

## 5.3 AIR QUALITY

This chapter describes the potential air quality impacts due to the buildout of the General Plan Update and Upper Ridge Community Plan (URCP) in the County. This section describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential air quality impacts, and identifies proposed project policies and strategies and feasible mitigation measures that could minimize any potentially significant impacts.

### Terminology

- **AAQS.** Ambient Air Quality Standards
- **CES.** CalEnviroScreen. CES is a mapping tool that helps identify the California communities most affected by sources of pollution and where people are often especially vulnerable to pollution's effects.
- **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 ( $\mu\text{g}/\text{m}^3$ ).
- **Criteria Air Pollutants.** Those air pollutants specifically identified for control under the Federal Clean Air Act (currently seven—carbon monoxide, nitrogen oxides, lead, sulfur oxides, ozone, and coarse and fine particulates).
- **DPM.** Diesel particulate matter.
- **Emissions.** Refers to the actual quantity of pollutant, measured in pounds per day or tons per year.
- **ppm.** Parts per million.
- **Sensitive receptor.** Land uses that are considered more sensitive to air pollution than others due to the types of population groups or activities involved. These land uses include residential, retirement facilities, hospitals, and schools.
- **TAC.** Toxic air contaminant.
- **$\mu\text{g}/\text{m}^3$ .** Micrograms per cubic meter.
- **VMT.** Vehicle miles traveled.

### 5.3.2 ENVIRONMENTAL SETTING

#### 5.3.2.1 AIR POLLUTANTS OF CONCERN

##### Criteria Air Pollutants

The Federal and State governments have established ambient air quality standards for the following seven criteria pollutants: ozone ( $\text{O}_3$ ), carbon monoxide (CO), nitrogen dioxide ( $\text{NO}_2$ ), sulfur dioxide ( $\text{SO}_2$ ), coarse particulate matter ( $\text{PM}_{10}$ ), fine particulate matter ( $\text{PM}_{2.5}$ ), and lead (Pb). Ozone and  $\text{NO}_2$  are generally considered “regional” pollutants, as these pollutants or their precursors affect air quality on a regional scale.

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Pollutants such as CO, SO<sub>2</sub>, and lead are considered local pollutants that tend to accumulate in the air locally. Particulate matter is considered a localized pollutant as well as a regional pollutant. Brief descriptions of these pollutants are provided below Table 5.3-1, *Criteria Air Pollutants Health Effects Summary*, which summarizes the potential health effects associated with criteria air pollutants.

**TABLE 5.3-1 CRITERIA AIR POLLUTANT HEALTH EFFECTS SUMMARY**

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	Chest pain in heart patients Headaches, nausea Reduced mental alertness Death at very high levels	Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O <sub>3</sub> )	Cough, chest tightness Difficulty taking a deep breath Worsened asthma symptoms Lung inflammation	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO <sub>2</sub> )	Increased response to allergens Aggravation of respiratory illness	Same as carbon monoxide sources
Particulate Matter (PM <sub>10</sub> & PM <sub>2.5</sub> )	Hospitalizations for worsened heart diseases Emergency room visits for asthma Premature death	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO <sub>2</sub> )	Aggravation of respiratory disease (e.g., asthma and emphysema) Reduced lung function	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	Behavioral and learning disabilities in children Nervous system impairment	Contaminated soil

Sources: CARB 2022a; South Coast AQMD 2005.

### *Ozone (O<sub>3</sub>)*

Ozone is a photochemical oxidant and the major component of smog. Although O<sub>3</sub> in the upper atmosphere is essential to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O<sub>3</sub> at ground level represent a significant health and environmental concern, capable of causing damage to lung tissue and plants. O<sub>3</sub> is formed when precursor emissions of volatile organic compounds (VOC)/reactive organic gases (ROGs) and oxides of nitrogen (NO<sub>x</sub>) react in the presence of sunlight and higher temperatures. Peak O<sub>3</sub> levels thus generally occur during warm periods. VOCs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents. NO<sub>x</sub> results from fuel combustion occurring with transportation and industrial sources (BCAQMD 2014).

### *Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)*

Respirable PM is fine material, metal, soot, smoke, and dust particles suspended in the air. For health reasons, we are most concerned with inhalable particulate matter less than 10 micrometers in diameter (PM<sub>10</sub>), and less than 2.5 micrometers in diameter (PM<sub>2.5</sub>). Particles of these sizes can permanently lodge in

the deepest and most sensitive areas of the lung, and can aggravate many respiratory illnesses including asthma, bronchitis, and emphysema. Sources of directly emitted particulates in Butte County include soil from farming, construction dust, paved road dust, smoke from residential wood combustion, and exhaust from mobile sources such as cars and trucks. The valley can also be impacted by agricultural and residential burning (BCAQMD 2014).

