3.2 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable air quality regulations, and an analysis of potential short-term and long-term air quality impacts that could result from implementation of the Project. The primary source of information used for this analysis is Section 5.3, "Air Quality," from the *City of Elk Grove General Plan Update Draft Environmental Impact Report* (General Plan EIR) (City of Elk Grove 2018).

The Sacramento Metropolitan Air Quality Management District (SMAQMD) submitted a comment in response to the notice of preparation (NOP). The letter included recommendations for what to evaluate in this air quality analysis. Specifically, the comment letter recommended that the Project be reviewed for consistency with applicable plans, potential cancer risk, and impacts to transit. Consistency with applicable plans is evaluated in the impact discussions in this section. Table 3.2-5 presents data regarding potential annual incremental health incidences. Effects on transit are discussed in Section 3.13, "Transportation," of this Draft SEIR.

3.2.1 Regulatory Setting

Ambient air quality in the Project area is regulated through the efforts of various federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policy making, education, and a variety of programs. The agencies responsible for improving the air quality in the air basin in which the Project area is located are discussed below.

FEDERAL

The United States Environmental Protection Agency (EPA) has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970 (42 United States Code Chapter 85). The most recent major amendments made by Congress were in 1990.

Safer Affordable Fuel-Efficient Vehicles Rule

On August 2, 2018, the National Highway Traffic Safety Administration and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule) (49 Code of Federal Regulations (CFR) 523, 531, 533, 536, and 537 and 40 CFR 85 and 86). This rule addresses emissions and fuel economy standards for motor vehicles and is separated in two parts as described below.

Part One, "One National Program" (84 *Federal Register* [FR] 51310), revokes a waiver granted by EPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of greenhouse gas (GHG) reduction and, indirectly, criteria air pollutants and ozone precursor emission reduction. This revocation became effective on November 26, 2019, restricting the ability of the California Air Resources Board (CARB) to enforce more stringent GHG emission standards for new vehicles and set zero-emission-vehicle mandates in California. CARB has estimated the vehicle tailpipe and evaporative emissions impacts on criteria air pollutants from SAFE Rule Part One and has provided off-model adjustment factors to adjust emissions output from CARB's Emission Factor (EMFAC) model.

Part Two addresses Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks for model years 2021–2026. This rulemaking proposes new CAFE standards for model years 2022–2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026, but comment is sought on a range of alternatives discussed throughout the proposed rule. This proposal addressing CAFE standards is being jointly developed with EPA, which is simultaneously proposing tailpipe carbon dioxide standards for the same vehicles covered by the same model years. The final SAFE Rule Part Two was released on March 31, 2020, and multiple lawsuits have been filed challenging the rulemaking.

Criteria Air Pollutants

The CAA required EPA to establish the national ambient air quality standards (NAAQS) (42 United States Code Section 7409). As shown in Table 3.2-1, EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide, respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead. The primary standards protect the public health, and the secondary standards protect public welfare. The CAA also requires each state to prepare a State Implementation Plan (SIP) for attaining and maintaining the NAAQS. The federal CAA amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. Individual SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Toxic Air Contaminants/Hazardous Air Pollutants

TACs, or, in federal parlance, hazardous air pollutants (HAPs), are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. A substance that is listed as a HAP pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Section 7412[b]) is considered a TAC. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

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

For evaluation purposes, TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants, for which acceptable levels of exposure can be determined and for which ambient standards have been established (Table 3.2-1). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

EPA and, in California, CARB regulate HAPs and TACs, respectively, through statutes (i.e., 42 United States Code Section 7412[b]) and regulations that generally require the use of the maximum achievable control technology or best available control technology (BACT) for toxics to limit emissions.

Table 3.2-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS)[a,b]	National (NAAQS)[c]	
			Primary[b,d]	Secondary[b,e]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	–[e]	Same as primary standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Same as primary standard
	8-hour	9 ppm[f] (10 mg/m^3)	9 ppm (10 mg/m^3)	
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
Sulfur dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	—	—
	3-hour	—	—	0.5 ppm (1,300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	—	Same as primary standard
	24-hour	50 µg/m^3	150 µg/m^3	
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
	24-hour	—	35 µg/m^3	Same as primary standard
Lead [f]	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
	30-day average	1.5 µg/m^3	—	—
	Rolling 3-month average	–	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	No national standards	
Sulfates	24-hour	25 µg/m^3		
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

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

[a] California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, 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] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; "ppm" in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[c] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM_{10} 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. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

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

[f] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This allows for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Sources: EPA 2016; CARB 2019a

STATE

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) (California Health and Safety Code Section 40910). The CCAA, which was adopted in 1988, required CARB to establish California ambient air quality standards (CAAQS) (Table 3.2-1).

Criteria Air Pollutants

CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the State endeavor to attain and maintain the CAAQS by the earliest date practical. It specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources, and it provides air districts with the authority to regulate indirect emission sources.

Toxic Air Contaminants

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

After a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

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

AB 617 of 2017 (California Health and Safety Code Section 39607.1) aims to help protect air quality and public health in communities around stationary sources of pollution including facilities subject to the State's cap-and-trade program for greenhouse gas (GHG) emissions. AB 617 imposes a new State-mandated local program to address non-vehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and TACs. AB 617 requires CARB to identify high-pollutant areas and directs air districts to focus air quality improvement efforts through adoption of community emission reduction programs within these identified areas. Currently, air districts review individual sources and impose emissions limits on emitters based on best available control technology, pollutant type, and proximity to nearby existing land uses. AB 617 addresses the cumulative and additive nature of air pollutant health effects by requiring community-wide air quality assessment and emission reduction planning.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan and other regulatory programs, it is estimated that emissions of diesel PM will be less than half of those in 2010 by 2035 (CARB

2020). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

LOCAL

Sacramento Metropolitan Air Quality Management District

Criteria Air Pollutants

SMAQMD is the primary agency responsible for planning to meet NAAQS and CAAQS in Sacramento County. SMAQMD works with other local air districts in the Sacramento region to maintain the region's portion of the SIP for ozone. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the CAA requirements to attain and maintain the NAAQS for ozone. The Sacramento Region has been designated as a "moderate" 2015 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019 (EPA 2020a). The 2018 Sacramento Regional 2008 8-Hour Ozone Attainment and Further Reasonable Progress Plan was approved by CARB on November 16, 2017. The previous 2013 Update to the 8-Hour Ozone Attainment and Reasonable Further Progress Plan was approved and promulgated by EPA for the 1997 8-Hour Ozone Standard. EPA has not released a notice of approval and promulgation of the 2017 SIP (CARB 2017).

SMAQMD has developed a set of guidelines for use by lead agencies when preparing environmental documents. The guidelines contain thresholds of significance for criteria pollutants and TACs, and also make recommendations for conducting air quality analyses. After SMAQMD guidelines have been consulted and the air quality impacts of a project have been assessed, the lead agency's analysis undergoes a review by SMAQMD. SMAQMD submits comments and suggestions to the lead agency for incorporation into the environmental document.

