4.2 AIR QUALITY

This chapter describes the existing air quality setting and evaluates the potential environmental impacts that could occur by adopting and implementing the proposed project. This analysis is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for project-level review, using preliminary information available. It focuses on air pollution from regional emissions and localized pollutant concentrations from buildout of the proposed project. Transportation sector emissions are based on trip generation included in the Traffic Impact Study prepared by W-Trans Transportation Consultants. The Traffic Impact Study is included in Appendix H of this Draft EIR.

Emissions of the proposed project were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.1. The modeling data is included in Appendix B of this Draft EIR. Criteria air pollutant and greenhouse gas (GHG) emissions modeling for construction and operational phases of the proposed project is also included in Appendix B of this Draft EIR. 'Emissions' refers to the actual quantity of pollutant, measured in pounds per day or tons per year. 'Concentrations' refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$).

4.2.1 ENVIRONMENTAL SETTING

4.2.1.1 REGULATORY FRAMEWORK

Federal, state, and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the city is subject to the rules and regulations imposed by BAAQMD, California Air Resources Board (CARB), and United States Environmental Protection Agency (USEPA). The regulatory framework that is potentially applicable to the proposed project is also summarized below.

Federal and State Regulations

Ambient air quality standards have been adopted at federal and state levels for criteria air pollutants. In addition, both the federal and state governments regulate the release of toxic air contaminants (TACs). Santa Rosa in the San Francisco Bay Area Air Basin (SFBAAB or Air Basin) and is subject to the rules and regulations imposed by the BAAQMD, the National ambient air quality standards (AAQS) adopted by the USEPA, and the California AAQS adopted by CARB. Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

Ambient Air Quality Standards

The Clean Air Act was passed in 1963 by the US Congress and has been amended several times. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollutants. The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the California

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AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 4.2-1. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard[a]	Federal Primary Standard[b]	Major Pollutant Sources
Ozone (O_3)[c]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20.0 ppm	35.0 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9.0 ppm	
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Particulate Matter (PM_{10})[d]	Annual Arithmetic Mean	20.0 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50.0 µg/m^3	150.0 µg/m^3	
Respirable Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12.0 µg/m^3	12.0 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35.0 µg/m^3	

TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard[a]	Federal Primary Standard[b]	Major Pollutant Sources
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarterly	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[e]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo[f] =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydro-carbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Notes: ppm: parts per million; µg/m^3: micrograms per cubic meter * Standard has not been established for this pollutant/duration by this entity.

a. California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b. National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

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

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

e. On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual arithmetic mean standards were revoked.

Source: California Air Resources Board, 2015, Ambient Air Quality Standards, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed on April 20, 2017.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building Energy Efficiency Standards

- Title 24, Part 11, CCR: Green Building Standards Code

Tanner Air Toxics Act and Air Toxics "Hot Spot" Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code § 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e. a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Air Pollutants of Concern

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that AAQS have been established

for them. ROG and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants. Each of the primary and secondary criteria air pollutants and its known health effects is described here.

- Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little or no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the SFBAAB. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and when a vehicle is moving at low speeds. New findings indicate that CO emissions per mile are lowest at about 45 miles per hour (mph) for the average light-duty motor vehicle and begin to increase again at higher speeds. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.[1] The SFBAAB is designated under the California and National AAQS as being in attainment of CO criteria levels.[2]

- Reactive Organic Gases (ROGs) are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O_3. There are no AAQS established for ROGs. However, because they contribute to the formation of O_3, BAAQMD has established a significance threshold for this pollutant.

- Nitrogen Oxides (NO_x) are a by-product of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The two major components of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). The principal component of NO_x produced by combustion is NO, but NO reacts with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NOx. NO_2 acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 ppm. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen

[1] Bay Area Air Quality Management District (BAAQMD). 2017, Revised. California Environmental Quality Act Air Quality Guidelines.

[2] California Air Resources Board. December 2015. Area Designations Maps: State and National. http://www.arb.ca.gov/desig/adm/adm.htm.

and oxygen when combustion takes place under high temperature and/or high pressure.[5] The SFBAAB is designated an attainment area for NO_2 under the National AAQS and California AAQS.[6]

- Sulfur Dioxide (SO_2) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When SO_2 forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue.[3] The SFBAAB is designated an attainment area for SO_2 under the California and National AAQS.[4]

- Suspended Particulate Matter (PM_{10} and $PM_{2.5}$) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch).

  Some particulate matter, such as pollen, occurs naturally. In the SFBAAB most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM_{10} bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The USEPA scientific review concluded that $PM_{2.5}$ penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well below current PM_{10} standards. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates.[7]

  Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. These health effects include premature death; increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individual with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may

[3] Bay Area Air Quality Management District. 2017, Revised. California Environmental Quality Act Air Quality Guidelines.
[4] California Air Resources Board. December 2015. Area Designations Maps: State and National. http://www.arb.ca.gov/desig/adm/adm.htm.

initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs. However, the USEPA or CARB have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is also classified a carcinogen by CARB. The SFBAAB is designated nonattainment under the California AAQS for PM_{10} and nonattainment under both the California and National AAQS for $PM_{2.5}$.[5]

- **Ozone (O_3)** is commonly referred to as "smog" and is a gas that is formed when ROGs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions to the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. O_3 levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. O_3 can also damage plants and trees and materials such as rubber and fabrics.[6] The SFBAAB is designated nonattainment of the 1-hour California AAQS and 8-hour California and National AAQS for O_3.[7]

- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phasing out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the USEPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.[10] The SFBAAB is designated in attainment of the California and National AAQS for lead.[11] Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the proposed project.

[5] On January 9, 2013, the EPA issued a final rule to determine that the SFBAAB had attained the 24-hour $PM_{2.5}$ National AAQS. This action suspended federal State Implementation Plan planning requirements for the Bay Area. However, the SFBAAB will continue to be designated nonattainment for the National 24-hour $PM_{2.5}$ standard until BAAQMD submits a redesignation request and a maintenance plan to the EPA and the EPA approves the proposed redesignation.

[6] Bay Area Air Quality Management District. 2017, Revised. California Environmental Quality Act Air Quality Guidelines.

[7] California Air Resources Board. December 2015. Area Designations Maps: State and National. http://www.arb.ca.gov/desig/adm/adm.htm.

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Toxic Air Contaminants

At the time of the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs.[8] Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. According to BAAQMD, particulate matter emitted from diesel engines contributes more than 85 percent of the cancer risk within the SFBBAB and cancer risk from TAC is highest near major diesel PM sources.[9]

Community Risk

To reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when siting sensitive receptors near existing pollution sources. CARB's recommendations were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity substantially increases exposure and the potential for adverse health effects. Three carcinogenic TACs constitute the majority of the known health risks from motor vehicle traffic—DPM from trucks and benzene and 1,3 butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

Regional Regulations

Bay Area Air Quality Management District

BAAQMD is the agency responsible for assuring that the National and California AAQS are attained and maintained in the SFBBAB. Air quality conditions in the SFBBAB have improved significantly since the BAAQMD was created in 1955.[10] The BAAQMD prepares air quality management plans (AQMPs) to attain ambient air quality standards in the SFBBAB. The BAAQMD prepares ozone attainment plans for the

[8] California Air Resources Board, 1999. Final Staff Report: Update to the Toxic Air Contaminant List.

[9] Bay Area Air Quality Management District, 2014, Improving Air Quality & Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective & Path Forward (2004-2013), April.

[10] Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2017). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

National O_3 standard and clean air plans for the California O_3 standard. The BAAQMD prepares these AQMPs in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). BAAQMD adopted the 2017 *Clean Air Plan, Spare the Air, Cool the Climate* (2017 Clean Air Plan) on April 19, 2017, making it the most recent adopted comprehensive plan. The 2017 Clean Air Plan incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools.