### *Carbon Monoxide (CO)*

CO is a colorless, odorless, and poisonous gas produced by incomplete burning of carbon during fuel combustion. When CO enters the bloodstream, it reduces the delivery of oxygen to the body's organs and tissues. Health threats are most serious for those who suffer from cardiovascular disease, particularly those with angina or peripheral vascular disease. Exposure to elevated CO levels can cause impairment of visual perception, manual dexterity, learning ability and performance of complex tasks (BCAQMD 2014).

### *Lead (Pb)*

Lead exposure can occur through multiple pathways, including inhalation of air and ingestion of lead in food, water, soil, or dust. Excessive lead exposure can cause seizures, mental retardation and/or behavioral disorders; low doses of lead can lead to damage of the central nervous system. Lead may also be a factor in high blood pressure and subsequent heart disease (BCAQMD 2014).

### *Nitrogen Dioxide (NO<sub>2</sub>)*

NO<sub>2</sub> is a brownish, highly reactive gas that is present in all urban atmospheres. NO<sub>2</sub> can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O<sub>3</sub>) and acid rain and may affect both terrestrial and aquatic ecosystems. NO<sub>2</sub> is primarily formed in the atmosphere by oxidation of the primary air pollutant nitric oxide (NO<sub>x</sub>) which, in turn, reacts in the atmosphere with VOCs to produce O<sub>3</sub>. The two major emission sources for NO<sub>x</sub>, which forms when fuel is burned at high temperatures, are transportation and stationary fuel combustion sources such as electric utility and industrial boilers (BCAQMD 2014).

### *Sulfur Dioxide (SO<sub>2</sub>)*

Sulfur dioxide affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children, and the elderly. SO<sub>2</sub> is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings, and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. Ambient SO<sub>2</sub> results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills, and nonferrous smelters (BCAQMD 2014).

## **Toxic Air Contaminants**

People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other

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health problems (USEPA 2022a). By the last update to the TAC list in December 1999, the California Air Resources Control Board (CARB) had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. There are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most relevant to the proposed project 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. Long-term (chronic) inhalation of DPM is likely a lung cancer risk. Short-term (i.e., acute) exposure can cause irritation and inflammatory symptoms and may exacerbate existing allergies and asthma symptoms (USEPA 2002).

### *Placement of New Sensitive Receptors*

Because placement of sensitive land uses falls outside CARB’s jurisdiction, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* to address 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 (CARB 2005). This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources.

CARB’s recommendations on the siting of new sensitive land uses—identified in Table 5.3-2, *CARB Recommendations for Siting New Sensitive Land Uses*—were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources.

**TABLE 5.3-2 CARB RECOMMENDATIONS FOR SITING NEW SENSITIVE LAND USES**

<b>Source/Category</b>	<b>Advisory Recommendations</b>
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units [TRUs] per day, or where TRU unit operations exceed 300 hours per week).
Rail Yards	Take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points.
Ports	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Refineries	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or CARB on the status of pending analyses of health risks.

Source/Category	Advisory Recommendations
Chrome Platers	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of any dry-cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.

Source: CARB 2005.

The key observation in these studies is that proximity to air pollution sources substantially increases both exposure and the potential for adverse health effects. There are three carcinogenic TACs that constitute the majority of the known health risks from motor vehicle traffic: DPM from trucks and benzene and 1,3-butadiene from passenger vehicles.

In 2017, CARB provided a supplemental technical advisory to the handbook for near-roadway air pollution exposure, “Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways.” Strategies include practices and technologies that reduce traffic emissions, increase dispersion of traffic pollution (or the dilution of pollution in the air), or remove pollution from the air (CARB 2017).

### **5.3.2.2 REGULATORY FRAMEWORK**

The federal Clean Air Act (CAA) governs air quality in the United States and California. Air quality in the state is also governed by more stringent regulations under the California CAA. At the federal level, the US Environmental Protection Agency (EPA) administers the CAA, while the California CAA is administered by CARB at the State level and by the Butte County Air Quality Management District (BCAQMD) at the regional and local levels.

## **Federal and State Regulations**

### *Ambient Air Quality Standards*

The Clean Air Act was passed in 1963 by the US Congress and has been amended several times. The 1970 CCA amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. 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 CCA allows states to adopt more stringent standards or include other pollutants. The California CCA, signed in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

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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 5.3-3, *Ambient Air Quality Standards for Criteria Air Pollutants*. These pollutants are ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

**TABLE 5.3-3 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA AIR POLLUTANTS**

Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
Ozone (O <sub>3</sub> ) <sup>3</sup>	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 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	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 <sub>2</sub> )	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 Coarse Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	*	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 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Respirable Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>4</sup>	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	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 µg/m <sup>3</sup>	
Lead (Pb)	30-Day Average	1.5 µg/m <sup>3</sup>	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m <sup>3</sup>	
	Rolling 3-Month Average	*	0.15 µg/m <sup>3</sup>	

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Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
Sulfates (SO <sub>4</sub> ) <sup>5</sup>	24 hours	25 µg/m <sup>3</sup>	No Federal Standard	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =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 <sub>2</sub> S) 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 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, 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.

