained within a building. Alternative 4 additionally prohibits the development of cannabis facilities within 1,000 feet of expanded sensitive uses, including other cannabis facilities. Advertising of cannabis on billboards would also be prohibited within 1,000 feet of the expanded sensitive uses.

Similar to Alternative 2, Alternative 4 would not be considered regionally significant because it would not have the potential to substantially affect housing, employment, or population projections within the San Diego region, which are the basis of the RAQS and Attainment Plan projections. As such, the Cannabis Program would not conflict with or obstruct implementation of the RAQS or Attainment Plan. Furthermore, the Cannabis Program would not result in substantial operational emissions that would conflict with the local air quality plans.

This impact would be less than significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

The Cannabis Program under Alternative 5 is anticipated to accommodate up to 372 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions) and is the same as Alternative 2 described above. Alternative 5 additionally prohibits the development of cannabis facilities within 1,000 feet of expanded sensitive uses, including other cannabis facilities. Advertising of cannabis on billboards would also be prohibited within 1,000 feet of the expanded sensitive uses. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

Alternative 5 includes the same development potential as Alternative 2. Similar to Alternative 2, Alternative 5 would not be considered regionally significant because it would not have the potential to substantially affect housing, employment, or population projections within the San Diego region, which are the basis of the RAQS and Attainment Plan projections. As such, the Cannabis Program would not conflict with or obstruct implementation of the RAQS or Attainment Plan. Furthermore, the Cannabis Program would not result in substantial operational emissions that would conflict with the local air quality plans.

This impact would be less than significant under Alternative 5.

2.4.3.5 *Issue 2: Result in a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant*

Guidelines for Determination of Significance

According to Appendix G of the State CEQA Guidelines and the *County of San Diego Guidelines for Determining Significance: Air Quality*, the proposed Cannabis Program would have a significant impact if it would exceed the quantitative screening level thresholds for attainment pollutants (NO_2, SO_2, and CO) and would result in a significant impact if they exceed the significant local thresholds for nonattainment pollutants (O_3 precursors and

particulate matter). Specifically, the proposed project would result in a significant impact if it would result in:

a. emissions that exceed 250 pounds per day of NO_X, or 75 pounds per day of VOCs;

b. emissions of CO that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 ppm or an 8-hour average of 9 ppm;

c. emissions of $PM_{2.5}$ that will exceed 55 pounds per day; or

d. emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 $\mu g/m^3$ or greater at the maximum exposed individual.

Impact Analysis

Construction and operational air pollution estimates and associated impacts are addressed below for each alternative of the Cannabis Program.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona would be allowed to continue to operate under the existing ordinances as well as expand their existing facilities and operations to a total of 10,000 square feet of building area. However, no new commercial cannabis uses would be allowed. These expansions would not generate significant construction or operational emissions based on typical screening criteria for expansion of existing development.

While some expansion could occur under Alternative 1 resulting in some level of criteria air pollutant emissions, construction and operational impacts would be less than significant under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

Under Alternative 2, outdoor cultivation activities could occur on up to 472 acres of land, with a total of up to 1,772,120 square feet (i.e., approximately 41 acres) of building area. Mixed-light cultivation activities could occur on up to 293 acres of land, with a total of up to 668,184 square feet (i.e., approximately 15 acres) of building area. Indoor cultivation activities could occur on up to 8 acres of land, with a total of up to 240,000 square feet (i.e., approximately 5.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, temporary shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 1,032 acres, with approximately 108 acres (4,710,704 square feet) of building area for Alternative 2. Cannabis facilities would be required to observe a 600-foot buffer from certain state-defined sensitive uses, including schools, daycares, and youth centers.

Construction

Development of future licensed commercial cannabis operations could require earthwork and use of heavy-duty off-road equipment that would generate exhaust emissions and fugitive dust. Generally, the intensity of construction activity would be similar to that associated with a residential renovation or building addition project. Construction of individual outdoor commercial cannabis operations could involve the clearing of vegetation, grading, and other earth-disturbing activities to establish a grow area; the laying of a gravel pad to support the containers in which the cannabis is planted; installation of a water storage tank or pond; construction of greenhouses and buildings, as well as a water storage tank or pond, utilities, and supporting structures.

The construction of new commercial cannabis cultivation operations was assumed to last approximately 7 months at each commercial cannabis site, and heavy-duty off-road equipment would be used for approximately 22 weeks at each single new commercial cannabis cultivation operation. Emissions of fugitive PM_{10} and $PM_{2.5}$ dust would be generated primarily by ground disturbance during site preparation and grading and would vary as a function of parameters such as travel on unpaved roads, soil silt content, soil moisture, wind speed, and the size of the disturbance area. PM_{10} and $PM_{2.5}$ would also be emitted in vehicle and equipment exhaust.

Emissions were estimated for each new commercial cannabis use type using the range of assumed future cannabis cultivation types (outdoor, mixed-light, and indoor) identified in Table 1.4 and based on anticipated daily construction activities. Table 2.4.6, included at the end of this section, presents the levels of criteria air pollutants and precursors that would be emitted by this level of construction activity based on modeling using the construction module of CalEEMod. Refer to Appendix C for detailed modeling input parameters and results.