All projects are subject to adopted SMAQMD rules and regulations in effect at the time of construction. Specific rules relevant to the construction of future development under the Project may include the following:

- Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. The Applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact SMAQMD early to determine whether a permit is required, and to begin the permit application process. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment) with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or CARB portable equipment registration.
- Rule 202: New Source Review. The purpose of this rule is to provide for the issuance of authorities to construct and permits to operate at new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.
- Rule 207: Federal Operating Permit. The purpose this rule is to establish an operating permitting system consistent with the requirements of Title V of the United States Code and pursuant to 40 FR Part 70. Stationary sources subject to the requirements of this rule are also required to comply with any other applicable federal, state, or SMAQMD orders, rules and regulations, including requirements pertaining to prevention of significant deterioration pursuant to Rule 203, requirements to obtain an authority to construct pursuant to Rule 201, or applicable requirements under SMAQMD's new source review rule in the SIP.
- Rule 402: Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.

- Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earthmoving activities or any other construction activity to prevent airborne dust from leaving the project site. Fugitive dust controls include the following:
  - Water all exposed surfaces two times daily.
  - Cover or maintain at least two feet of free board on haul trucks transporting soil, sand, or other loose material on the site.
  - Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day.
  - Limit vehicle speeds on unpaved roads to 15 miles per hour.
  - All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
  - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes.
  - Maintain all construction equipment in proper working condition according to manufacturer's specifications.
- Rule 442: Architectural Coatings. The purpose of this rule is to limit the emissions of volatile organic compounds from the use of architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within Sacramento County.
- Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of material containing asbestos.

In addition, if modeled construction-generated emissions for a project are not reduced to levels below SMAQMD's mass emission threshold (of 85 pounds per day [lb/day] for nitrogen oxide [NO_X], 80 lb/day or 13.2 tons per year (tpy) for PM_{10}, and 82 lb/day or 15 tpy for $PM_{2.5}$) after the standard construction mitigation is applied, then SMAQMD requires an offsite construction mitigation fee to purchase offsite emissions reductions. Such purchases are made through SMAQMD's Heavy Duty Incentive Program, through which select owners of heavy-duty equipment in Sacramento County can repower or retrofit their old engines with cleaner engines or technologies (SMAQMD 2019).

As discussed in greater detail under the headings, "Thresholds of Significance," and "Methodology," the Thresholds of Significance have been developed in consideration of long-term regional air quality planning. Projects that are found to emit emissions in exceedance of these bright-line thresholds would generate a cumulatively considerable contribution of regional air pollution which could obstruct the region's attainment of the NAAQS and/or CAAQS, or cause a localized exceedance of these concentration-based standards within the SVAB. Conversely, projects that emit levels of air pollution below these thresholds would not affect the SVAB's ability to attain the NAAQs and/or CAAQS.

Also discussed in greater detail under the heading, "Methodology," SMAQMD has released several versions of guidance in response to the California Supreme Court Case *Sierra Club v. County of Fresno* (2018) 6 Cal.App.5th 503 (herein referred to as the Friant Ranch Decision). The Final Guidance, released in October 2020, is discussed in greater detail under the heading, "Methodology."

Toxic Air Contaminants

At the local level, air districts may adopt and enforce CARB control measures for TACs. Under SMAQMD Rule 201 ("General Permit Requirements"), Rule 202 ("New Source Review"), and Rule 207 ("Federal Operating Permit"), all sources that possess the potential to emit TACs are required to obtain permits from SMAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including New Source Review standards and air toxics control measures. SMAQMD limits emissions and public exposure to TACs through a number of programs. SMAQMD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., schools, hospitals, residences), that may experience adverse effects from unhealthful concentrations of air pollutants.

Odors

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and SMAQMD. SMAQMD's Rule 402 ("Nuisance") regulates odors.

City of Elk Grove General Plan

The following policies in the Elk Grove General Plan are relevant to the analysis of air quality effects (City of Elk Grove 2019).

- **Policy H-2-3:** Support energy-conserving programs in the production and rehabilitation of affordable housing to reduce household energy costs, improve air quality, and mitigate potential impacts of climate change in the region.
- **Policy NR-4-1:** Require all new development projects which have the potential to result in substantial air quality impacts to incorporate design, and/or operational features that result in a reduction in emissions equal to 15 percent compared to an "unmitigated baseline project." An unmitigated baseline project is a development project which is built and/or operated without the implementation of trip reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.
- **Policy NR-4-3:** Implement and support programs that reduce mobile source emissions.
- **Policy NR-4-4:** Promote pedestrian/bicycle access and circulation to encourage residents to use alternative modes of transportation in order to minimize direct and indirect emissions of air contaminants.
- **Policy NR-4-5:** Emphasize demand management strategies that seek to reduce single-occupant vehicle use in order to achieve State and federal air quality plan objectives.
- **Policy NR-4-8:** Require that development projects incorporate best management practices during construction activities to reduce emissions of criteria pollutants.
- **Policy NR-5-2:** Improve the health and sustainability of the community through improved regional air quality and reduction of greenhouse gas emissions that contribute to climate change.
- **Policy N-1-7:** The standards outlined in Table 8-4 shall not apply to transportation- and City infrastructure-related construction activities as long as construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends and federally recognized holidays. Work may occur beyond these time frames for construction safety or because of existing congestion that makes completing the work during these time frames infeasible.

City of Elk Grove Municipal Code

Municipal Code Chapter 16.07 provides permitting guidance for electric vehicle (EV) charging stations. Municipal Code Sections 16.07.200 through 16.07.500 summarize the streamlined permitting process for installation of EV charging stations, including provisions pertaining to the completion of a technical review checklist that ensures that installation of an EV charging station would not result in any adverse environmental or health effects. As stated in Municipal Code Section 16.07.400, "the intent of this chapter [is] to encourage the installation of electric vehicle charging stations by removing obstacles to permitting for charging stations so long as the action does not supersede the Building Official's authority to address higher priority, life-safety situations."

Municipal Code Section 23.58.120 requires one "EV ready" parking space for all new one family and two family dwelling units. This section also requires that 2.5 percent of parking for multifamily projects provide EV charging and an additional 2.5 percent of parking be ready for future EV charging expansion.

Municipal Code Chapter 6.32 details the City's noise standards. Municipal Code Section 6.32.100 summarizes exemptions to the City's noise standards as they pertain to construction activities. Consistent with General Plan Policy Noise Policy NO-1-7, construction activities within the proximity of sensitive receptors are limited to 7 a.m. to 7 p.m. Monday through Friday and 8 a.m. and 5 p.m. on weekends and federally recognized holidays. Section 6.32.100 states that construction activities not located near residential uses may be allowed to occur between 6 a.m. and 8 p.m. Also, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project

necessitates that work in progress be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 7 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

3.2.2 Environmental Setting

Elk Grove is located in the Sacramento Valley Air Basin (SVAB). The SVAB includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties; the western portion of Placer County; and the eastern portion of Solano County. The ambient concentrations of air pollutants are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

CLIMATE, METEOROLOGY, AND TOPOGRAPHY

The SVAB is a relatively flat area bordered by the north Coast Ranges to the west and the northern Sierra Nevada to the east. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento River–San Joaquin River Delta (Delta) from the San Francisco Bay area.