Source: CARB 2016.

Notes: ppm: parts per million; µg/m<sup>3</sup>: micrograms per cubic meter

\* Standard has not been established for this pollutant/duration by this entity.

<sup>1</sup> California standards for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>2</sup> National standards (other than O<sub>3</sub>, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, 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.

<sup>3</sup> On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

<sup>4</sup> On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

<sup>5</sup> On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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California has also adopted a host of other regulations that reduce criteria pollutant emissions.

- **AB 1493: Pavley Fuel Efficiency Standards.** Pavley I is a clean-car standard that reduces emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.
- **Heavy-Duty (Tractor-Trailer) GHG Regulation.** The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay-verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low-rolling-resistance tires. Sleeper-cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay-verified low-rolling-resistance tires. This rule has criteria air pollutant co-benefits.
- **SB 1078 and SB 107: Renewables Portfolio Standards.** A major component of California’s Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under this standard, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010.
- **California Code of Regulations (CCR) Title 20: Appliance Energy Efficiency Standards.** The 2006 Appliance Efficiency Regulations (20 CCR secs. 1601–1608) were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. This code reduces natural gas use from appliances.
- **24 CCR, Part 6: Building and Energy Efficiency Standards.** Energy conservation standards for new residential and nonresidential buildings adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977. This code reduces natural gas use from buildings.
- **24 CCR, Part 11: Green Building Standards Code.** Establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. This code reduces natural gas use from buildings.

### *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 reduce exposure to them. 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” (17 CCR sec. 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code sec. 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency, 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 Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act set 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 that TAC. 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.** Generally restricts on-road diesel-powered commercial motor vehicles with a gross vehicle weight rating of greater than 10,000 pounds from idling more than five minutes.
- **13 CCR Chapter 10 Section 2480: Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools.** Generally restricts a school bus or transit bus from idling for more than five minutes when within 100 feet of a school.
- **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.** Regulations established to control emissions associated with diesel-powered TRUs.

## **Regional Regulations**

### *Butte County Air Quality Management District*

The BCAQMD is the local air district responsible for local air quality regulation in Butte County. The BCAQMD’s primary responsibility is to regulate stationary sources and develop plans to achieve and maintain air quality standards. CARB and the EPA have jurisdiction over controlling emissions from mobile sources. The BCAQMD has jurisdiction over air quality matters in Butte County. Formerly a department of the Butte County government, it is now an independent special district under California law.

BCAQMD’s mission to improve air quality includes adopting and enforcing rules and regulations to attain and maintain air quality standards, issuing permits for and inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring air quality and meteorological conditions, awarding grants to reduce mobile emissions, implementing public outreach campaigns, assisting Butte County jurisdictions in

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addressing climate change, and updating and evaluating consistency with the Northern Sacramento Valley Air Quality Attainment Plan.

The stationary “direct” sources of air contaminants over which BCAQMD has permit authority include, but are not limited to, power plants, gasoline stations, dry cleaners, internal combustion engines, and surface-coating operations. BCAQMD does not, however, exercise permit authority over “indirect” emission sources. Indirect sources are contributors to air pollution and include facilities and land uses that may not emit significant amounts of pollution directly themselves, but are responsible for indirect emissions, such as:

- Motor vehicle trips attracted to or generated by a land use.
- On-site combustion of natural gas and propane for heating.
- Architectural coatings (paints, stains) and consumer products.
- Landscape maintenance.

The BCAQMD works with the Butte County Association of Governments (BCAG) to ensure a coordinated approach in the development and implementation of transportation plans throughout the county. This coordination ensures compliance with pertinent provisions of the CAA and California CAA as well as with related transportation legislation.

### *Air Quality Plans*

The California CAA requires districts to adopt air quality attainment plans and to review and revise their plans to address deficiencies in interim measures of progress once every three years. The Triennial Air Quality Attainment Plan (AQAP) was created by the air districts in the Northern Sacramento Valley (SVABCC 2021). The purpose of the plan is to achieve and maintain healthy air quality throughout the northern air basin. The plan addresses the progress made in implementing the original plan, submitted to CARB in 1991, and has been updated every three years, most recently in 2021, and was approved by the District Governing Board in April 2022. The AQAP includes control strategies necessary to attain the California ozone standard at the earliest practicable date (BCAQMD 2022).