As shown in Table 2.4.6, construction of typical outdoor, mixed-light, and indoor commercial cannabis cultivation sites and noncultivation use types would not generate daily levels of VOCs, NO_X, PM_{10}, or $PM_{2.5}$ that exceed SDAPCD's screening thresholds.

The addition of VOCs, NO_X, PM_{10}, and $PM_{2.5}$ from outdoor, indoor, and noncultivation uses, which are below the identified thresholds, would therefore not result in an increase in ambient concentrations of ozone or PM in the SDAB. As summarized in Section 2.4.1, "Existing Conditions," above, human exposure to ozone may cause acute and chronic health impacts, including coughing, pulmonary distress, lung inflammation, shortness of breath, and permanent lung impairment. By evaluating emissions against SDAPCD's screening thresholds, the construction of future outdoor and indoor commercial cannabis cultivation sites and noncultivation uses would likely not contribute to the health complications associated with exposure to increased concentrations of ozone and PM_{10}. This impact would be less than significant.

Operation

Development of future licensed commercial cannabis operations could result in operational emissions of VOCs, NO_X, $PM_{2.5}$, and PM_{10} similar to those used for other agricultural activities. These include the combustion of natural gas for heating and emergency generators, use of consumer products and fertilizers, application of architectural coatings, and use of heavy-duty equipment for agricultural purposes. Cannabis manufacturing would be allowed under the Cannabis Program, which would be source of VOC emissions; however, these processes would be regulated under SDAPCD Rule 1200. In consultation with SDAPCD, permits

acquired through Rule 1200 demonstrate a range of VOC emissions from 2.9–62.7 pounds per day, which would be below SDAPCD's threshold of significance (Amberg, pers. comm., 2025). Table 2.4.7, included at the end of this section, presents the levels of criteria air pollutants and precursors associated with operation of each new individual commercial cannabis use type. Emissions were estimated for each commercial cannabis cultivation type using the range of assumed future cannabis cultivation sites identified in Table 1.4.

As shown in Table 2.4.7, operational emissions of VOCs, NO_X, PM_{10}, and $PM_{2.5}$ from outdoor, mixed-light, and indoor cannabis cultivation and noncultivation sites would not exceed SDAPCD's screening thresholds.

Long-term operational emissions of criteria air pollutants and precursors that exceed these screening thresholds could violate or substantially contribute to an existing or projected air quality violation and expose sensitive receptors to substantial pollutant concentrations such that adverse health impacts could occur. Therefore, because operation of individual outdoor, mixed-light, and indoor cultivation sites and noncultivation uses would not exceed SDAPCD's screening thresholds, emissions would not adversely affect human health under Alternative 2. Therefore, the contribution to operational criteria pollutants and precursors would not result in greater acute or chronic health impacts compared to existing conditions under Alternative 2.

Summary

As identified above, construction and operational emissions from cultivation would not exceed SDAPCD's screening thresholds and would not contribute to the nonattainment status for ozone of the SDAB. The impact would be less than significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

The Cannabis Program under Alternative 3 is anticipated to accommodate up to 372 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions) and is the same as Alternative 2 described above. Alternative 3 additionally prohibits the development of cannabis facilities within 1,000 feet of expanded sensitive uses, including other cannabis facilities. Advertising of cannabis on billboards would also be prohibited within 1,000 feet of the expanded sensitive uses.

Alternative 3 includes the same development potential as Alternative 2. The extension of the assumed buffer would not alter the projected emissions for each cannabis cultivation type. The emissions shown below in Tables 2.4.6 and 2.4.7 would apply to Alternative 3. Therefore, similar to Alternative 2, construction and operational impacts would be less than significant.

The impact would be less than significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

The Cannabis Program under Alternative 4 is anticipated to accommodate up to 212 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions). This alternative would result in 2,002,524 square feet of cannabis building area and 479 acres of land area dedicated to cannabis cultivation activity (whereas Alternatives 2, 3, and 5 would result in 2,680,304 square feet of cannabis building area and 773 acres of land area dedicated to cannabis cultivation activity). Alternative 4 would allow mixed-light and

indoor cannabis cultivation only when contained within a building. Alternative 4 additionally prohibits the development of cannabis facilities within 1,000 feet of expanded sensitive uses, including other cannabis facilities. Advertising of cannabis on billboards would also be prohibited within 1,000 feet of the expanded sensitive uses.

When assessed at a project-level, the construction and operational energy demand of each commercial cannabis use type would be same to that disclosed in Tables 2.4.6 and 2.4.7 with the exception of the outdoor cannabis cultivation use type. It is foreseeable, in a cumulative context, that allowance of additional licenses for mixed-light and indoor cultivation under Alternative 4 would result in an increase in total natural gas demand and associated emissions to grow cannabis. However, on a project scale, emissions would be the same as Alternative 2. Therefore, similar to Alternative 2, construction and operational impacts would be less than significant.

The impact would be less than significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

The Cannabis Program under Alternative 5 is anticipated to accommodate up to 372 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions) and is the same as Alternative 2 described above. Alternative 5 additionally prohibits the development of cannabis facilities within 1,000 feet of expanded sensitive uses, including other cannabis facilities. Advertising of cannabis on billboards would also be prohibited within 1,000 feet of the expanded sensitive uses. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

Alternative 5 includes the same development potential as Alternative 2. The extension of the assumed buffer would not alter the projected emissions for each cannabis cultivation type. The emissions shown below in Tables 2.4.6 and 2.4.7 would apply to Alternative 5. Therefore, similar to Alternative 2, construction and operational impacts would be less than significant.