The Mediterranean climate type of the SVAB is characterized by hot, dry summers and cool, rainy winters. During the summer, daily temperatures range from 50 degrees Fahrenheit (°F) to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature. Most precipitation in the area results from air masses that move in from the Pacific Ocean, usually from the west or northwest, during the winter months. More than half the total annual precipitation falls during the winter rainy season (November through February); the average winter temperature is a moderate 49°F. Also characteristic of SVAB winters are periods of dense and persistent low-level fog, which are most prevalent between storms. The prevailing winds are moderate in speed and vary from moisture-laden breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which leads to the entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. The highest frequency of poor air movement occurs in the fall and winter when high-pressure cells are often present over the SVAB. The lack of surface wind during these periods, combined with the reduced vertical flow caused by a decline in surface heating, reduces the influx of air and leads to the concentration of air pollutants under stable metrological conditions. Surface concentrations of air pollutant emissions are highest when these conditions occur in combination with agricultural burning activities or with temperature inversions, which hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground.

May through October is ozone season in the SVAB. This period is characterized by poor air movement in the mornings with the arrival of the Delta sea breeze from the southwest in the afternoons. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between ROG and NO_X, which result in ozone formation. Typically, the Delta breeze transports air pollutants northward out of the SVAB; however, a phenomenon known as the Schultz Eddy prevents this from occurring during approximately half of the time from July to September. The Schultz Eddy phenomenon causes the wind to shift southward and blow air pollutants back into the SVAB. This phenomenon exacerbates the concentration of air pollutant emissions in the area and contributes to the area violating the ambient air quality standards.

The local meteorology of the City and surrounding area is represented by measurements recorded at the Western Regional Climate Center Sacramento Executive Airport Station. The normal annual precipitation is approximately 17.24 inches. January temperatures range from a normal minimum of 37.8°F to a normal maximum of 53.5°F. July

temperatures range from a normal minimum of 58.2°F to a normal maximum of 92.7°F (WRCC 2016). The prevailing wind direction is from the south (WRCC 2002).

CRITERIA AIR POLLUTANTS

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. Ozone, PM_{10}, and $PM_{2.5}$ are the criteria air pollutants of primary concern in this analysis due to their nonattainment status with respect to the applicable NAAQS and/or CAAQS in the SVAB. Brief descriptions of these key criteria air pollutants in the SVAB and their health effects are provided below. The attainment statuses of all criteria air pollutants with respect to the NAAQS and the CAAQS in Sacramento County are shown in Table 3.2-2.

Table 3.2-2 Attainment Status Designations for Sacramento County

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone	Attainment (1-hour)[1]	Nonattainment (1-hour) Classification-Serious[2]
	Nonattainment (8-hour)[3] Classification=Moderate	Nonattainment (8-hour)
		Nonattainment (8-hour)
Respirable particulate matter (PM_{10})	Attainment (24-hour)	Nonattainment (24-hour)
	Attainment (24-hour)	Nonattainment (Annual)
Fine particulate matter ($PM_{2.5}$)	Nonattainment (24-hour)	(No State Standard for 24-Hour)
	Attainment (Annual)	Attainment (Annual)
Carbon monoxide (CO)	Attainment (1-hour)	Attainment (1-hour)
	Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO_2)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Sulfur dioxide (SO_2)[4]	(Attainment Pending) (1-Hour)	Attainment (1-hour)
	(Attainment Pending) (1-Hour)	Attainment (24-hour)
Lead (Particulate)	Attainment (3-month rolling avg.)	Attainment (30 day average)
Hydrogen Sulfide	No Federal Standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibly Reducing Particles		Unclassified (8-hour)
Vinyl Chloride		Unclassified (24-hour)

Notes: NAAQS = national ambient air quality standards; CAAQS = California ambient air quality standards

[1] Air Quality meets federal 1-hour Ozone standard (77 FR 64036). EPA revoked this standard, but some associated requirements still apply. SMAQMD attained the standard in 2009. SMAQMD has requested EPA recognize attainment to fulfill the requirements.

[2] Per Health and Safety Code Section 40921.5(c), the classification is based on 1989–1991 data, and therefore does not change.

[3] 2015 Standard.

[4] 2010 Standard.

Source: CARB 2019b

Ozone

Ground-level ozone is not emitted directly into the air but is created by chemical reactions between ROG and NO_X. This happens when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight. Ozone at ground level is a harmful air pollutant because of its effects on people and the environment and is the main ingredient in smog (EPA 2020b).

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of

permanent lung impairment (EPA 2020b). Emissions of the ozone precursors ROG and NO_X have decreased over the past two decades because of more stringent motor vehicle standards and cleaner burning fuels (CARB 2013).

Nitrogen Dioxide

NO_2 is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NO_X and are reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO_2 concentration in a particular geographical area may not be representative of the local sources of NO_X emissions (EPA 2020b).

Acute health effects of exposure to NO_X includes coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis, or pulmonary edema, breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include chronic bronchitis and decreased lung function (EPA 2020b).

Particulate Matter

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

Acute health effects of exposure to PM_{10} include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases including asthma and chronic obstructive pulmonary disease, and premature death. Chronic health effects include alternations to the immune system and carcinogenesis (EPA 2020b). For $PM_{2.5}$, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. Long-term (months to years) exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.

TOXIC AIR CONTAMINANTS

According to the 2013 Edition of the California Almanac of Emissions and Air Quality, health risks from TACs can largely be attributed to relatively few compounds, the most important being diesel PM (CARB 2013:5-2 to 5-4). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Diesel PM poses the greatest health risk among the 10 TACs mentioned. Overall, Statewide emissions of diesel PM are forecasted to decline by 71 percent between 2000 and 2035 (CARB 2013:3-8).

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, food packaging plants, and cannabis (SMAQMD 2016). The Sacramento Regional Wastewater Treatment Plant is located directly north of the Elk Grove Planning Area.

SENSITIVE RECEPTORS

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants. The Elk Grove Planning Area encompasses numerous sensitive receptors including, but not limited to, the schools within the Elk Grove Unified School District, Sutter Health and Kaiser hospitals and facilities (among others), and the City's residences.

3.2.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The analysis in this section is consistent with the recommendations of SMAQMD's Guide to Air Quality Assessment in Sacramento County, Chapter 9, "Program-Level Analysis of General Plans and Area Plans" (SMAQMD 2020). The analysis primarily focuses on the extent to which the Project would conflict with air quality planning efforts. The net increase in criteria air pollutant (PM_{10} and $PM_{2.5}$) and ozone precursor (ROG and NO_X) emissions (i.e., pollutants for which the region is in nonattainment of ambient air quality standards) generated by the Project were estimated based on predicted vehicle miles traveled (VMT) and maximum extent housing sites proposed under the Housing Element Update that are identified in Table 2-3 of Chapter 2, "Project Description," in order to address the largest extent of potential air quality impacts.