BAAQMD 2017 Clean Air Plan

The 2017 Clean Air Plan serves as an update to the adopted Bay Area 2010 Clean Air Plan and continues in providing the framework for SFBAAB to achieve attainment of the California and National AAQS. The 2017 Clean Air Plan updates the Bay Area's ozone plan, which is based on the "all feasible measures" approach to meet the requirements of the California Clean Air Act. Additionally, it sets a goal of reducing health risk impacts to local communities by 20 percent by 2020. Furthermore, the 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a postcarbon year 2050 that encompasses the following: [11]

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A comprehensive multipollutant control strategy has been developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, TACs, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
- Increase efficiency of the energy and transportation systems.
- Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
- Make the electricity supply carbon-free.
- Electrify the transportation and building sectors.

[11] Bay Area Air Quality Management District (BAAQMD). 2017, April 19. Final 2017 Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area. http://www.baaqmd.gov/plans-and-climate/air-quality-plans/plans-under-development.

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BAAQMD Community Air Risk Evaluation Program

The BAAQMD Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area. Based on findings of the latest report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant contributors: 1,3-butadiene contributed four percent of the cancer risk-weighted emissions, and benzene contributed three percent. Collectively, five compounds—diesel PM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). A 75 percent reduction in DPM was predicted between 2005 and 2015 when the inventory accounted for CARB's diesel regulations. Overall, cancer risk from TAC dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for state diesel regulations and other reductions.[12]

Modeled cancer risks from TAC in 2005 were highest near sources of DPM: near core urban areas, along major roadways and freeways, and near maritime shipping terminals. Peak modeled risks were found to be located east of San Francisco, near West Oakland, and near the Maritime Port of Oakland. BAAQMD has identified seven impacted communities in the Bay Area; however, Santa Rosa lies outside of these seven impacted communities.

The major contributor to acute and chronic non-cancer health effects in the SFBBAB is acrolein (C_3H_4O). Major sources of acrolein are on-road mobile sources and aircraft near freeways and commercial and military airports.[13] Currently CARB does not have certified emission factors or an analytical test method for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, the BAAQMD does not conduct health risk screening analysis for acrolein emissions.[14]

BAAQMD Rules and Regulations

Regulation 7, Odorous Substances

Sources of objectionable odors may occur within the City. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property."

[12] Bay Area Air Quality Management District, 2014. Improving Air Quality & Health in Bay Area Communities, Community Air Risk Program (CARE) Retrospective & Path Forward (2004 – 2013). April

[13] Bay Area Air Quality Management District, 2006. Community Air Risk Evaluation Program, Phase I Findings and Policy Recommendations Related to Toxic Air Contaminants in the San Francisco Bay Area.

[14] Bay Area Air Quality Management District, 2010. Air Toxics NSR Program, Health Risk Screening Analysis Guidelines.

Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

Other BAAQMD Regulations

In addition to the plans and programs described above, BAAQMD administers a number of specific regulations on various sources of pollutant emissions that would apply to individual development projects allowed under the proposed project, including:

- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing)

Sonoma County Transportation Authority

The Sonoma County Transportation Authority (SCTA) is the congestion management agency (CMA) for Sonoma County. SCTA is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. SCTA's latest congestion management program (CMP) is the 2016 Comprehensive Transportation Plan (CTP). SCTA s countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, SCTA's updated CTP includes multi-modal performance standards and trip reduction and transportation demand management (TDM) strategies consistent with the goals of reducing regional vehicles miles travelled (VMT) in accordance with Senate Bill 375.

Plan Bay Area

Plan Bay Area is the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). *Plan Bay Area* was adopted jointly by the ABAG and MTC July 18, 2013 and the update, *Plan Bay Area 2040*, is currently being prepared. *Plan Bay Area* lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. *Plan Bay Area* is discussed in greater detail in Chapter 4.6, Greenhouse Gases, of this Draft EIR.

Local Regulations

General Plan 2035

The Land Use and Livability (LUL) and the Open Space and Conservation (OSC) elements of General Plan 2035 include the following goals and policies specific to air quality and applicable to the proposed project:

- Goal LUL-E Livable Neighborhoods: Promote livable neighborhoods by requiring compliance with green building programs to ensure that new construction meets high standards of energy efficiency and sustainable material use. Ensure that everyday shopping, park and recreation facilities, and schools are within easy walking distance of most residents.
- Goal OSC-J: Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards.
  - Policy OSC-J-1: Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the Bay Area Air Quality Management District.
  - Policy OSC-J-3: Reduce particulate matter emissions from wood burning appliances through implementation of the city's Wood Burning Appliance code.

Climate Action Plan

On June 5, 2012, the Santa Rosa City Council adopted the Climate Action Plan (CAP). The CAP recognizes the imperative to act on climate change and demonstrates the City's continued commitment to reducing GHG emissions. The CAP presents measures that will reduce local GHG emissions that have a direct impact on air quality. For additional discussion of the Climate Action Plan, see Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR.

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes provisions apply to buildings with regards to reducing GHG emissions through energy conservation. On July 17, 2008, the California Building Standards Commission adopted the California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") as part of the California Building Standards Code (Title 24, California Code of Regulations). The City of Santa Rosa has adopted all sections of the current California Building Code Title 24, Part 2, in Chapter 18-16, California Building Code, of the SRCC and the California Code of Regulations Title 24, Part 11, in SRCC Chapter 18-42, Citation of California Green Building Standards Code.

4.2.1.2 EXISTING CONDITIONS

San Francisco Bay Area Air Basin

California is divided geographically into air basins for the purpose of managing the air resources of the State on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The State is divided into 15 air basins. As previously stated, Santa Rosa is in the SFBAAB. The discussion below identifies the natural factors in the SFBAAB that affect air pollution. Air pollutants of concern are criteria air pollutants and toxic air contaminants (TACs). Federal, State, and local air districts have adopted laws and regulations intended to control and improve air quality. The regulatory framework that is potentially applicable to the proposed project is also summarized below.

The BAAQMD is the regional air quality agency for the SFBAAB. In addition to the presence of existing air pollution sources and ambient conditions, air quality in the SFBAAB is determined by the following natural factors:[15]

- Meteorology: The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range[16] splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allows air to flow in and out of the Bay Area and the Central Valley.

  The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast.

  The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

- Wind Patterns: During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills.

  Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. For example, the average wind speed at San Francisco International Airport in July is about 17 knots (from 3:00 to 4:00 p.m.), compared with only 7 knots at San Jose and less than 6 knots at the Farallon Islands.

  The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. An inversion is a change in the normal conditions that causes the temperature gradient to be reversed, or inverted. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited, and stagnant conditions are likely to result.

  In the winter, the SFBAAB frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing, which occurs when there is a lack of or little wind) are characterized by nighttime

[15] Bay Area Air Quality Management District (BAAQMD). 2017, Revised. California Environmental Quality Act Air Quality Guidelines.

[16] The Coast Ranges traverses California's west coast from Humboldt County to Santa Barbara County.

drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

- Temperature: Summertime temperatures in the SFBAAB are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold water from the ocean bottom along the coast. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10 degrees Fahrenheit. In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.
- Precipitation: The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the SFBAAB to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys. During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.
- Wind Circulation: Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthful levels.
- Inversions: As described above, an inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the SFBAAB. Elevation inversions[17] are more common in the summer and fall, and radiation inversions[18] are more common during the winter. The highest air pollutant concentrations in the SFBAAB generally occur during inversions.

[17] When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.

[18] During the night, the ground cools off, radiating the heat to the sky.