The impact would be less than significant under Alternative 5.

2.4.3.6 *Issue 3: Result in Emissions of Odors Adversely Affecting a Substantial Number of People*

Guidelines for Determination of Significance

According Appendix G of the State CEQA Guidelines and the *County of San Diego Guidelines for Determining Significance: Air Quality*, the proposed Cannabis Program, with the exception of agricultural operations, is subject to SDAPCD Rule 51 and would have a significant impact if it would result in the emission of any material that causes nuisance to a considerable number of people 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.

Impact Analysis

As described in Section 2.4.1, “Existing Conditions,” the typical smell of cannabis originates from roughly 140 different terpenes. A terpene is a volatile, unsaturated hydrocarbon that is found in essential oils of plants, especially conifers and citrus trees. Some terpenes are identified explicitly in research (myrcene, pinene, limonene). The “skunk” odor attributable to cannabis is primarily volatile thiols. Commercial cannabis uses have the potential to generate nuisance odors. Cannabis plants are known to emit odors, especially during the final stages of the growing cycle (i.e., typically beginning in August and continuing through the harvest season, in September and October, for outdoor cultivation). The potential for detected odors to be considered objectionable and an adverse effect would depend on the size of the cannabis-related operation, the receptor, the presence of nearby vegetation, and topographic and atmospheric conditions.

The farthest distance cannabis odors may be recognizable or detectable is approximately 2 miles, depending on topography and meteorology (Kern County 2017). However, recognition of an odor does not imply that the odor is a nuisance, only that it can be identified or detected as cannabis. Typically, the odor is detectable much closer to the source, such as adjacent to or on a commercial cannabis cultivation site. The distance for odor detection is very site-specific and can be affected by many variables, including meteorology, topography, and how ready plants are for harvesting at cultivation sites. In addition, human perception of cannabis plant odors may be influenced by personal views regarding cannabis. Whether the odor is acceptable and the level at which it should be defined as objectionable at various strengths and distances as perceived by individual sensitive receptors varies.

The proposed Cannabis Program includes amendments to the Regulatory Code that include the following performance standards to address odors:

- Section 21.2510(a)(6): Odor Mitigation Plan.

  (A) All cannabis businesses shall prepare, implement, and maintain, a site-specific odor mitigation plan.

  (B) The plan shall provide guidance to on-site operation personnel by describing, at a minimum, the following items. If the operator will not be implementing any of these procedures, the plan shall explain why it is not necessary.

    a. A description of on-site odor sources; and,

    b. A description of the air treatment system or other best management practices that will be implemented to prevent cannabis odors from being detected outside the licensed premises.

  (C) The odor mitigation plan shall be reviewed annually by the licensee to determine if any revisions are necessary.

- Section 21.2525: General Operating Requirements.

  (o) Odor Control

  (1) Odor control devices and techniques shall be incorporated in all Cannabis Businesses in accordance with the business's approved Odor Mitigation Plan to ensure that odors from cannabis are not detectable outside the licensed premises.

  (A) Cannabis Businesses sited on a parcel with other commercial uses, consumption lounges, indoor, greenhouse, and mixed-light cultivation activities shall provide a sufficient odor absorbing ventilation and exhaust system so that odor generated inside the Cannabis Business that is distinctive to its operation is not detected outside of the licensed premises, anywhere on adjacent property or public rights-of-way, on or about the exterior or interior common area walkways, hallways, breezeways, foyers, lobby areas, or any other areas available for use by common tenants or the visiting public, or within any other unit located inside the same building as the Cannabis Business.

  (2) Cannabis Businesses as described in Section21.2525(n)(1)(A) must install and maintain the following equipment, or any other equipment which the Director or their designee(s) determine is a more effective method or technology:

  (A) An exhaust air filtration system with odor control that prevents internal odors from being emitted externally;

  (B) An air system that creates negative air pressure between the Cannabis Business's interior and exterior, so that the odors generated inside the Cannabis Business are not detectable on the outside of the Cannabis Business.

- Section 21.2528: Consumption Lounges.

  (k) The licensee shall provide an adequate odor mitigation plan so as to prevent any detectable odor immediately outside of the premises (this shall include within business suites that may be located adjacent to the consumption lounge). Within twenty-four (24) hours of any complaint concerning odors emanating from or originating within the facility, the licensee shall respond to the complaint in question, and shall within one (1) business day file a written disclosure to the County documenting any and all actions taken and planned to address the odor complaints. If the odor complaints persist, the facility shall be closed until the situation is resolved.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona would be allowed to continue to operate under the existing ordinances as well as expand their existing facilities and operations to a total of 10,000 square feet of building area. However, no new commercial cannabis uses would be allowed. These expansions would not generate significant new odors beyond existing cannabis cultivation operations.

This impact would be less than significant under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

The Cannabis Program under Alternative 2 is anticipated to accommodate up to 372 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions). Alternative 2 would include 600-foot buffers from cannabis uses from certain state-defined sensitive uses, including schools, daycares, and youth centers.