The proposed Safety Element Update does not designate specific projects that could generate air quality emissions from construction or operation. Thus, air quality impacts associated with the implementation of the Safety Element Update are addressed qualitatively.

Construction and operational emissions were estimated based on the net change in land uses for housing between the General Plan EIR and buildout of the Project. Construction emissions account for estimated changes in acreage of on-site and off-site improvements and were estimated consistent with SMAQMD's Program-Level Analysis guidance, which directs lead agencies to estimate construction emissions using guidance contained in Chapter 3, "Construction-Generated Criteria Air Pollutant and Ozone Precursor Emissions." For this analysis, a steady rate of construction was assumed.

As indicated in Chapter 2, "Project Description," the proposed Housing Element would redesignate candidate housing sites for an additional 2,919 housing units not currently provided in the General Plan to meet the regional housing needs of the City. There is uncertainty surrounding the schedule and exact location of where development would occur, therefore, construction emissions were modeled using the assumptions that development would occur gradually over the 8-year Project period (2021–2029). The acreages and dwelling units provided by the City were utilized. Due to the programmatic nature of this analysis, CalEEMod default values for trip generation, heavy-duty equipment type, and construction phasing were used.

Both short-term construction emissions and long-term operational emissions were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2, computer program. This model was developed in coordination with the South Coast Air Quality Management District and is the most current emissions model approved for use in California by various air districts, including SMAQMD. Appendix B includes outputs from the model runs for both construction and operational activity associated with future buildout conditions. With respect to operational emissions, mobile source emissions were estimated using Project-estimated annual VMT derived from the traffic study prepared for the Project (see Section 3.13, "Transportation"). Energy- and area-sourced emissions were estimated using CalEEMod default values; however, energy-related estimates were adjusted to demonstrate consistency with the 2019 California Energy Code. Project emissions were compared to anticipated air pollutant emissions associated with buildout under the General Plan as disclosed in the General Plan EIR.

Since the preparation of the General Plan EIR, the California Supreme Court issued a ruling in Friant Ranch Decision regarding an air quality analysis prepared for the Friant Ranch Development Project EIR in December 2018. The Court asserted that the air quality analysis performed for the project did not adequately explain the nature and magnitude of long-term air quality impacts from emissions of criteria pollutants and ozone precursors. The Court held that the EIR lacked "sufficient detail to enable those who did not participate in its preparation to understand and consider meaningfully the issues the proposed project raises."

The Court expressed the need to determine whether there was a connection between the significant project emissions and the human health impacts associated with such emissions. According to the Court, one pathway would be to estimate the level of ozone that would be produced from the project, measure to what extent human health would be affected, and describe where daily exceedances of the NAAQS and CAAQS would occur in an air basin. This detailed approach to modeling is founded on the assumption that such an exercise would produce estimates of meaningful accuracy.

In response to this recent court case, a discussion of the development of air quality thresholds of significance for criteria pollutants and ozone precursors and their connection to attainment of the NAAQS and CAAQS, as well as a discussion of the applicability of regional air pollution modeling is provided below.

Typically, air districts develop thresholds of significance for CEQA evaluation (summarized below) in consideration of maintaining or achieving attainment under the NAAQS and CAAQS for the geographical area they oversee (long-term regional air quality planning). These thresholds are tied to an air district in nonattainment's SIP for criteria air pollutants within a cumulative context. These SIPs are submitted to CARB and contain an inventory of existing ambient air pollutant concentrations and, if applicable, a suite of measures to reduce air pollution and a projected date of achieving attainment under the NAAQS and CAAQS. Air quality plans identify a budget that accounts for new, future sources of pollution from land use development and stationary sources. These budgets inform the development of CEQA thresholds of significance and represent an allowable level of pollution that, when emitted in volumes below such thresholds, would not conflict with an air district's long-term regional air quality planning or attainment date.

As discussed previously, the NAAQS and CAAQS represent concentrations of criteria air pollutants protective of human health and are substantiated by extensive scientific evidence. EPA and CARB recognize that ambient air quality below these concentrations would not cause adverse health impacts to exposed receptors. In connecting an air district's (e.g., SMAQMD, San Joaquin Valley Air Pollution Control District [SJVAPCD]) thresholds of significance to its anticipated date of attainment, projects that demonstrate levels of construction and/or operational emissions below the applicable thresholds would be consistent with long-term regional planning efforts. These projects would

not result in emissions that would conflict with an area achieving future attainment status under the NAAQS and CAAQS as outlined by an applicable air quality plan.

Similarly, projects that demonstrate emissions levels in exceedance of an applicable threshold could contribute to the continued nonattainment designation of a region or potentially degrade a region from attainment to nonattainment resulting in acute or chronic respiratory and cardiovascular illness associated with exposure to concentrations of criteria air pollutants above what EPA and CARB consider safe. Symptoms can include coughing, difficulty breathing, chest pain, eye and throat irritation and, in extreme cases, death caused by exacerbation of existing respiratory and cardiovascular disease, cancer, and impaired immune and lung function.

However, the exact location and magnitude of specific health impacts that could occur as a result of project-level construction- or operation-related emissions is infeasible to model with a high degree of accuracy. While dispersion modeling of project-generated PM may be conducted to evaluate resulting ground-level concentrations, the secondary formation of PM is similar to the complexity of ozone formation, and localized impacts of directly emitted PM do not always equate to local PM concentrations due to the transport of emissions. Ozone is a secondary pollutant formed from the oxidation of ROG and NO_X in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including topography, building influences on air flow (e.g., downwash), ROG and NO_X concentration ratios, multiple meteorological conditions, and sunlight exposure (Seinfeld and Pandis 1996:298). For example, rates of ozone formation are highest in elevated temperatures and when the ratio of ROG to NO_X is 5.5:1. When temperatures are lower and this ratio shifts, rates of ozone formation are stunted (Seinfeld and Pandis 1996:299–300). In addition, ROG emissions are composed of many compounds that have different levels of reactivity leading to ozone formation. Methane, for instance, is the most common ROG compound, yet it has one of the lowest reactivity potentials (Seinfeld and Pandis 1996:309, 312). Moreover, some groups may develop more severe health impacts than others. For instance, infants, children, the elderly, and individuals with preexisting medical conditions are more susceptible to developing illnesses from exposure to air pollutants.

Notably, during the litigation process in the Friant Ranch case, SJVACPD submitted an amicus curiae brief that provided scientific context and expert opinion regarding the feasibility of performing regional dispersion modeling for ozone. In the brief, SJVAPCD states that "CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible." SJVAPCD reiterates that (SJVAPCD 2015):

> the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the [SJVAB] can accommodate without affecting the attainment date for the NAAQS. The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources must 'offset' their emissions…Thus the CEQA air quality analysis for criteria air pollutants is not really localized, project-level impact analysis but one of regional 'cumulative impacts.'