SFBAAB Area Designations

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal AAQS through the State Implementation Plan. Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas. Severity classifications for O_3 range from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment:** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment:** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- **Nonattainment/Transitional:** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SFBBAB is shown in Table 4.2-2. The SFBBAB is currently designated a nonattainment area for California and National O_3, California and National $PM_{2.5}$, and California PM_{10} AAQS.

TABLE 4.2-2 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment (serious)	No Federal Standard
Ozone – 8-hour	Nonattainment	Nonattainment
PM_{10} – 24-hour	Nonattainment	Unclassified
$PM_{2.5}$ – 24-hour	Nonattainment	Unclassified/Attainment[a]
CO – 8-hour and 1-hour	Attainment	Attainment
NO_2 – 1-hour	Attainment	--[b]
SO_2 – 24-hour and 1-hour	Attainment	--[c]
Lead	Attainment	Attainment
Sulfates	Attainment	No Federal Standard
All others	Unclassified/Attainment	Unclassified/Attainment

Notes:
a. In December 2014, USEPA issued final area designations for the 2012 primary annual $PM_{2.5}$ National AAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015
b. The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.
c. On June 2, 2010, the U.S. EPA established a new 1-hour SO2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO2 NAAQS however must

TABLE 4.2-2 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN

Pollutant	State	Federal

continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO2 NAAQS. EPA expects to make designation for the Bay Area by the end of 2017.

Source: California Air Resources Board, 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, accessed on April 20, 2017; Bay Area Air Quality Management District. 2017. Air Quality Standards and Attainment Status. http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status#thirteen

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of Santa Rosa have been documented and measured by the BAAQMD. BAAQMD has 24 permanent monitoring stations located around the Bay Area, and data from the nearest station, 5th Street Monitoring Station in Santa Rosa, was used. Data from the Santa Rosa Station was not available for O_3 and NO_2 for years 2014 and 2015, so data from the Sebastopol-103 Morris Street Monitoring Station was used in their absence. The station closest to the project site with data for PM_{10} was the Healdsburg-133 Matheson Street Monitoring Station. Data from these stations are summarized in Table 4.2-3. The data show occasional violations of the federal PM_{10} standards. The federal state PM_{10} standards have not been exceeded in the last five years. The State and federal O_3, CO, $PM_{2.5}$, and NO_2 standards have not been exceeded in the last five years in the vicinity of the city.

TABLE 4.2-3 AMBIENT AIR QUALITY MONITORING SUMMARY

	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations				
Pollutant/Standard	2012	2012	2013	2014	2015
Ozone (O_3)[a]					
State 1-Hour ≥ 0.09 ppm	0	0	0	0	0
State 8-hour ≥ 0.07 ppm	2	0	0	0	0
Federal 8-Hour > 0.075 ppm[c]	1	0	0	0	0
Maximum 1-Hour Conc. (ppm)	0.091	0.090	0.085	0.082	0.077
Maximum 8-Hour Conc. (ppm)	0.081	0.070	0.063	0.068	0.068
Carbon Monoxide (CO)[a]					
State 8-Hour > 9.0 ppm	0	0	0	0	0
Federal 8-Hour ≥ 9.0 ppm	0	0	0	0	0
Maximum 8-Hour Conc. (ppm)	1.94	2.41	2.24	*	*
Nitrogen Dioxide (NO_2)[a]					
State 1-Hour ≥ 0.18 (ppm)	0	0	0	0	0
Maximum 1-Hour Conc. (ppb)	55.0	47.4	52.4	49.4	50.1
Sulfur Dioxide (SO_2)[a]					
State 1-Hour ≥ 0.04 ppm	0	0	0	0	*
Max. 1-Hour Conc. (ppm)	0.002	0.002	0.003	0.002	*
Coarse Particulates (PM_{10})[b]					
State 24-Hour > 50 µg/m^3	0	1	0	0	0
Federal 24-Hour > 150 µg/m^3	0	0	0	0	0

TABLE 4.2-3 AMBIENT AIR QUALITY MONITORING SUMMARY

	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations				
Pollutant/Standard	**2012**	**2012**	**2013**	**2014**	**2015**
Maximum 24-Hour Conc. (µg/ m^3)	41.2	73.4	46.7	48.1	46.3
Fine Particulates ($PM_{2.5}$)[a]					
Federal 24-Hour > 35 µg/m^3	0	6	1	6	1
Maximum 24-Hour Conc. (µg/m^3)	29.4	54.2	36.8	48.0	39.6

Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; * = insufficient data; NA = Not Available
a. Data from the Sebastopol-103 Morris Street Monitoring Station.
b. Data from the Healdsburg-133 Matheson Street Monitoring Station.
c. On October 1, 2015 the EPA adopted a new 8-hour national AAQS for ozone of 0.070 ppm (70 ppb).
Source: California Air Resources Board, 2015, Air Pollution Data Monitoring Cards (2010, 2011, 2012, 2013, and 2014), http://www.arb.ca.gov/adam/index.html, accessed on April 20, 2017.

Existing Emissions

The existing Southeast Greenway Area or project site includes 57 acres of land owned by Caltrans, which has remained largely undeveloped. As described in Chapter 3, Project Description, of this Draft EIR, the West Subarea is primarily composed of grassland with a creek, numerous swales, potential wetlands, and remnant orchards. The Central Subarea is primarily composed of undeveloped land with trees along the perimeter, two creeks, and a remnant walnut orchard on the eastern portion of the site. The East Subarea is primarily composed of grassland and rocky outcroppings, oak woodlands, two potential wetlands, and a remnant walnut orchard. These current land uses do not generate long-term air pollutant emissions from mobile sources, energy use, or area sources. The proposed project would amend the General Plan to include land use and zoning changes and policies that would guide future development within the Southeast Greenway Area; however, no project development is proposed at this time.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, since the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the population. Nearby sensitive receptors include residences adjacent to the project site, along Hoen Avenue, Mayette Avenue, Summer Lane, Boulder Lane, Newanga Avenue, and Vallejo Street. In addition, Montgomery High School and Beth Ami Jewish Community Preschool are both adjacent to the project site, approximately 25 feet to the north of

the edge of the project site. Additionally, Spring Creek Elementary School is approximately 320 feet to the north of the edge of the project site.

4.2.2 THRESHOLDS OF SIGNIFICANCE

4.2.2.1 CEQA APPENDIX G THRESHOLDS

Implementation of the proposed project would have a significant effect on the environment with respect to air quality if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.

4.2.2.2 BAAQMD THRESHOLDS

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. These Thresholds are designed to establish the level at which the District believed air pollution emissions would cause significant environmental impacts under CEQA.

In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts; however, this later amendment regarding risk and hazards was the subject of the December 17, 2015, California Supreme Court decision (*California Building Industry Association v BAAQMD*), which clarified that CEQA does not require an evaluation of impacts of the environment on a project.[19] The Supreme Court also found that CEQA requires the analysis of exposing people to

[19] On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not rule on the merits of the thresholds of significance, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA. Following the court's order, the BAAQMD released revised CEQA Air Quality Guidelines in May of 2012 that include guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The Alameda County

environmental hazards in specific circumstances, including the location of development near airports, schools near sources of toxic contamination, and certain exemptions for infill and workforce housing. The Supreme Court also held that public agencies remain free to conduct this analysis regardless of whether it is required by CEQA. To account for these updates, BAAQMD published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court's opinion.[20] This latest version of the BAAQMD CEQA Guidelines was used to prepare the analysis in this Draft EIR.

Criteria Air Pollutant Emissions and Precursors

Regional Significance Criteria

The BAAQMD's criteria for regional significance for projects that exceed the screening thresholds are shown in Table 4.2-4. Criteria for both the potential future construction and operational phases of the project are shown.