As described above, commercial cannabis uses have the potential to generate nuisance odors. Cannabis plants are known to emit odors, especially during the final stages of the growing cycle (i.e., typically beginning in August and continuing through the harvest season, in September and October, for outdoor cultivation). The potential for detected odors to be considered objectionable and an adverse effect would depend on the size of the cannabis-related operation, the receptor, the presence of nearby vegetation, and topographic and atmospheric conditions. Odor impact associated with commercial cannabis cultivation operations not associated with the use of buildings and greenhouses (i.e., outdoor and mixed-light) are typically addressed through the establishment of setbacks or buffers. Indoor cultivation and noncultivation uses address cannabis odor through the use of filtered ventilation systems.

Under Alternative 2, a 600-foot buffer would be required for all future licensed cannabis cultivation sites for some, but not all, sensitive uses. This buffer would not apply to other sensitive uses, such as residences or recreation amenities. Outdoor and mixed-light cannabis cultivation sites would also be required to be setback by a minimum of 100 feet from all lots lines and 300 feet from legal residences on adjoining parcels in existence during the permit application process. As identified above, the Cannabis Program includes amendments to the Regulatory Code that would apply to all cannabis facilities that require the implementation of an odor mitigation plan and odor control requirements. Odor control associated with cannabis operations within buildings can be successfully accomplished through the use of active carbon filters, biofilters, plasma ion technology, air filters, and other manufactured odor control/masking substances (e.g., gels and sprays designed to mask odors). Cannabis odor control for buildings through this use of filtration is an effective method of providing odor control (Trinity Consultants 2019).

While odor control equipment for commercial cannabis operations contained within buildings or greenhouses would mitigate odor impacts, detectable cannabis odors from outdoor and mixed-light commercial cannabis cultivation operations not contained within buildings with odor control features cannot be completely eliminated in all circumstances. Moreover, under Alternative 2, outdoor cannabis events could be permissible which could introduce temporary odors from the combustion of cannabis products.

The impact would be significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

Alternative 3 includes the same development and odor generation potential as Alternative 2; however, the buffer distance under Alternative 3 would be 1,000 feet as compared to 600 feet. Nevertheless, as explained under Alternative 2, emissions modeling has captured odor from cannabis up to 2 miles from its origin; therefore, for similar reasons outlined in the discussion of Alternative 2 above, odor impacts would be significant for outdoor and mixed-light commercial cannabis cultivation operations not contained within buildings with odor control features.

The impact would be significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

The Cannabis Program under Alternative 4 is anticipated to accommodate up to 212 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions). Alternative 4 would allow mixed-light and indoor cannabis cultivation only when contained within a building. Alternative 4 additionally prohibits the development of cannabis facilities within 1,000 feet of expanded sensitive uses, including other cannabis facilities. Advertising of cannabis on billboards would also be prohibited within 1,000 feet of the expanded sensitive uses.

Alternative 4 includes a prohibition of cannabis cultivation outside. Thus, all cannabis cultivation operations would be contained within a building and would be subject to Cannabis Program and Regulatory Code requirements for the implementation of an odor mitigation plan and odor control requirements that prohibit cannabis odors from being detected outside of the cannabis premises. Odor control associated with cannabis operations within buildings can be successfully accomplished through the use of active carbon filters, biofilters, plasma ion technology, air filters, and other manufactured odor control/masking substances (e.g., gels and sprays designed to mask odors). Cannabis odor control for buildings through this use of filtration is an effective method of providing odor control (Trinity Consultants 2019).

The impact would be less than significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

The Cannabis Program under Alternative 5 is anticipated to accommodate up to 372 cultivation and 170 noncultivation sites/licenses within the county in 2044 (refer to Table 1.4 in Chapter 1, "Project Description, Location, and Environmental Setting" for a full list of development assumptions). Alternative 5 additionally prohibits the development of cannabis facilities within 1,000 feet of expanded sensitive uses, including other cannabis facilities. Advertising of cannabis on billboards would also be prohibited within 1,000 feet of the expanded sensitive uses. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

Alternative 5 includes the same development and odor generation potential as Alternative 2; however, the buffer distance under Alternative 5 would be 1,000 feet, as compared to 600 feet. Nevertheless, as explained under Alternative 2, emissions modeling has captured odor from cannabis up to 2 miles from its origin; therefore, for similar reasons outlined in the discussion of Alternative 2 above, odor impacts would be significant for outdoor and mixed-light commercial cannabis cultivation operations not contained within buildings with odor control features.

The impact would be significant under Alternative 5.

2.4.4 Cumulative Impacts

With respect to criteria air pollutants, the cumulative environment for the project is the SDAB, which comprises San Diego County. A description of the SDAB can be found in Section 2.4.1. The cumulative setting for criteria air pollutants includes all past, present, and future projects

within the county and the growth assumptions provided in the RAQS overseen by SDAPCD given the programmatic nature of the Cannabis Program.

Odor impacts tend to not to be cumulative in nature with odor issues generally within 4 miles of an odor emitting source.

2.4.4.1 *Issue 1: Conflict with Air Quality Plans*

The San Diego County General Plan Update EIR identified cumulatively considerable impacts associated with air quality attainment efforts from implementation of the General Plan (County of San Diego 2011).

In accordance with SDAPCD guidance, the Cannabis Program under Alternatives 1, 2, 3, 4, and 5 were evaluated qualitatively for consistency with the most recently adapted air quality plan in the county (i.e., 2023 RAQS). Specifically, the Cannabis Program was compared to the growth assumptions used in the RAQS and was determined to be consistent because no new growth would be introduced as a result of program implementation. Therefore, the Cannabis Program's contribution to conflicts with or obstruction of an applicable air quality plan would not be cumulatively considerable under Alternative 1, 2, 3, 4, or 5.