The brief asserts that these CEQA thresholds of significance are not intended to be applied such that any localized human health impact associated with a project's emissions could be identified. Rather, CEQA thresholds of significance are used to determine whether a project's emissions would obstruct a region's capability of attaining the NAAQS and CAAQS according to the emissions inventory prepared in a SIP, which is then submitted and reviewed by CARB and EPA. This sentiment is corroborated in an additional brief submitted by the South Coast Air Quality Management District (SCAQMD 2015).

SMAQMD has developed Final Guidance based on extensive air quality impact and health effects modeling that yields estimates of incremental health effects as a result of a proposed Project's emissions of criteria air pollutants and ozone precursors. Based on the magnitude of the Project, the Strategic Area Project Health Effects Tool contained in the guidance was used to evaluate the Project's incremental health effects. The Strategy Area Project IV, "South Sacramento," the closest Strategic Area to the City of Elk Grove, was used for the model. Based on the impact determinations summarized below, the Project's associated adverse health outcomes were only estimated for operational emissions.

CO impacts were assessed qualitatively, using the results from the Project-specific traffic study. The level of health risk from exposure to construction- and operation-related TAC emissions was assessed qualitatively. This assessment was

based on the proximity of TAC-generating construction activity to off-site sensitive receptors, the number and types of diesel-powered construction equipment being used, and the duration of potential TAC exposure. An operational-related TAC exposure assessment was based on the project siting any new sources of TAC-generated activities to off-site receptors.

THRESHOLDS OF SIGNIFICANCE

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project is considered to have a significant effect on the environment if it would:

- conflict with or obstruct implementation of the applicable air quality plan,
- violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- 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),
- expose sensitive receptors to substantial pollutant concentrations, and/or
- create objectionable odors affecting a substantial number of people

For individual and subsequent projects developed under the Project, the significance criteria used to evaluate project impacts on air quality under CEQA are based on Appendix G of the State CEQA Guidelines and thresholds of significance adopted by SMAQMD. SMAQMD's air quality thresholds of significance are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health. Implementing the project would have a significant impact related to air quality such that human health would be adversely affected if it would (SMAQMD 2020):

- cause construction-generated criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended thresholds of 85 lb/day for NO_X, 80 lb/day or 13.2 tpy for PM_{10}, and 82 lb/day or 15 tpy for $PM_{2.5}$ once SMAQMD's Basic Construction Emission Control Practices have been implemented;
- result in a net increase in long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended thresholds of 65 lb/day for ROG and NO_X, 80 lb/day and 13.2 tpy for PM_{10}, and 82 lb/day or 15 tpy for $PM_{2.5}$;
- result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm;
- result in an incremental increase in cancer risk (i.e., the risk of contracting cancer) greater than 10 in one million at any off-site receptor and/or a noncarcinogenic hazard index of 1.0 or greater; and/or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

ISSUES NOT DISCUSSED FURTHER

Implementation of the Housing Element and Safety Element Update (e.g., housing and emergency access and evacuation improvements) would not introduce any new stationary sources of odor, due to the nature of the potential development (residential, rather than industrial or agricultural). Therefore, odor impacts are dismissed from the following impact discussion.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: Construction Emissions of Criteria Air Pollutants and Precursors

The General Plan EIR Impact 5.3.1 determined that development and growth under the General Plan could result in short-term construction emissions that could violate or substantially contribute to a violation of the NAAQS and CAAQS for ozone, PM_{10}, and $PM_{2.5}$. This impact was identified as significant and unavoidable. Implementation of the Housing Element and Safety Element Update could generate construction emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from demolition, material and equipment delivery trips, worker commute trips, and other miscellaneous activities. However, construction activities and emissions from implementation of the Housing Element and Safety Element Update would be similar to what was anticipated under the General Plan EIR and its current land use designations. Subsequent projects would be required to comply with General Plan Policy NR-4-8, which would require that emissions in exceedance of SMAQMD's thresholds of significance be mitigated. Therefore, construction-generated emissions would not result in a new or substantially more severe construction air quality impacts than was addressed in the General Plan EIR. Project impacts would be **less than significant**.

Impact 5.3.1 of the General Plan EIR estimated that under a worst-case construction year, construction of the development and growth under the General Plan could generate approximately 161.3 lb/day of ROG, 378.5 lb/day of NO_X, 235.0 lb/day of PM_{10}, and 64.0 lb/day of $PM_{2.5}$. The General Plan EIR concluded that this impact was significant and unavoidable.

Construction-related activities would generate emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with demolition, off-road equipment, material delivery, worker commute trips, and other miscellaneous activities (e.g., application of architectural coatings). Fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be associated primarily with demolition and vary as a function of soil silt content, soil moisture, wind speed, and acreage of disturbance. PM_{10} and $PM_{2.5}$ are also contained in exhaust from off-road equipment and on-road vehicles. Emissions of ozone precursors, ROG and NO_X, would be associated primarily with construction equipment and on-road mobile exhaust. The application of architectural coatings results in off-gas emissions of ROG.

Construction activities were assumed to begin in early 2021 and extend until the end of the growth forecast period (2029). For specific construction assumptions and modeling inputs, refer to Appendix B. Table 3.2-3 summarizes the modeled maximum daily (ROG/NO_x, PM) and annual (PM) emissions from construction activities over an assumed nine-year construction period from existing and candidate housing sites under the Housing Element Update.

As shown in Table 3.2-3, daily emissions of NO_X could exceed SMAQMD's annual mass emissions thresholds. Emissions of PM_{10}, and $PM_{2.5}$ would also exceed their respective thresholds. SMAQMD's project thresholds are intended to maintain or achieve attainment designations in the SVAB with respect to the CAAQS and NAAQS. Implementation of the Safety Element Update could also result in construction emissions associated with improvements for emergency access and evacuation routes; however, the amount or timing of these emissions is speculative at this time. If a project does not exceed SMAQMD's thresholds, it would be determined that project's contribution of air pollutants would not affect an air basin's maintenance or attainment of the NAAQS and CAAQS, thus would not exacerbate or interfere with the region's ability to attain the health-based standards (SMAQMD 2020). Because the Project's construction emissions of NO_X, PM_{10}, and $PM_{2.5}$ could be above SMAQMD's recommended thresholds, these pollutants could contribute substantially to an existing or projected air quality violation of the NAAQS and CAAQS could occur. This is consistent with the findings of the General Plan EIR as the subsequent development of housing sites would be similar to development assumed in the General Plan EIR and its current land use designations. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Table 3.2-3 Summary of Maximum Emissions of Criteria Air Pollutants and Precursors Associated with Housing Element Update Housing Sites Construction per Year (2021–2029)

Construction Year	ROG (lb/day)[1]	NO_X (lb/day)	PM_{10} (lb/day)	PM_{10} (tpy)	$PM_{2.5}$ (lb/day)	$PM_{2.5}$ (tpy)
2021	20	88	37	2	12	1
2022	19	82	36	5	11	1
2023	17	71	36	5	10	1
2024	16	69	36	5	10	1
2025	15	66	36	5	10	1
2026	15	65	36	5	10	1
2027	14	64	36	5	10	1
2028	14	63	36	5	10	1
2029	37	61	36	<1	10	<1
SMAQMD Threshold of Significance	None	85	0	0	0	0

Notes: ROG = reactive organic gases; lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with aerodynamic diameter of 2.5 micrometers or less; SMAQMD = Sacramento Metropolitan Air Quality Management District.