TABLE 4.2-4 BAAQMD REGIONAL CRITERIA AIR POLLUTANTS SIGNIFICANCE THRESHOLDS

	Construction Phase	Operational Phase	
Pollutant	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (Tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
PM_{10} and $PM_{2.5}$ Fugitive Dust	Best Management Practices	None	None

Source: Bay Area Air Quality Management District. 2017, May. California Environmental Quality Act Air Quality Guidelines.

CO Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, the BAAQMD does not require a CO hotspot analysis if the following criteria are met:

Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds, and in light of the subsequent case history discussed below, the science and reasoning contained in the BAAQMD 2017 CEQA Air Quality Guidelines provide the latest state-of-the-art guidance available. On August 13, 2013, the First District Court of Appeal ordered the trial court to reverse the judgment and upheld the BAAQMD's CEQA Guidelines. (California Building Industry Association versus BAAQMD, Case Nos. A135335 and A136212 (Court of Appeal, First District, August 13, 2013))

[20] Bay Area Air Quality Management District. 2017, May. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.

- The project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g. tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway, etc.).

Community Risk and Hazards

The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level.

- The future potential development associated with the proposed project would generate TACs and $PM_{2.5}$ during construction activities that could elevate concentrations of air pollutants at the nearby residential sensitive receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for project operations. The BAAQMD has adopted screening tables for air toxics evaluation during construction.[21] Construction-related TAC and $PM_{2.5}$ impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site receptors, as applicable. [22]
- The proposed project does not involve construction of any facilities that would be a source of operational TACs and $PM_{2.5}$. BAAQMD thresholds related to siting new sources of TACs and $PM_{2.5}$ near existing or planned sensitive receptors are not applicable.

Since neither Santa Rosa nor Sonoma County currently has a qualified risk reduction plan, a site-specific analysis of TACs and $PM_{2.5}$ impacts on sensitive receptors was conducted. The thresholds identified below are applied to the construction and operational phases for potential future development under the proposed project.

Community Risk and Hazards: Project

Project-level emissions of TACs or $PM_{2.5}$ from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- Noncompliance with a qualified Community Risk Reduction Plan.
- An excess cancer risk level of more than 10 in one million, or a noncancer (i.e., chronic or acute) hazard index greater than 1.0 would be a significant cumulatively considerable contribution.

[21] Bay Area Air Quality Management District. 2010. Screening Tables for Air Toxics Evaluations during Construction.
[22] Bay Area Air Quality Management District. 2017, May. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.

- An incremental increase of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) annual average $PM_{2.5}$ from a single source would be a significant cumulatively considerable contribution. [23]

Community Risk and Hazards: Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the project, exceeds any of the following:

- No-compliance with a qualified Community Risk Reduction Plan.
- An excess cancer risk level of more than 100 in one million or a chronic noncancer hazard index (from all local sources) greater than 10.0.
- 0.8 $\mu g/m^3$ annual average $PM_{2.5}$. [24]

In February 2015, OEHHA adopted new health risk assessment guidance that includes several efforts to be more protective of children's health. These updated procedures include the use of age sensitivity factors to account for the higher sensitivity of infants and young children to cancer causing chemicals, and age-specific breathing rate.[25]

Odors

BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health, or safety of any such persons or the public, or which cause, or has a natural tendency to cause, injury, or damage to business or property. Under BAAQMD's Rule 1-301. BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.[26] For a plan-level analysis, BAAQMD requires:

- Identification of potential existing and planned location of odors sources.
- Policies to reduce odors.

[23] Bay Area Air Quality Management District. 2017, May. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.

[24] Bay Area Air Quality Management District. 2017, May. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.

[25] Office of Environmental Health Hazard Assessment. 2015, February. Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments.

[26] Bay Area Air Quality Management District. 2017, May. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.

4.2.3 IMPACT DISCUSSION

AQ-1 Implementation of the proposed project would not conflict with or obstruct implementation of the applicable air quality plan.

A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the 2017 Clean Air Plan. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration at an early enough stage to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to clean air goals in the Bay Area.

As described in Section 4.2.2, Thresholds of Significance, BAAQMD requires a consistency evaluation of a plan with its current AQMP measures. BAAQMD considers project consistency with the AQMP in accordance with the following:

- Does the project support the primary goals of the AQMP?
- Does the project include applicable control measures from the AQMP?
- Does the project disrupt or hinder implementation of any AQMP control measures?
- A comparison that the project VMT or vehicle trip increase is less than or equal to the projected population increase.

BAAQMD 2017 Clean Air Plan Goals

The primary goals of the 2017 Clean Air Plan are to attain the State and federal AAQS, reduce population exposure and protect public health in the Bay Area, and reduce GHG emissions and protect the climate. Furthermore, the 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal.

Attain Air Quality Standards

BAAQMDs 2017 Clean Air Plan strategy is based on regional population and employment projections in the Bay Area compiled by ABAG. These demographic projections are incorporated into *Plan Bay Area*. Demographic trends incorporated into *Plan Bay Area* determine VMT in the Bay Area, which BAAQMD uses to forecast future air quality trends. The SFBAAB is currently designated a nonattainment area for O_3, $PM_{2.5}$, and PM_{10} (State AAQS only).

Future growth associated with the proposed project could occur incrementally throughout the General Plan's 2035 buildout horizon. The anticipated growth from the proposed project is within the population and employment projections identified by ABAG for the City of Santa Rosa, as discussed further in Chapter 4.11, Population and Housing, of this Draft EIR. As identified in Chapter 4.11, Population and Housing, the proposed project would not exceed the anticipated regional population and employment forecasts. Because population and employment projections of the proposed project are consistent with regional projections, BAAQMD emissions forecasts consider the additional growth and associated emissions from the proposed project. Consequently, emissions resulting from potential future development associated with the proposed project are included in BAAQMDs projections, and future development accommodated

under the proposed project would not hinder BAAQMDs ability to attain the California or National AAQS. Accordingly, impacts would be *less than significant*.

Reduce Population Exposure and Protect Public Health

As identified in the discussion of community risk and hazards (see impact discussion AQ-4 below), new sensitive land uses (e.g., residential) could be near major sources of TACs. There are three stationary sources within 1,000 feet of the Southeast Greenway Area, all of which are gas stations. Likewise, State Route 12 is the only high-volume roadway with over 10,000 vehicles per day in the vicinity of the Southeast Greenway Area.[27] Adherence to BAAQMD regulations would ensure that new sources of TACs do not expose populations to significant health risk; however, siting of land uses near major sources of air pollution is outside the control of BAAQMD as BAAQMD has no jurisdiction over municipal land use decisions. Future projects within 1,000 feet of major sources of TACs would be required to ensure that they could achieve BAAQMDs performance standards (greater or equal to 10 in 1 million [10E-06] cancer risk, greater or equal to 0.3 $\mu g/m^3$ $PM_{2.5}$, or a non-cancer hazard index greater or equal to 1.0). Compliance with these regulations would ensure consistency and impacts would be *less than significant*.

Reduce GHG Emissions and Protect the Climate

The GHG emissions impacts of the proposed project are discussed in Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR. Future development allowed by the proposed project would be required to adhere to statewide measures that have been adopted to achieve the GHG reduction targets of Assembly Bill 32. In addition, the proposed project is consistent with regional strategies for infill development identified in *Plan Bay Area*. Furthermore, the proposed project would not exceed the forecasted year 2035 project-level efficiency metric of 2.4 metric tons of carbon dioxide equivalent per service population (residents plus employees) per year and would be on a trajectory to meet the GHG reduction goal of Executive Order S-03-05. Therefore, the proposed project is consistent with the goal of the 2017 Clean Air Plan to reduce GHG emissions and protect the climate, and the impact would be *less than significant*.