2.4.4.2 *Issue 2: Result in a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant*

The San Diego County General Plan Update EIR identified cumulatively considerable impacts associated with contribution to criteria pollutants from implementation of the General Plan (County of San Diego 2011).

Construction

SDAPCD's screening thresholds apply at the project level and are cumulative in nature; that is, they identify the level of project-generated emissions above which impacts would be cumulatively considerable. Thus, they represent the level at which emissions of a given project would impede the air basin from achieving ambient air quality standards, considering anticipated growth and associated emissions in the region.

The SDAB is in nonattainment for ozone and PM_{10} with respect to the CAAQS and for ozone and $PM_{2.5}$ with respect to the NAAQS. Construction activities in the region would emit additional PM and ozone precursors that may conflict with attainment efforts in the county. Because the region is in nonattainment, the existing cumulative condition is adverse, and any additional emissions would exacerbate that condition. However, SDAPCD has established construction emission thresholds for development projects that determine whether that particular project's emissions would be cumulatively considerable. As detailed above, criteria air pollutants would remain below the SDAPCD screening thresholds. Therefore, the Cannabis Program's construction-related contribution to criteria air pollutant or precursor emissions would not be cumulatively considerable under Alternative 1, 2, 3, 4, or 5.

For analysis and disclosure purposes, this EIR estimated licensed commercial cannabis cultivation and noncultivation operations that may occur in the county over the next 20 years for cumulative conditions. Since the proposed Cannabis Program does not entitle any new individual commercial cannabis uses upon its approval, it is not known how many new

commercial cannabis uses would be constructed at the same time. Construction and operation air pollutant emission modeling used the CalEEMod computer program. Cumulative modeling was based on assumptions of the number and size of these new facilities, which are identified in Table 1.4, as well as of the climatic conditions in the county. Construction-related emissions were estimated for individual license types and scaled based on the number of cultivation and noncultivation sites that could be constructed simultaneously. This PEIR estimates that a total of 180 acres of licensed cannabis cultivation canopy and 170 noncultivation sites may occur over the next 20 years under Alternatives 2, 3, 4, and 5 (see Table 1.4 for additional assumptions).

To estimate the number of new commercial cannabis sites that could potentially be constructed in a year, it is conservatively estimated that as many as 12 commercial cannabis sites could be under construction at the same time. Table 2.4.8, included at the end of this section, presents the levels of criteria air pollutants and precursors that would be emitted by this level of construction activity. Refer to Appendix C for detailed modeling input parameters and results.

Operations

Ozone impacts are the result of cumulative emissions from numerous sources in the region and transport from outside the region. Ozone is formed in chemical reactions involving VOCs, NO_X, and sunlight. All but the largest individual sources emit VOCs and NO_X in amounts too small to have a measurable effect on ambient ozone concentrations by themselves. However, when all sources throughout the region are combined, they can result in cumulative ambient concentrations of ozone that exceed the NAAQS and CAAQS.

PM_{10} and $PM_{2.5}$ have similar regional cumulative impacts when particulates are entrained in the air and build to unhealthful concentrations over time. PM_{10} and $PM_{2.5}$ also have the potential to cause significant local problems during periods of dry conditions accompanied by high winds, and during periods of heavy earth-disturbing activities. PM_{10} and $PM_{2.5}$ may have cumulative local impacts if, for example, several unrelated grading or earth-moving activities are underway simultaneously at nearby sites. Operational PM_{10} and $PM_{2.5}$ are less likely to result in local cumulative impacts because operational sources of PM_{10} and $PM_{2.5}$ tend to be spread throughout the region (i.e., vehicles traveling on roads), not concentrated at one receptor.

SDAPCD has established operational emission criteria thresholds for individual projects beyond which a particular project's emissions would be cumulatively considerable. A project that operates below the threshold levels is generally considered not to contribute to a cumulatively significant air quality impact, and those that operate above the thresholds would contribute to a cumulative impact.

Under Alternative 1, no new commercial cannabis uses would be allowed and expansion of the 5 existing facilities would not generate significant construction or operational emissions; thus, there would be no contribution to criteria air pollutants. As noted above, the Cannabis Program under Alternatives 2, 3, 4, and 5 is consistent with applicable local air quality plans designed to reduce regional emissions. Nonetheless, overall emissions associated with the Cannabis Program would increase over existing conditions. The analysis included in Section 2.4.3.5, "Issue 2: Result in a Cumulatively Considerable New Increase of Any Nonattainment Criteria Pollutant," shows that operation of cannabis cultivation sites and noncultivation uses under the Cannabis Program would result in the generation of additional VOCs, NO_X, and PM_{10}, which are criteria air pollutants and precursors that form the basis for the region's nonattainment

status and the existing adverse cumulative condition in the air basin. However, these emissions would not exceed SDAPCD's screening thresholds, which are inherently cumulative by design. Therefore, the Cannabis Program's contribution to a net increase in long-term operational criteria air pollutant and precursor emissions that form the basis for the regions nonattainment status would not be cumulatively considerable for Alternative 1, 2, 3, 4, or 5.