[1] Emissions of ROG were adjusted off-model to correct the CalEEMod assumption that all architectural coatings would occur within the final year of construction.

Source: Modeling performed by Ascent Environmental in 2020

As identified in the General Plan EIR, construction-generated sources of criteria air pollutants from new development under the Project would be minimized through implementation of General Plan Policy NR-4-8, which includes Standards NR-4.8.a through NR-4.8.d that require implementation of the SMAQMD recommended standard construction mitigation. All projects that will involve construction activities, regardless of the significance determination, are required to implement the SMAQMD Basic Construction Emission Control Practices (Best Management Practices) for controlling fugitive dust at construction sites. SMAQMD Best Management Practices would be identified in subsequent project site plans and/or improvement plans and implemented during construction (e.g., site watering, equipment idling restrictions, and covering of transported fill). These practices collectively reduce fugitive PM by approximately 54 percent. For projects that will generate maximum daily NO_X emissions exceeding the SMAQMD threshold of significance, SMAQMD recommends implementation of the Enhanced Exhaust Control Practices for off-road construction equipment. The SMAQMD considers implementation of the Enhanced Exhaust Control Practices to achieve a 10 percent reduction for NO_X from off-road construction equipment exhaust when compared to the state fleet average. For projects where emissions still exceed the SMAQMD daily emissions threshold for NO_X and PM after application of the above measures, SMAQMD requires the project applicant to pay into the SMAQMD's construction mitigation fund to offset construction-generated emissions of NO_X and/or PM. Payment into this program allows the air district to offset the contribution of emissions associated with individual construction projects by removing other NO_X or PM generating sources elsewhere in the air basin.

The General Plan EIR concluded that no additional feasible plan-level mitigation was available beyond compliance with General Plan Policy NR-4-8 and that this impact was significant and unavoidable. Construction-generated emissions from implementation of the Housing Element and Safety Element Update would not result in a new or substantially more severe construction air quality impacts that was addressed in the General Plan EIR. Project impacts would be **less than significant**.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan Policy NR-4-8 and its standards that require implementation of the SMAQMD Basic Construction Emission Control Practices.

Impact 3.2-2: Long-Term Operational Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$

General Plan EIR Impact 5.3.2 and 5.3.6 determined that long-term operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would be substantial and could substantially contribute to a violation of the NAAQS and CAAQS for ozone and PM and conflict with air quality attainment efforts. This impact was identified as significant and unavoidable. Implementation of the Housing Element and Safety Element Update could generate long-term operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$. However, emissions from implementation of the Housing Element and Safety Element Update would be similar to what was anticipated under the General Plan EIR and its current land use designations. Therefore, operational emissions would not result in a new or substantially more severe air quality impacts that was addressed in the General Plan EIR. Project impacts would be **less than significant.**

General Plan EIR Impact 5.3.2 and 5.3.6 determined that long-term operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would be substantial and could substantially contribute to a violation of the NAAQS and CAAQS for ozone and PM and conflict with air quality attainment efforts. Based on modeling performed for that analysis, the land uses proposed under the General Plan resulted in 8,280 lb/day of ROG, 2,673 lb/day of NO_X, 177 lb/day of PM_{10}, and 168 lb/day of $PM_{2.5}$. These levels of emissions would exceed SMAQMD's thresholds of significance and this impact was concluded to be significant and unavoidable.

Operation emissions associated with housing sites identified in the Housing Element Update could result in the generation of long-term operational emissions of ROG, NO_X, and particulate matter (PM_{10} and $PM_{2.5}$) from mobile, stationary, and area-wide sources. Mobile-source emissions of criteria pollutants and precursors would result from vehicle trips generated by residents and their visitors, as well as deliveries made to residences. Stationary and area-wide sources would include the combustion of natural gas for space and water heating (i.e., energy use), the use of landscaping equipment and other small equipment, the periodic application of architectural coatings, and ROG from the use of consumer products.

Table 3.2-4 summarizes the maximum annual and daily operational-related emissions of criteria air pollutants during the first year of assumed buildout (i.e., 2029) for the maximum number of housing sites proposed under the Housing Element Update. Emissions were calculated based on proposed land uses and adjusted trip lengths to match Project-specific VMT, as reported in the traffic study (Section 3.13, "Transportation and Circulation") for the Project. As shown in Table 3.2-4, operational-related activities could result in annual and daily emissions of ROG, NO_X, and PM_{10}, that exceed the SMAQMD-recommended thresholds of significance. No operational emissions are anticipated from implementation of the Safety Element Update because it would not result in the development of a land use that could generate air pollutant emissions.

Table 3.2-4 Summary of Maximum Operational Emissions of Criteria Air Pollutants and Precursors From Housing Element Update Housing Sites (2029)

Emissions Source	ROG (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	PM_{10} (tpy)	$PM_{2.5}$ (lb/day)	$PM_{2.5}$ (tpy)
Area	157	5	3	<1	3	<1
Mobile	1	9	1	<1	1	<1
Energy	43	151	181	29	49	8
Total Emissions	201	165	185	29	52	8
SMAQMD Threshold of Significance	65	65	0	0	0	0

Notes: ROG = reactive organic gases; lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SMAQMD = Sacramento Metropolitan Air Quality Management District.

Total values may not sum exactly due to rounding. See Appendix B for detailed input parameters and modeling results.

Source: Modeling performed by Ascent Environmental in 2020

SMAQMD's project thresholds are intended to maintain or achieve attainment designations in the SVAB with respect to the CAAQS and NAAQS. Projects that exceed SMAQMD's thresholds contribute to nonattainment designations, it would exacerbate or interfere with the region's ability to attain the health-based standards (SMAQMD 2020). Because implementation of the Housing Element could result in operational emissions above SMAQMD's recommended thresholds, they could contribute to a violation of any air quality standard or contribute substantially to an existing or projected air quality violation. Because the ambient air quality standards are established to be protective of public health, adverse health impacts to receptors could occur due to the Project's emissions being above SMAQMD's thresholds. This is consistent with the findings of the General Plan EIR as the subsequent development of housing sites would generate emissions similar to development and buildout conditions assumed in the General Plan EIR and its current land use designations. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Consistent with SMAQMD's most recent Friant Ranch Guidance, the possible operational emissions of criteria air pollutants from implementation of the Housing Element Update were used to estimate foreseeable adverse health outcomes using SMAQMD's Strategic Area Project Health Effects Tool. Strategic Area Project IV, "South Sacramento," was used as this Strategic Area is the closest to the City of Elk Grove. Table 3.2-5 below summarizes the potential health effects in the region from the Housing Element Update.