2017 Clean Air Plan Control Measures

Table 4.2-5 identifies the control measures included in the 2017 Clean Air Plan that are required by BAAQMD to reduce emissions for a wide range of both stationary and mobile sources. As shown in the table, the proposed project, through compliance with existing City regulations, including the Santa Rosa Climate Action Plan and implementation of proposed General Plan policies and Zoning regulations, would not conflict with the 2017 Clean Air Plan and would not hinder BAAQMD from implementing the control measures in the 2017 Clean Air Plan. Accordingly, impacts would be *less than significant*.

TABLE 4.2-5 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
Stationary Source Control Measures	▪ SS 1 – Fluid Catalytic Cracking in Refineries ▪ SS 2 – Equipment Leaks ▪ SS 3 – Cooling Towers	Stationary and area sources are regulated directly by BAAQMD; therefore, as the implementing agency, new stationary and area sources within the Southeast

[27] Bay Area Air Quality Management District. 2011. *Highway Screening Analysis Tool*. http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools. Accessed June 16, 2017.

TABLE 4.2-5 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
	▪ SS 4 – Refinery Flares ▪ SS 5 – Sulfur Recovery Units ▪ SS 6 – Refinery Fuel Gas ▪ SS 7 – Sulfuric Acid Plants ▪ SS 8 – Sulfur Dioxide from Coke Calcining ▪ SS 9 – Enhanced NSR Enforcement for Changes in Crude Slate ▪ SS 10 – Petroleum Refining Emissions Tracking ▪ SS 11 – Petroleum Refining Facility-Wide Emission Limits ▪ SS 12 – Petroleum Refining Climate Impacts Limit ▪ SS 13 – Oil and Gas Production, Processing and Storage ▪ SS 14 – Methane from Capped Wells ▪ SS 15 – Natural Gas Processing and Distribution ▪ SS 16 – Basin-Wide Methane Strategy ▪ SS 17 – GHG BACT Threshold ▪ SS 18 – Basin-Wide Combustion Strategy ▪ SS 19 – Portland Cement ▪ SS 20 – Air Toxics Risk Cap and Reduction from Existing Facilities ▪ SS 21 – New Source Review for Toxics ▪ SS 22 – Stationary Gas Turbines ▪ SS 23 – Biogas Flares ▪ SS 24 – Sulfur Content Limits of Liquid Fuels ▪ SS 25 – Coatings, Solvents, Lubricants, Sealants and Adhesives ▪ SS 26 – Surface Prep and Cleaning Solvent ▪ SS 27 – Digital Printing ▪ SS 28 – LPG, Propane, Butane ▪ SS 29 – Asphaltic Concrete ▪ SS 30 – Residential Fan Type Furnaces ▪ SS 31 – General Particulate Matter Emission Limitation ▪ SS 32 – Emergency Backup Generators ▪ SS 33 – Commercial Cooking Equipment ▪ SS 34 – Wood Smoke ▪ SS 35 – PM from Bulk Material Storage, Handling and Transport, Including Coke and Coal ▪ SS 36 – PM from Trackout ▪ SS 37 – PM from Asphalt Operations ▪ SS 38 – Fugitive Dust ▪ SS 39 – Enhanced Air Quality Monitoring	Greenway Area would be required to comply with BAAQMDs regulations. BAAQMD routinely adopts/revises rules or regulations to implement the stationary source (SS) control measures to reduce stationary source emissions. Due to the location of the Southeast Greenway Area and the type of the proposed land uses (park and recreational, residential, and commercial) under the proposed project, implementation of the proposed project would not hinder the ability of BAAQMD to implement these SS control measures. Furthermore, implementation of the proposed project would not result in any new major stationary source emissions or toxic air contaminants, which are more commonly associated with industrial manufacturing or warehousing. However, the City has existing regulations in place to ensure potential future development under the proposed project would not conflict with the applicable SS control measures. For example General Plan Policy OSC-J-1 would require the City to review all new construction projects and require fugitive dust (PM_{10} and $PM_{2.5}$) abatement actions as contained in the current BAAQMD basic control measures for reducing construction emissions. Non-residential land uses may generate small quantities of stationary source emissions during project operation (e.g., emergency generators, dry cleaners, and gasoline dispensing facilities); however, these small-quantity generators would require review by BAAQMD for permitted sources of air toxics, which would ensure consistency with the 2017 Clean Air Plan.

TABLE 4.2-5 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
	▪ SS 40 – Odors	
Transportation Control Measures	▪ TR 1 – Clean Air Teleworking Initiative ▪ TR 2 – Trip Reduction Programs ▪ TR 3 – Local and Regional Bus Service ▪ TR 4 – Local and Regional Rail Service ▪ TR 5 – Transit Efficiency and Use ▪ TR 6 – Freeway and Arterial Operations ▪ TR 7 – Safe Routes to Schools and Safe Routes to Transit ▪ TR 8 – Ridesharing, Last-Mile Connection ▪ TR 9 – Bicycle and Pedestrian Access and Facilities ▪ TR 10 – Land Use Strategies ▪ TR 11 – Value Pricing ▪ TR 12 – Smart Driving ▪ TR 13 – Parking Policies ▪ TR 14 – Cars and Light Trucks ▪ TR 15 – Public Outreach and Education ▪ TR 16 – Indirect Source Review ▪ TR 17 – Planes ▪ TR 18 – Goods Movement ▪ TR 19 – Medium and Heavy Duty Trucks ▪ TR 20 – Ocean Going Vessels ▪ TR 21 – Commercial Harbor Craft ▪ TR 22 – Construction, Freight and Farming Equipment ▪ TR 23 – Lawn and Garden Equipment	Transportation (TR) control measures are strategies to reduce vehicle trips, vehicle use, VMT, vehicle idling, and traffic congestion for the purpose of reducing motor vehicle emissions. Although most of the TR control measures are implemented at the regional level—that is, by MTC or Caltrans—the 2017 Clean Air Plan relies on local communities to assist with implementation of some measures. The proposed project would create new pedestrian and bicycle facilities to improve connectivity and reduce dependency on motorized vehicles. Likewise, several land use and circulation policies under the proposed project would reduce motor vehicle emissions. Examples of such policies include the following: ▪ Ensure additional bicycle facilities connect to the Southeast Greenway as proposed in the Bicycle and Pedestrian Master Plan. ▪ Provide safe and convenient crossings where the Greenway bicycle and pedestrian trail crosses Hoen Avenue, Franquette Avenue, Yulupa Avenue and Summerfield Road.
Energy and Climate Control Measures	▪ EN 1 – Decarbonize Electricity Production ▪ EN 2 – Renewable Energy Decrease Electricity Demand	The energy and climate (EN) control measures are intended to reduce energy use as a means to reducing adverse air quality emissions. Under the City's Climate Action Plan and SRCC, future potential development under the proposed project would be required to comply with the Climate Action Plan Measure 1.1, which requires new development to meet Tier 1 CALGreen requirements, as amended, for new nonresidential and residential development, in addition to California Building Code, 2016 Building Energy Efficiency Standards, and CALGreen. Compliance with these ongoing City regulations would ensure consistency with these EN control measures.
Buildings Control Measures	▪ BL 1 – Green Buildings ▪ BL 2 – Decarbonize Buildings ▪ BL 3 – Market-Based Solutions ▪ BL 4 – Urban Heat Island Mitigation	The buildings (BL) control measures focus on working with local governments to facilitate adoption of best GHG emissions control practices and policies. The 2017 Clean Air Plan includes measures to increase building efficiency. As described above, compliance with the City's current Climate Action Plan and SRCC regulations (i.e., CALGreen and the current Building Energy Efficiency Standards of Title 24 for energy efficiency) would ensure the project would not conflict with these BL control measures.