For analysis and disclosure purposes, this PEIR estimated licensed commercial cannabis cultivation and noncultivation operations that may occur in the county over the next 20 years for cumulative conditions (see Table 1.4). Table 2.4.9, included at the end of this section, presents total levels of criteria air pollutants and precursors associated with operation of assumed new commercial cannabis sites under Alternatives 2, 3, and 5 based on Table 1.4. Table 2.4.10, included at the end of this section, presents the total levels of criteria pollutants and precursors from operation of the assumed new commercial cannabis sites under Alternative 4. Refer to Appendix C for detailed modeling input parameters and results.

2.4.4.3 *Issue 3: Result in Emissions of Odors Adversely Affecting a Substantial Number of People*

The San Diego County General Plan Update EIR identified no cumulatively considerable impacts associated with odors from implementation of the General Plan (County of San Diego 2011). Odor impacts tend to not to be cumulative in nature with odor issues generally within 1 to 4 miles of an odor emitting source.

Under Alternative 1, no new commercial cannabis uses would be allowed and expansion of the 5 existing facilities would not generate significant new odor emissions; thus, there would be no contribution or creation of new odor impacts. As described above, the farthest distance cannabis odors may be recognizable or detectable is approximately 2 miles, depending on topography and meteorology (Kern County 2017). However, recognition of an odor does not imply that the odor is a nuisance, only that it can be identified or detected as cannabis. Typically, the odor is detectable much closer to the source, such as adjacent to or on a commercial cannabis cultivation site. The distance for odor detection is very site-specific and can be affected by many variables, including meteorology, topography, and how ready plants are for harvesting at cultivation sites. In addition, human perception of cannabis plant odors may be influenced by personal views regarding cannabis. Whether the odor is acceptable and the level at which it should be defined as objectionable at various strengths and distances as perceived by individual sensitive receptors varies.

While it is acknowledged that Alternatives 2, 3, and 5 would result in significant odor impacts at the project level (no significant odor impacts were identified for Alternative 4), these impacts would be limited to the area surrounding the outdoor or mixed-light cannabis cultivation operation and would not create a countywide odor impact. All commercial cannabis operations would be subject to the Cannabis Program and Regulatory Code requirements for the implementation of an odor mitigation plan and odor control requirements that prohibit cannabis odors from being detected outside of the cannabis premises. Thus, this impact would not be cumulatively considerable for Alternative 1, 2, 3, 4, or 5.

2.4.5 Significance of Impacts Prior to Mitigation

2.4.5.1 *Issue 1: Conflict with Air Quality Plans*

The proposed Cannabis Program would result in less than significant impacts associated with conflicts with applicable air quality plans under Alternatives 1 through 5. It would also not result in significant cumulative impacts associated with conflicts with applicable air quality plans.

2.4.5.2 *Issue 2: Result in a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant*

The proposed Cannabis Program would not result in significant impacts associated with construction or operational emissions under Alternatives 1 through 5. Alternatives 1 through 5 would not result in significant cumulative impacts associated air pollutant emissions.

2.4.5.3 *Issue 3: Result in Emissions of Odors Adversely Affecting a Substantial Number of People*

The Cannabis Program would have less than significant impacts associated with odors under Alternative 1. The proposed Cannabis Program would result in significant odor impacts under Alternatives 2, 3, and 5. Alternative 4 would result in a less-than-significant odor impact due to the prohibition of cannabis cultivation outside of a building. Cannabis Program would also not result in significant cumulative impacts associated odors under Alternatives 1, 2, 3, 4, and 5.

2.4.6 Mitigation

2.4.6.1 *Issue 1: Conflict with Air Quality Plans*

No mitigation is required.

2.4.6.2 *Issue 2: Result in a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant*

No mitigation is required.

2.4.6.3 *Issue 3: Result in Emissions of Odors Adversely Affecting a Substantial Number of People*

No mitigation is required under Alternative 1 and 4.

All commercial cannabis operations would be subject to the proposed Cannabis Program and Regulatory Code requirements for the implementation of an odor mitigation plan and odor control requirements that prohibit cannabis odors from being detected outside of the cannabis premises. No additional feasible mitigation is available to address odor impacts for Alternatives 2, 3, and 5.

2.4.7 Conclusion

The discussion below provides a synopsis of the conclusion reached in each of the above impact analyses.

2.4.7.1 *Issue 1: Conflict with Air Quality Plans*

New commercial cannabis operations under Alternatives 1 through 5 would be within the growth projections of the RAQS because commercial cannabis would not introduce new population to the county. Thus, the Cannabis Program would not conflict with the applicable air quality plan under Alternatives 1 through 5. Thus, this impact would be less than significant under Alternatives 1 through 5. In addition, the proposed Cannabis Program would not contribute to a significant cumulative impact.

2.4.7.2 *Issue 2: Result in a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant*

While some expansion could occur under Alternative 1 resulting in some level of criteria air pollutant emissions, construction and operational impacts would be less than significant under Alternative 1. Construction of mixed-light cannabis cultivation sites under Alternatives 2 through 5 would generate VOCs, NO_X, PM_{10}, and $PM_{2.5}$ below SDAPCD's thresholds of significance. Operation of all cannabis cultivation types would not generate cumulatively considerable emissions of criteria air pollutants. Thus, this impact would be less than significant under Alternatives 1 through 5. In addition, the proposed Cannabis Program would not contribute to a significant cumulative impact.