Table 3.2-5 Potential Annual Incremental Health Incidences for the Housing Element Update

$PM_{2.5}$ Health Endpoint	Age Range	Incidences (Mean)	Percent of Background Incidences	Total Number of Health Incidences (per Year)
Respiratory				
Emergency Room Visits	0-99	3.3	0.018%	18,419
Hospital Admissions, Asthma	0-64	0.22	0.012%	1,846
Hospital Admissions, All Respiratory	65-99	0.99	0.0050%	19,644
Cardiovascular				
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65-99	0.58	0.0024%	24,037
Acute Myocardial Infarction, Nonfatal	18-24	0.00030	0.0079%	4
Acute Myocardial Infarction, Nonfatal	25-44	0.024	0.0078%	308
Acute Myocardial Infarction, Nonfatal	45-54	0.060	0.0081%	741
Acute Myocardial Infarction, Nonfatal	55-64	0.10	0.0081%	1,239
Acute Myocardial Infarction, Nonfatal	65-99	0.37	0.0074%	5,052
Mortality				
Mortality, All Causes	30-99	6.6	0.015%	44,766
Ozone Health Endpoint	**Age Range**	**Incidences (Mean)**	**Percent of Background Incidences**	**Total Number of Health Incidences (per Year)**
Respiratory				
Hospital Admissions, All Respiratory	65-99	0.14	0.00070%	19,644
Emergency Room Visits, Asthma	0-17	0.80	0.014%	5,859
Emergency Room Visits, Asthma	18-99	1.2	0.0097%	12,560
Mortality				
Mortality, Non-Accidental	0-99	0.090	0.00029%	30,386
Total Incidences	**0-99**	**14.47**	**0.0012**	**184,505**

Notes: $PM_{2.5}$ = fine particulate matter; NA = not applicable.

Source: Modeling conducted by Ascent Environmental 2020

Based on this modeling, operational emissions from implementation of the Housing Element Update may result in an additional 7 deaths from ozone and $PM_{2.5}$ exposure compared to a background number of incidences of about 75,000 mortality incidences per year. There is no established threshold of significance that addresses anticipated deaths; however, consistent with guidance from the Friant Ranch Decision, this information has been included to provide a meaningful level of detail to readers of this Draft SEIR. Notably, as discussed under the heading, "Methodology," there is inherent difficulty in evaluating the exact location and degree of adverse health outcomes from project-level emissions. Moreover, the Strategic Area Project Health Effects Tool cannot account for personal information such as age, preexisting conditions, genetic propensities, and lifestyle choices that may contribute to a receptor's sensitivity to air pollution.

As noted in the General Plan EIR, General Plan Policy NR-4-1 requires that all new development projects in the City with the potential to result in substantial air quality impacts incorporate features to reduce emissions equal to 15 percent compared to an "unmitigated baseline" project. An unmitigated baseline project is a development project that is built and/or operated without the implementation of trip reduction, energy conservation, or similar features. Standard NR-4-1a requires appropriate mitigation measures to the extent feasible and appropriate, potentially including—in the case of projects which may conflict with applicable air quality plans—emission reductions in addition to those required by Policy NR-4-1.

Additionally, General Plan Policy MOB-1-1 requires that new land use plans, amendments to such plans, and other discretionary development proposals demonstrate 15 percent reduction in VMT from existing conditions. While the primary intent of this policy would be to reduce emissions of greenhouse gases (see Section 3.6, "Greenhouse Gas Emissions"), this policy would have beneficial effects on ambient air quality in the Planning Area. However, a 15 percent reduction in VMT may be achieved through several pathways which are unknown at the time of writing this Draft SEIR. For instance, a project may implement a transportation demand management (TDM) plan, which may be composed of multiple strategies to reduce VMT such as congestion pricing, parking management, ridesharing matching, and carpool and vanpool programs. A TDM may include all or some methods of VMT-reducing strategies; however, a TDM plan is project-specific and would be developed in consideration of the land use types associated with a future project. As such, the composition of reductions for air pollutants would differ depending on the type of project. General Plan Standard MOB-3-2.a requires new residential development to pre-wire for plug-in EV, which would further reduce emissions. As summarized in Section 3.2.1, "Regulatory Setting," the City Municipal Code Sections 16.07.200 through 16.07.500 includes a streamlined permitting process for the installation of EV charging stations, which would additionally reduce emissions from the mobile sector associated with the combustion of fossil fuels. Municipal Code Section 23.58.120 requires one "EV ready" parking space for all new one family and two family dwelling units. This section also requires that 2.5 percent of parking for multifamily projects provide EV charging and an additional 2.5 percent of parking be ready for future EV charging expansion.

Implementation of General Plan Policy NR-4-1 would help reduce operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$; however, the reductions anticipated to be achieved by General Plan Policy NR-4-1 cannot be uniformly applied to all future development under the Project. There is inherent uncertainty as to the size, intensity, and timing of future development that would occur under the Project. Notably, some smaller housing projects may generate emissions below SMAQMD's operational thresholds of significance. Therefore, because the details of future development (e.g., the size, intensity, duration of construction, overlap of construction with other projects) cannot be determined at this time, the assumed levels of emissions may not fully encompass total net changes in future emissions.

The General Plan EIR concluded that no additional feasible plan-level mitigation was available beyond compliance with General Plan policies and concluded that Impact 5.3.2 and 5.3.6 are significant and unavoidable. Operational emissions from implementation of the Housing Element and Safety Element Update would not result in a new or substantially more severe air quality impacts that was addressed in the General Plan EIR. Project impacts would be less than significant.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan Policy NR-4-1, Policy MOB-1-1, and Standard MOB-3-2a, and Municipal Code Sections 16.07.200 through 16.07.500 and 23.58.120.

Impact 3.2-3: Exposure of Sensitive Receptors to Substantial Carbon Monoxide Pollutant Concentrations

The General Plan EIR concluded that the Project would not contribute to localized concentrations of mobile-source CO impacts. Implementation of the Housing Element and Safety Element Update would include different land uses and would distribute vehicle trips throughout the City; however, this redistribution would not result in a new impact. Based on modeling performed for this analysis, the maximum number of housing sites proposed under the Housing Element Update could generate a maximum of 32,600 daily trips; however, the trips would be distributed throughout the City and into the region and would not be focused within one intersection exclusively. Therefore, there is no new effect and the impact is not substantially more severe than the impact identified in the General Plan. This impact would remain **less than significant** as identified in the General Plan EIR.

Impact 5.3.3 of the General Plan EIR used a tiered approach established by SMAQMD to evaluate potential CO exposure. Based on this tiered approach, traffic generated would not exceed 9,010 and 9,240 trips in the a.m. and p.m. peak periods, respectively. This level of trips would be less than the 31,600 vehicles per hour (VPH) at an intersection, which comprises the screening criterion established by SMAQMD to evaluated CO impacts. Because this level would be less, the General Plan would not result in a CO "hotspot."