TABLE 4.2-5 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
Agriculture Control Measures	▪ AG 1 – Agricultural Guidance and Leadership ▪ AG 2 – Dairy Digesters ▪ AG 3 – Enteric Fermentation ▪ AG 4 – Livestock Waste	Agricultural practices in the Bay Area accounts for a small portion, roughly 1.5 percent, of the Bay Area GHG emissions inventory. The GHGs from agriculture include methane and nitrous oxide, in addition to carbon dioxide. While the Agriculture (AG) control measures target larger scale farming practices that are not proposed under the project, the type of urban farming associated with the proposed project would support reduced GHG emission by increasing the amount of food grown and consumed locally consistent with the City's Climate Action Plan Measure 8.1 (Local Food Systems). Furthermore, the proposed project includes proposed General Plan Policy PSF-J-2, which requires that the locations of community gardens be sited as closely as possible to access points from neighboring residential areas to encourage use and activity. Therefore, implementation of the proposed project would not conflict with these AG control measures. .
Natural and Working Lands Control Measures	▪ NW 1 -- Carbon Sequestration in Rangelands ▪ NW 2 – Urban Tree Planting ▪ NW 3 – Carbon Sequestration in Wetlands	The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands. The proposed project would promote urban tree-planting in order to absorb CO_2, provide shade to reduce urban heat island effects, and increase carbon sequestration in urban areas.
Waste Management Control Measures	▪ WA 1 – Landfills ▪ WA 2 – Composting and Anaerobic Digesters ▪ WA 3 – Green Waste Diversion ▪ WA 4 – Recycling and Waste Reduction	The waste management (WA) control measures include strategies to increase waste diversion rates through efforts to reduce, reuse and recycle. The City actively implements several waste reduction and recycling programs that divert waste that is transported to landfills and assist in waste reduction. As discussed in Chapter 4.14, Utilities and Service Systems, in Section 4.14.3, Solid Waste, the City has existing regulations in place to ensure potential future development under the proposed project would not conflict with the applicable WA control measures. For example, General Plan Policy PSF-H-1, requires the city to continue contracting for garbage and recycling collection services as well as to expand the single-stream recycling program (all recyclables in one container) to all users. Policy PSF-H-3 requires the City to expand recycling efforts in multifamily residential and commercial projects, and continue to encourage recycling by all residents. Additionally, the City's Climate Action Plan requires the City to increase the amount of waste that is recycled and composted. For example, Measure 1.1 requires the City to continue to enforce and require new development to meet Tier 1 CALGreen requirements, as amended, for new nonresidential and residential development. Implementation of these ongoing City regulations to reduce waste would ensure implementation of the proposed project would not conflict with these WA control measures.
Water Control Measures	▪ WR 1 – Limit GHGs from publicly owned treatment works(POTWs) ▪ WR 2 – Support Water Conservation	The 2017 Clean Air Plan includes measures to reduce water use. As discussed in Chapter 4.14, Utilities and Services Systems, ongoing compliance with the City's current water

TABLE 4.2-5 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		conservation regulations included in the General Plan, SRCC, and Climate Action Plan, would support water conservation and ensure the proposed project would not conflict with the WR control measures. For example CALGreen, adopted in SRCC Chapter 18-42, includes water conservation measures and requirements that new buildings reduce water consumption by 20 percent. General Plan Policy PSF-F-4 requires the City to continue improving water infrastructure by maintaining water mains and water transmission lines as necessary. Climate Action Plan Measure 7.1 (Water Conservation), also requires the City to continue to require and incentivize water conservation, while Measure 7.2 (Wastewater and Water Operations) requires the City to improve the efficiency of the water facilities. Furthermore, the Development Standards of the proposed project, would require that landscaping associated with the project be water efficient and meet the City's Water Efficient Landscape Policy standards.
Super-GHG Control Measures	▪ SL 1 – Short-Lived Climate Pollutants ▪ SL 2 – Guidance for Local Planners ▪ SL 3 – GHG Monitoring and Emissions Measurements Network	Super-GHGs include methane, black carbon and fluorinated gases. The compounds are sometimes referred to as short-lived climate pollutants because their lifetime in the atmosphere is generally fairly short. Measures to reduce super GHGs are addressed on a sector-by-sector basis in the 2017 Clean Air Plan. Through ongoing implementation of the City's Climate Action Plan, the City will continue to reduce local GHG emissions, meet State, regional, and local reduction targets, which would ensure implementation of the proposed project would not conflict with these SL control measures.
Further Study Control Measures	▪ FSM SS 1 – Internal Combustion Engines ▪ FSM SS 2 – Boilers, Steam Generator and Process Heaters ▪ FSM SS 3 – GHG Reductions from Non Cap-and Trade Sources ▪ FSM SS 4 – Methane Exemptions from Wastewater Regulation ▪ FSM SS 5 – Controlling start-up, shutdown, maintenance, and malfunction (SSMM) Emissions ▪ FSM SS 6 – Carbon Pollution Fee ▪ FSM SS 7 – Vanishing Oils and Rust Inhibitors ▪ FSM SS 8 – Dryers, Ovens and Kilns ▪ FSM SS 9 – Omnibus Rulemaking to Achieve Continuous Improvement ▪ FSM BL 1 – Space Heating ▪ FSM AG 1 – Wineries	The majority of the further study control measures apply to sources regulated directly by BAAQMD. Because BAAQMD is the implementing agency, new and existing sources of stationary and area sources in the project area would be required to comply with these additional further study control measures in the 2017 Clean Air Plan.

Source: Bay Area Air Quality Management District, 2017 Revised, *California Environmental Quality Act Air Quality Guidelines*.

Regional Growth Projections for VMT and Population and Employment

Future potential development allowed by the proposed project would result in additional sources of criteria air pollutants. Growth accommodated by the proposed project could occur throughout the 2035 buildout horizon. As a result, BAAQMDs approach to evaluating impacts from criteria air pollutants generated by a plan's long-term growth is done by comparing population and employment estimates to the VMT estimates. This is because BAAQMDs AQMP plans for growth in the SFBAAB are based on regional population and employment projections identified by ABAG and growth in VMT identified by SCTA. Changes in regional, community-wide emissions in the Plan Area could affect the ability of BAAQMD to achieve the air quality goals in the AQMP. Consequently, air quality impacts for a plan-level analysis are based on consistency with the regional growth projections.

VMT estimates based on trip generation data provided by W-Trans were calculated for the proposed project. Table 4.2-6 compares the projected increase in service population with the projected increases in total VMT and per capita VMT.

Generally, land uses that reflect a more balanced jobs-housing ratio result in lower per capita VMT. As shown in this table, VMT throughout Santa Rosa is projected to increase by 1,074,658 trips per day. Implementation of the proposed project would only represent approximately 0.2 percent of this projected increase, making the project a nominal source of VMT. In addition, daily VMT in the Plan Area would increase at a lower rate (29 percent) than would the population (49 percent) and employment (83 percent) when compared to existing conditions. BAAQMDs AQMP requires that the VMT increase be less than or equal to the projected population increase from the proposed project (e.g., generate the same or less VMT per capita). In other words, BAAQMD requires that a proposed project be designed to ensure the same or lower VMT per capita compared to what is on the ground. Even though the proposed project would result in an increase in service population, the total VMT does not increase at the same rate, but rather a lower rate. As shown in Table 4.2-6, implementation of the proposed project would result in lower VMT per capita. Consequently, impacts would be *less than significant*.