2.4.7.3 *Issue 3: Result in Emissions of Odors Adversely Affecting a Substantial Number of People*

The Cannabis Program would have less than significant impacts associated with odors under Alternative 1. Alternative 4 would result in a less-than-significant odor impact due to the prohibition of cannabis cultivation outside of a building and proposed Cannabis Program and Regulatory Code requirements for the implementation of an odor mitigation plan and odor control requirements that prohibit cannabis odors from being detected outside of the cannabis premises.

The proposed Cannabis Program would result in significant odor impacts under Alternatives 2, 3, and 5. Compliance with proposed Regulatory Code amendments (Sections 21.2510(6), 21.2525(k), and 21.2528(i)) would provide all feasible measures to address and minimize odor impacts as well as corrective actions for commercial cannabis sites that routinely generate nuisance odor impacts off-site consistent with General Plan Policy LU-2.8. However, it is possible that nuisance odor impacts would occur occasionally before abatement for outdoor and mixed-light commercial cannabis cultivation sites not contained within buildings or greenhouses. There are no feasible mitigation measures for completely avoiding the potential for occasional odor nuisance impacts because there is no reliable method to contain odors on-site under all atmospheric conditions during harvest season. Moreover, these odors could combine with other sources of odors from agricultural activity unrelated to cannabis cultivation. There are no effective mitigation measures to ensure elimination of cannabis odors. Therefore, this impact is significant and unavoidable for Alternatives 2, 3, and 5.

Table 2.4.2 Ambient Air Quality Standards and Attainment Status for the San Diego Air Basin

Pollutant	Averaging Time	California (CAAQS) Standards	California (CAAQS) Attainment Status	National (NAAQS) Standards – Primary	National (NAAQS) Attainment Status
Ozone (O_3)	1-hour	0.090 ppm (180 µg/m^3)	Nonattainment	—	—
	8-hour	0.070 ppm (137 µg/m^3)	Nonattainment	0.070 ppm (137 µg/m^3)	Nonattainment
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
	8-hour	9 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	Attainment	53 ppb (100 µg/m^3)	Attainment
	1-hour	0.18 ppm (339 µg/m^3)	Attainment	100 ppb (188 µg/m^3)	Attainment
Sulfur dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	Attainment	—	—
	3-hour	—	Attainment	—	—
	1-hour	0.25 ppm (655 µg/m^3)	Attainment	75 ppb (196 µg/m^3)	Attainment
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	Attainment	—	—
	24-hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified/ attainment
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	Nonattainment	9 µg/m^3	Unclassified/ attainment
	24-hour	—	—	35 µg/m^3	Unclassified/ attainment
Lead	Calendar quarter	—	—	1.5 µg/m^3	Attainment
	30-day average	1.5 µg/m^3	Attainment	—	—
	Rolling 3-month average	—	—	0.15 µg/m^3	Attainment
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	Unclassified	No national standards	
Sulfates	24-hour	25 µg/m^3	Attainment		
Vinyl chloride	24-hour	0.01 ppm (26 µg/m^3)	Unclassified		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km	Unclassified		

Notes: CAAQS = California ambient air quality standards; NAAQS = national ambient air quality standards; µg/m^3 = micrograms per cubic meter; km = kilometers; mg/m^3 = milligrams per cubic meter; ppb = parts per billion; ppm = parts per million (by volume).

Sources: EPA 2024.

Table 2.4.3 Sources and Health Effects of Criteria Air Pollutants

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Ozone	Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and the primary component of smog. It is a secondary pollutant resulting from the reaction of VOCs and NO_X in the presence of sunlight. VOC emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO_X results from the combustion of fuels.	increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	CO is an odorless, colorless gas formed by the incomplete combustion of fuels and motor vehicle exhaust. Other sources include industrial processes, carbon black manufacturing, non-transportation-related fuel combustion, and natural sources, such as wildfires.	headache, dizziness, fatigue, nausea, vomiting, death	permanent heart and brain damage
Nitrogen dioxide (NO_2)	NO_2 is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines.	coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	chronic bronchitis, decreased lung function
Sulfur dioxide (SO_2)	coal and oil combustion, steel mills, refineries, and pulp and paper mills	irritation of upper respiratory tract, increased asthma symptoms	insufficient evidence linking SO_2 exposure to chronic health impacts
Respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$)	fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO_2 and ROG	breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	alterations to the immune system, carcinogenesis
Lead	metal processing	reproductive/developmental effects (fetuses and children)	numerous effects including neurological, endocrine, and cardiovascular effects

Notes: NO_X = oxides of nitrogen; VOCs = volatile organic compounds; ROG = reactive organic gasses.

[1] Acute health effects refer to immediate illnesses caused by short-term exposures to criteria air pollutants at fairly high concentrations. An example of an acute health effect includes fatality resulting from short-term exposure to carbon monoxide levels in excess of 1,200 parts per million.

[2] Chronic health effects refer to cumulative effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations. An example of a chronic health effect includes the development of cancer from prolonged exposure to particulate matter at concentrations above the national ambient air quality standards.

Source: EPA 2024.