The primary addition of vehicle trips associated with the Safety Element Update would occur during construction of new infrastructure and deployment of police, fire, and emergency medical services as well as the execution of evacuations if warranted. Construction-related vehicle trips would be minor and would be dispersed throughout the General Plan Area. Additionally, police, fire, and emergency medical service vehicles would operate throughout the General Plan Area and would not be substantially greater than the existing vehicle movement associated with these services.

Based on modeling conducted for this analysis, the housing sites under the Housing Element Update could generate a maximum of 32,600 daily vehicle trips throughout the City. While localized concentrations of criteria air pollutants can expose sensitive receptors to substantial pollutant concentrations, criteria air pollutants generally produce regional impacts. Criteria air pollutants are predominantly generated in the form of mobile-source exhaust from vehicle trips associated with land use development projects. These vehicle trips occur throughout a paved network of roads, and, therefore, associated exhaust emissions of criteria air pollutants are not generated in a single location where high concentrations could be formed. However, there may be unique situations or infrastructure designs (e.g., tunnels, enclosed underpasses) where a project with high levels of emissions may require concentration modeling to determine if the emissions will expose sensitive receptors to substantial pollutant concentrations.

Using the screening criteria utilized in the General Plan EIR established by SMAQMD, a CO hotspot could occur at intersections that support 31,600 VPH. Although the 32,600 daily trips generated by the housing sites under the Housing Element Update would be greater than this 31,600 VPH screening criterion, that value is intended to be used for discrete intersections rather than a City/regional addition. Because these trips would be regional in nature rather than localized, a CO hotspot would not occur.

Additionally, mobile-source CO emissions have historically decreased since the advent of catalytic converters, which decrease mobile-source exhaust emissions, and there have been improvements in fuel economy since 2006 through regulatory compliance implemented by EPA and CARB (e.g., the CAFE standards and Advanced Clean Cars program). As such, CO emissions from the Project would not introduce a substantially new or more severe impact as compared to what was evaluated in the General Plan EIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the General Plan EIR. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.2-4: Exposure of Sensitive Receptors to TACs

The General Plan EIR concluded that operational-related emissions of mobile source TACs would result in significant and unavoidable impacts to public health. Implementation of the Housing Element and Safety Element Update could generate mobile source TACs. However, these TAC emissions would be similar to what was anticipated under buildout conditions as described in the General Plan EIR and its current land use designations. Therefore, potential TAC mobile emissions would not result in a new or substantially more severe TAC impacts that was addressed in the General Plan EIR. Project impacts would be **less than significant**.

Impact 5.3.4 of the General Plan EIR evaluated the potential health risk to sensitive receptors (i.e., people, or facilities that generally house people such as schools, hospitals, residences) associated with construction-generated TACs and concluded impacts would be less than significant.

Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) were identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed above in Section 3.6.2, "Environmental Setting," outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2003:K-1). With regard to exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, when a Health Risk Assessment is prepared to project the results of exposure of sensitive receptors to selected compounds, exposure of sensitive receptors to TAC emissions should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the duration of activities associated with the proposed project if emissions occur for shorter periods (OEHHA 2015:5-23, 5-24).

The TAC that is the focus of this analysis is diesel PM because it is known that diesel PM would be emitted during project construction and operation. Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are primarily associated with industrial operations and the Housing Element and Safety Element Update would not include any industrial sources of other TACs.

Construction-related activities that would result in temporary, intermittent emissions of diesel PM would be from the exhaust of off-road equipment used during demolition and building modernization and on-road heavy-duty trucks. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive diesel PM emissions.

Based on the construction-related emissions modeling conducted (see Appendix B), maximum daily emissions of exhaust PM_{10} would be less than 2 lb/ during peak construction. A portion of these emissions would be due to haul trucks traveling and to and from housing sites This is below the SMAQMD-recommended threshold of 80 lb/day. In addition, construction activities located in close proximity to residential units (considered sensitive receptors) would occur during daytime hours consistent with General Plan Noise Policy NO-1-7 and Municipal Code Section 6.32.100, which restricts construction activities to between 7 a.m. and 7 p.m., Monday through Friday, which is when many residents are not home, thus limiting exposure from construction-related emissions to these receptors. As stated in Section 3.2.1, "Regulatory Setting," construction activities may be allowed between the hours of 6 a.m. and 8 p.m. if construction would not be located within the vicinity of a residential land uses, which are considered sensitive receptors.

Construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0. The low exposure level reflects the (i) relatively low mass of diesel PM emissions that would be generated by construction activity on the project site; (ii) the relatively short duration of diesel PM-emitting construction activity in the City; and (iii) the highly dispersive properties of diesel PM. Therefore, there is no new significant impact and the impact is not more severe than the impact identified in the General Plan EIR with respect to construction-related TACs.

Impact 5.3.4 of the General Plan EIR assessed the potential for receptors to be exposed to substantial pollutant concentrations from stationary sources and concluded that this impact would be potentially significant. The housing sites under the Housing Element Update would not introduce new stationary sources of pollution to the City. Therefore, there is no new significant impact and the impact is not more severe than the impact identified in the General Plan EIR with respect to stationary-sourced TACs.

Impact 5.3.4 of the General Plan EIR evaluated long-term operational sources of TACs and concluded that due to the anticipated level of traffic along certain roadways within the General Plan area, sensitive receptors could be exposed to substantial TAC concentrations. The General Plan EIR used the CARB- and SMAQMD-recommended 100,000 daily vehicle trips on a roadway segment to determine that new vehicle trips generated by the land uses under the General Plan would introduce substantial mobile-source TACs within the General Plan area.

Implementation of the Housing Element Update could generate additional vehicle trips associated with residential development than what was evaluated in the General Plan EIR due to the identification of new candidate housing sites of higher-density that were not previously evaluated in the General Plan EIR due to changes in land use designations. However, the extent of this increase would not create substantially higher levels of mobile TACs or generate new sources of mobile TACs than what was considered in the General Plan EIR. Implementation of General Plan Policies NR-2-4, NR-4-9, NR-4-10, MOB-3-1, MOB-3-2, MOB-3-5, MOB-3-6, MOB-3-7, MOB-3-13, and MOB-7-5 would serve to lower exposure of sensitive receptors to sources of TACs throughout the General Plan Planning Area. As discussed previously, the CARB Diesel Risk Reduction Plan and Air Toxic Control Measures would help reduce future emissions of diesel PM (the primary TAC of concern in mobile emissions).

The General Plan EIR concluded that no additional feasible plan-level mitigation was available beyond compliance with General Plan policies and that this impact was significant and unavoidable. Operational emissions from implementation of the Housing Element and Safety Element Update would not result in a new or substantially more severe TAC impacts that was addressed in the General Plan EIR. Project impacts would be **less than significant**.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan Policies NR-2-4, NR-4-9, NR-4-10, MOB-3-1, MOB-3-2, MOB-3-5, MOB-3-6, MOB-3-7, MOB-3-13, and MOB-7-5.