TABLE 4.2-6 COMPARISON OF THE CHANGE IN SERVICE POPULATION AND VMT IN THE PLAN AREA

Category	2010 Baseline[a]	2040 With Project[b]	Project Contribution[c]	Percent Increase from 2010-2040
Population	167,815	249,721	632	49%
Employment	75,460	138,193	40	83%
VMT per Day	3,723,824	4,798,482	2,313	29%

Notes:
a. Population, employment, and VMT Data for the 2010 Baseline from the ABAG Housing Element Data Profiles and Projections 2013.
b. 2040 population and employment projections from the Santa Rosa General Plan 2035. An annual 1% increase was added to 2035 population projections, and an annual 0.9% increase was assumed for employment growth, in line with growth assumed in the general plan in tables 2-2, 4-2, and 4-6.
c. VMT for the proposed project and 2040 baseline is based on the CalEEMod Version 2016.3.1 and trip generation provided by W-Trans.

In summary, implementation of the proposed project would not conflict with the 2017 Clean Air Plan.

Significance Without Mitigation: Less than significant.

AQ-2 Implementation of the proposed project would generate short- and long-term criteria air pollutant emissions that could violate air quality standards or contribute substantially to an existing or projected air quality violation.

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including ROG, NO, $PM_{10,}$ and $PM_{2.5}$. Development projects below the significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. According to BAAQMDs CEQA Guidelines, long-range plans, such as the proposed project, present unique challenges for assessing impacts.[28] Due to the SFBAABs nonattainment status for ozone and PM and the cumulative impacts of growth on air quality, these plans almost always have significant, unavoidable adverse air quality impacts.

Construction Emissions

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the project site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM_{10} and $PM_{2.5}$) from soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities on site would vary daily as construction activity levels change. The proposed project involves the construction of a continuous bicycle, pedestrian, and non-motorized transportation route, as well as park and recreational uses, educational opportunities, active recreation areas, residential developments, and commercial space.

BAAQMDs plan-level guidelines do not require an evaluation of construction emissions for plan-level projects. There is no proposed development under the proposed project at this time. Future development proposals under the proposed project would be subject to separate environmental review pursuant to CEQA in order to identify and mitigate potential air quality impacts. Because the details regarding future construction activities are not known at this time—including phasing of future individual projects, construction duration and phasing, and preliminary construction equipment—construction emissions are evaluated qualitatively in accordance with BAAQMDs plan-level guidance. Subsequent environmental review of development projects would also be required to assess potential impacts under BAAQMDs project-level thresholds based on site-specific construction phasing and buildout characteristics.

Construction emissions associated with individual development projects under the proposed project would increase criteria air pollutants and TACs. Subsequent environmental review of future development projects would be required to assess potential impacts under BAAQMDs project-level thresholds. Construction emissions from buildout of future projects in the Southeast Greenway Area would primarily be 1) exhaust emissions from off-road diesel-powered construction equipment; 2) dust generated by demolition, grading, earthmoving, and other construction activities; 3) exhaust emissions from on-road vehicles; and 4) off-gas emissions of ROGs from application of asphalt, paints, and coatings.

[28] Bay Area Air Quality Management District. 2017, May. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.

Existing federal, State, and local regulations, and policies and strategies of the proposed project described throughout this section protect local and regional air quality. Continued compliance with these regulations would reduce construction-related impacts. In addition, General Plan Policy OSC-J-1 would require the City to review all new construction projects and require fugitive dust (PM_{10} and $PM_{2.5}$) abatement actions as contained in the current BAAQMD basic control measures for reducing construction emissions of PM_{10} (Table 8-1, Basic Construction Mitigation Measures Recommended for All Proposed Projects, of the BAAQMD CEQA Guidelines). In compliance with BAAQMD requirements, if construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in the BAAQMD CEQA Guidelines, the City would require that future applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds (Table 8-2, Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above the Threshold, of the BAAQMD CEQA Guidelines, or applicable construction mitigation measures subsequently approved by BAAQMD). These identified measures would be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and verified by the City's Building Division and/or Planning Division. Consequently, construction-related impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

Operational Emissions

The existing 57 acres of undeveloped land do not generate long-term air pollutant emissions from the burning of fossil fuels in vehicles (mobile sources), energy use for cooling, heating, and cooking (energy), or landscape equipment use and consumer products (area sources).

Implementation and adoption of the proposed project would result in new development potential up to 47.2 acres of park and recreational uses including open space, 244 multi-family housing units, and 12,000 square feet of commercial space in the Southeast Greenway Area, in combination with the remaining and previously approved buildout in the existing General Plan 2035. One of the primary goals of the proposed project is to encourage multimodal transit and walking, provide a mixture of land uses, and support open and natural spaces. No physical changes to the site are proposed at this time.

Criteria air pollutant emissions would be generated from on-site area sources (e.g., landscaping fuel, consumer products), vehicle trips generated by implementation of the proposed project, and energy use (e.g., natural gas used for cooking and heating). These emissions from the proposed project could violate air quality standards or contribute substantially to an existing or projected air quality violation and expose sensitive receptors to elevated concentrations of pollutants during construction activities. Consequently, impacts are *significant*.

Impact AQ-2: Operation of the proposed project could contribute to an existing or projected air quality violation.

> Mitigation Measure AQ-2: Prior to issuance of construction permits, development project applicants that are subject to CEQA and exceed the screening sizes in the Bay Area Air Quality Management District's (BAAQMD) CEQA Guidelines shall prepare and submit to the City of Santa Rosa a technical assessment evaluating potential air quality impacts related to the project's operation phase. The

evaluation shall be prepared in conformance with the BAAQMD methodology in assessing air quality impacts. If operation-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in BAAQMD's CEQA Guidelines, the City of Santa Rosa shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operation activities.

Significance With Mitigation: Significant and unavoidable. The proposed project includes measures that would minimize emissions to the extent feasible. Mitigation Measure AQ-2 would require implementation of BAAQMD-approved mitigation measures if subsequent environmental review determines that applicants for future development in Santa Rosa could generate operational emissions in excess of the BAAQMD significance thresholds. An analysis of emissions generated from the operation of potential future projects allowed under the proposed project would be compared to BAAQMD's project-level significance thresholds during individual environmental review. The total criteria air pollutant emissions from operation of potential future development projects associated with the proposed project could be substantial and could contribute to increases in concentrations of air pollutants, which could contribute to ongoing violations of air quality standards. It should be noted that the identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects that comply with BAAQMD screening criteria or meet applicable thresholds of significance. The policies proposed as part of the proposed project would reduce criteria air pollutants, to the extent feasible, as part of this programmatic review of air quality impacts. Additional measures to reduce criteria air pollutant emissions would be considered during individual project-level review based on site-specific and project-specific characteristics to reduce significant impacts as applicable. Because those projects and measures cannot be known at this time, the impact is considered *significant and unavoidable*.

AQ-3 Implementation of the proposed project could violate an air quality standard, contribute substantially to an existing or projected air quality violation, and would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

This section analyzes potential impacts related to air quality that could occur from the buildout associated with the proposed project in combination with the regional growth in the air basin. The SFBAAB is currently designated a nonattainment area for California and National O_3, California and National $PM_{2.5}$, and California PM_{10} AAQS. At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMDs significance criteria and contribute to the State and federal nonattainment designations in the SFBAAB. Any project that produces a significant regional air quality impact in an area that is in nonattainment adds to the cumulative impact. The proposed project's contribution to cumulative air quality impacts is identified under impact discussions AQ-1 and AQ-2. The analyses in these sections identify whether the proposed project would conflict with the 2017 Clean Air Plan (impact discussion AQ-1) or generate a substantial increase in criteria air pollutants (impact discussion AQ-2). As described in impact discussion AQ-1, the proposed project would be consistent with the 2017 Clean Air Plan. As described under impact discussion AQ-2, the proposed project could generate a substantial

increase in criteria air pollutant emissions from operational activities that could exceed the BAAQMD regional significance thresholds. Consequently, cumulative regional air quality impacts are also *significant*.