Table 2.4.4 Summary of Annual Ambient Air Quality Data in San Diego County (2021–2023)

Pollutant	2021	2022	2023
Ozone (2015 standard)[1]			
Maximum concentration (1-hr/8-hr avg, ppm)	0.080	0.088	0.085
Number of days state standard exceeded (1-hr/8-hr)	15	24	32
Number of days national standard exceeded (8-hr)	15	24	27
Fine Particulate Matter ($PM_{2.5}$)[2]			
Maximum concentration (24-hour µg/m^3)	30.2	26.4	23.2
Annual average (µg/m^3)	9.7	8.9	8.4
Number of days national standard exceeded (measured)	0	0	0
Respirable Particulate Matter (PM_{10})[2]			
Maximum concentration (24-hour µg/m^3)	*	*	*
Number of days state standard exceeded	*	*	*
Number of days national standard exceeded (estimated days)	*	*	*

Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; * = data not available.

[1] Data from the Alpine–2300 Victoria Drive station.

[2] Data from the El Cajon–Lexington Elementary School station.

Sources: SDAPCD 2022; CARB 2024.

Table 2.4.5 Screening-Level Thresholds for Air Quality Impact Analysis

Pollutant Construction Emissions	Total Emissions (Pounds per Day)
Respirable particulate matter (PM_{10})	100
Fine particulate matter ($PM_{2.5}$)	55
Oxides of nitrogen (NO_X)	250
Oxides of sulfur (SO_X)	250
Carbon monoxide (CO)	550
Volatile organic compounds (VOCs)[1]	75

Operational Emissions	Pounds Per Hour	Pounds per Day	Tons per Year
Respirable particulate matter (PM_{10})	—	100	15
Fine particulate matter ($PM_{2.5}$)	—	55	10
Oxides of nitrogen (NO_X)	25	250	40
Oxides of sulfur (SO_X)	25	250	40
Carbon monoxide (CO)	100	550	100
Lead and lead compounds	—	3.2	0.6
Volatile organic compounds (VOCs)	—	75	13.7

Toxic Air Contaminant Emissions	
Excess cancer risk	1 in 1 million without Best Available Control Technology (T-BACT) 10 in 1 million with T-BACT
Non-cancer hazard	1.0

Source: DPLU 2007.

Table 2.4.6 Criteria Air Pollutant and Precursor Emissions Associated with Construction of Each New Individual Commercial Cannabis Cultivation Type and Noncultivation Site

License Type	VOC (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Outdoor	34 (winter)	14 (summer)	8 (summer)	4 (summer)
Mixed-light	16 (winter)	10 (summer)	6 (summer)	3 (summer)
Indoor	6 (winter)	10 (summer)	6 (summer)	3 (summer)
Noncultivation	30 (winter)	14 (summer)	8 (summer)	4 (summer)
SDAPCD screening criteria	75	250	100	55

Notes: VOC = volatile organic compounds; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with aerodynamic diameter of 2.5 micrometers or less; lb/day = pounds per day; SDAPCD = San Diego Air Pollution Control District.

Source: Modeling conducted by Ascent in 2024.

Table 2.4.7 Criteria Air Pollutant and Precursor Emissions Associated with Operation of Each New Individual Commercial Cannabis Cultivation Type and Noncultivation Site

License Type	VOC (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Outdoor	6	4	7	2
Mixed-light	2	2	3	1
Indoor	1	1	1	<1
Noncultivation	5	3	5	1
SDAPCD screening criteria	75	250	100	55

Notes: VOC = volatile organic compounds; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with aerodynamic diameter of 2.5 micrometers or less; lb/day = pounds per day; SDAPCD = San Diego Air Pollution Control District.

Source: Modeling conducted by Ascent in 2024.

Table 2.4.8 Cumulative Criteria Air Pollutant and Precursor Emissions Associated with Construction of 12 New Licensed Commercial Cannabis Sites Simultaneously

License Type	VOC (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Outdoor[1]	408 (winter)	168 (summer)	96 (summer)	48 (summer)
Mixed-light	1,188 (winter)	384 (summer)	252 (summer)	132 (summer)
Indoor	72 (winter)	120 (summer)	72 (summer)	36 (summer)
Noncultivation	360 (winter)	168 (summer)	96 (summer)	48 (summer)

Notes: VOC = volatile organic compounds; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with aerodynamic diameter of 2.5 micrometers or less; lb/day = pounds per day.

[1] Under Alternative 4, no emissions from outdoor cultivation would occur.

Source: Modeling conducted by Ascent in 2024.

Table 2.4.9 Cumulative Criteria Air Pollutant and Precursor Emissions Associated with Operation of New Commercial Cannabis Sites (Alternatives 2, 3, and 5)

License Type	VOC (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Outdoor	1,680	1,120	1,960	560
Mixed-light	132	132	198	66
Indoor	26	26	26	5
Noncultivation	850	510	850	170

Notes: VOC = volatile organic compounds; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with aerodynamic diameter of 2.5 micrometers or less; lb/day = pounds per day.

Source: Modeling conducted by Ascent in 2024.

Table 2.4.10 Cumulative Criteria Air Pollutant and Precursor Emissions Associated with Operation of New Commercial Cannabis Sites (Alternative 4)

License Type		VOC (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Mixed-light		202	202	303	101
Indoor		111	111	111	21
Noncultivation		850	510	850	170

Notes: VOC = volatile organic compounds; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with aerodynamic diameter of 2.5 micrometers or less; lb/day = pounds per day.

Source: Modeling conducted by Ascent in 2024.