Impact AQ-3: Future potential development projects associated with the proposed project could cumulatively contribute to the non-attainment designations of the SFBAAB.

Mitigation Measure AQ-3: Implement Mitigation Measure AQ-2.

Significance With Mitigation: *Significant and unavoidable.* Mitigation Measure AQ-2 would ensure that future new development under the proposed project would be required to prepare an evaluation of the potential contribution of air quality impacts if the project exceeds the BAAQMD screening thresholds. However, because the emissions are unknown at this time, regional and localized operational emissions could exceed the BAAQMD significance thresholds. As stated under impact discussion AQ-2, the identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects that comply with BAAQMD screening criteria or meet applicable thresholds of significance. Consequently, implementation of the proposed project could cumulatively contribute to the nonattainment designations of the SFBAAB and impacts would be considered *significant and unavoidable*.

AQ-4 Construction activities associated with future development projects accommodated under the proposed project could expose sensitive receptors to substantial concentrations of air pollution.

If the proposed project would cause or contribute significantly to elevated pollutant concentration levels it could expose sensitive receptors to elevated pollutant concentrations. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction Community Risk and Hazards

Future construction under the proposed project would temporarily elevate concentrations TACs and diesel-$PM_{2.5}$ in the vicinity of sensitive land uses during construction activities. The proposed project involves siting recreational land uses proximate to existing residential units in the vicinity of the project site. Because the details regarding future construction activities are not known at this time—including phasing of future individual projects, construction duration and phasing, and preliminary construction equipment—construction emissions are evaluated qualitatively in accordance with BAAQMDs plan-level guidance. Subsequent environmental review of future development projects would be required to assess potential impacts under BAAQMDs project-level thresholds. Because construction emissions associated with the proposed project could exceed BAAQMD's project level and cumulative significance thresholds for community risk and hazards, construction-related health risk impacts associated with the proposed project is considered *significant*.

Impact AQ-4: Construction activities associated with potential future development projects accommodated under the proposed project could expose nearby receptors to substantial concentrations of TACs.

Mitigation Measure AQ-4: Applicants for construction within 1,000 feet of residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) in the City of Santa Rosa, as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the City of Santa Rosa prior to future discretionary project approval. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment (OEHHA) and the Bay Area Air Quality Management District. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), $PM_{2.5}$ concentrations exceed 0.3 µg/m^3, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include, but are not limited to:

- During construction, use of construction equipment fitted with Level 3 Diesel Particulate Filters (DPF) for all equipment of 50 horsepower or more.
- Use of construction equipment fitted with Tier 3 engines for all equipment of 50 horsepower or more.
- Equipment shall be properly serviced and maintained in accordance with manufacturer recommendations.
- The construction contractor shall ensure that all non-essential idling of construction equipment is restricted to five minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

Measures identified in the HRA shall be included in the environmental document and/or incorporated into the site development plan as a component of the proposed project. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the City of Santa Rosa Planning Division and/or Building Division clearly show incorporation of all applicable mitigation measures.

Significance With Mitigation: Less than significant.

Operational Phase On-Site Community Risk and Hazards

Exposure to elevated concentrations of vehicle-generated $PM_{2.5}$ and TACs at sensitive land uses have been identified by CARB, the California Air Pollution Control Officer's Association, and BAAQMD as a potential air quality hazard. The proposed project would not create new major sources of TACs, which are more commonly associated with industrial manufacturing or warehousing. Non-residential (e.g., research and development and commercial and retail) land uses may generate small quantities of TACs (e.g., emergency generators, dry cleaners, and gasoline dispensing facilities). However, these small-quantity generators would require review by BAAQMD for permitted sources of air toxics, which would ensure health risks are below the BAAQMD thresholds. Therefore, operation-related health risk impacts associated with the proposed project are considered *less than significant*.

Significance Without Mitigation: Less than significant.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO, called hotspots. These pockets have the potential to exceed the State 1-hour standard of 20 parts per million (ppm) or the 8-hour standard of 9.0 ppm. Because CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

SCTA's CMP must be consistent with *Plan Bay Area*, and an overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle VMT and associated GHG emissions reductions. Because the proposed project would provide routes for alternative modes of transportation, the proposed project would be consistent with the overall goals of the *Plan Bay Area*. Additionally, the proposed project would not conflict with SCTA's CMP because it would not hinder the capital improvements outlined in the CMP or alter regional travel patterns. Furthermore, under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact.[29] Based on the traffic analysis conducted as part of this environmental analysis, the proposed project would generate a total of 277 daily peak hour trips and not increase traffic volumes at affected intersections by more than BAAQMD screening criteria of 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited.[30] Therefore, the proposed project would not have the potential to substantially increase CO hotspots at intersections in the Southeast Greenway Area and vicinity. Localized air quality impacts related to mobile-source emissions would therefore be *less than significant*.

Significance Without Mitigation: Less than Significant.

[29] Bay Area Air Quality Management District (BAAQMD), 2017 (Revised). *CEQA Air Quality Guidelines*.
[30] W-Trans. 2017, June 9. Draft Report Traffic Impact Study for the Southeast Greenway Plan.

AQ-5 Implementation of the proposed project would not create or expose a substantial number of people to objectionable odors.

The proposed project would accommodate future residential and commercial development. Construction and operation of residential developments, retail, and restaurants would not generate substantial odors or be subject to odors that would affect a substantial number of people. The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Residential and commercial uses are not associated with foul odors that constitute a public nuisance.

During operation, residences could generate odors from cooking. Odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people. Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor complaint. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds.[31] In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance

During construction activities of future developments on the project site, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Impacts would be less than significant.

Significance Without Mitigation: Less than significant.

4.2.4 CUMULATIVE IMPACTS

AQ-6 Implementation of the proposed project would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.

As described under impact discussion AQ-3, regional criteria air pollutant emissions generated by cumulative development associated with potential future buildout of the proposed project could exceed BAAQMD's project-level significance thresholds and could contribute to the nonattainment designations of the SFBAAB. The SFBAAB is currently designated a nonattainment area for California and national O_3, California and national $PM_{2.5}$, and California PM_{10} AAQS. Therefore, in combination with past, present, and reasonably foreseeable projects elsewhere within the SFBAAB, the proposed project, even with

[31] It should be noted that while restaurants can generate odors, these sources are not identified by BAAQMD as nuisance odors since they typically do not generate significant odors that affect a substantial number of people. Larger restaurants that employ five or more people are subject to BAAQMD Regulation 7, Odorous Substances.

implementation of applicable regulations, would result in a *significant* cumulative impact with respect to air quality.

Impact AQ-6: Despite implementation of the proposed project policies, criteria air pollutant emissions associated with the proposed project could generate a substantial net increase in emissions that exceeds the BAAQMD regional significance thresholds, and impacts would be *significant*.

Mitigation Measure AQ-5: Implement Mitigation Measures AQ-2 through AQ-4.

Significance With Mitigation: Significant and unavoidable. Criteria air pollutant emissions generated by land uses allowed under the proposed project could exceed the BAAQMD thresholds (see Impact AQ-2). Air quality impacts identified in the discussion under impact discussion AQ-2 constitute the proposed project's contribution to cumulative air quality impacts in the SFBAAB. Mitigation Measures AQ-2 through AQ-4, identified previously to reduce project-related emissions, would reduce impacts to the extent feasible. Due to the programmatic nature of the proposed project, site-specific details of potential future development are unknown and no additional mitigation measures are available. Air pollutant emissions associated with the proposed project would result in a cumulatively considerable contribution to air quality impacts; however, identification of this program-level impact does not preclude the finding of less-than-significant impacts for individual subsequent projects.