### *BCAQMD Rules*

All projects are subject to BCAQMD Rules in effect at the time of activity, including, but not limited to the following:

- **Rule 200, Nuisance:** No person shall discharge from any non-vehicular source such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.
- **Rule 201, Visible Emissions:** No person shall discharge into the atmosphere from any single non-vehicular source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is:

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- As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart as published by the U.S. Bureau of Mines; or,
- Of such opacity as to obscure an observers view to a degree equal to or greater than does smoke described in Section 1 of this Rule.

- **Rule 202, Particulate Matter Concentration:** A person shall not discharge into the atmosphere from any source particulate matter in excess of 0.3 grains per cubic foot of gas at standard conditions.

When the source involves a combustion process, the concentration must be calculated to 12 percent CO<sub>2</sub>. In measuring the combustion contaminants from incinerators used to dispose of combustible refuse by burning, the CO<sub>2</sub> produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation of 12 percent of CO<sub>2</sub>.

- **Rule 205, Fugitive Dust Emissions:** The purpose of this rule is to reduce ambient concentrations and limit fugitive emissions of coarse particulate matter (PM<sub>10</sub>) from construction activities, bulk material handling and storage, carryout and track-out, and similar activities, weed abatement activities, unpaved parking lots, unpaved staging areas, unpaved roads, inactive disturbed land, disturbed open areas, and windblown dust.
- **Rule 207, Wood Burning Devices:** The purpose of this rule is to provide requirements related to sale, installation, operation and testing of wood-burning stoves in order to minimize air pollutant emissions.
- **Rule 230, Architectural Coatings:** The purpose of this rule to limit the quantity of VOCs in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the District.
- **Rule 400, Permit Requirements:** The purpose of this rule is to require any person constructing, altering, or operating a source that emits or may emit air contaminants to request an Authority to Construct or Permit to Operate from the Air Pollution Control Officer and to provide an orderly procedure for application, review, and authorization of new sources and of the modification and operation of existing sources of air pollution. Stationary sources that are subject to Rule 1101—Title V-Federal Operating Permits—of these Rules and Regulations shall also comply with the procedures specified in this rule.
- **Rule 430, State New Source Review:** The purpose of this rule is to establish pre-construction review requirements for new and modified stationary sources of air pollution for use of Best Available Control Technology, offsets, and analysis of air quality impacts, and to ensure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards, and complies with all other applicable Butte County Air Quality Management District Rules and Regulations.
- **Rule 432, Federal New Source Review:** The purpose of this Rule is to establish pre-construction review requirements for new and modified major stationary sources and major modifications of air pollution for use of Best Available Control Technology, offsets, and analysis of air quality impacts, and to ensure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards and complies with all other applicable requirements.

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### *Butte County General Plan 2030*

The following policies are in the existing General Plan regarding air quality. The numbering is from the existing General Plan and therefore may not be consecutive.

#### Land Use Element

- Goal LU-3 Create communities where there is a sense of well-being where families and neighbors can socialize, interact, and play.
  - LU-P3.2 Newly developed neighborhoods shall include parks and recreation facilities. Sidewalks, bike paths, and other routes shall provide circulation to surrounding areas.
- Goal LU-4 Provide high-quality housing in a range of residential densities and types.
  - LU-P4.2 Residentially-designated land with High Density Residential and Very High Density Residential land use designations shall be developed at or above the minimum density range.
  - LU-P4.3 Generally, higher density housing shall be located along collector and arterial streets and within easy walking distance of public facilities.
- Goal LU-5 Provide adequate land for and promote the development of attractive commercial and industrial areas and uses that provide goods, services, and jobs.
  - LU-P5.2 Industrial and heavy commercial uses shall be grouped into integrated industrial parks.
  - LU-P5.3 New industrial uses shall be designed to avoid adverse impacts to adjacent uses, particularly residential neighborhoods, with respect to, but not limited to, noise, dust and vibration, water quality, air quality, agricultural resources, and biological resources.
- Goal LU-6 Provide adequate land for the development of public and quasipublic uses, as a means to provide necessary public services and facilities in support of existing and new residential, commercial, and industrial land uses.
  - LU-P6.3 New County government buildings and other public and quasi-public uses, such as hospitals, meeting halls, and private schools, shall be located in existing urbanized areas in convenient, central locations that provide maximum access for the maximum number of residents.
  - LU-P6.4 Development projects that provide lands for private open spaces, parks, community service facilities, such as places of worship and daycare facilities, and public facilities may be allowed to transfer density to other portions of the site.
- Goal LU-8 Promote development near existing infrastructure and services, and within already-developed areas.
  - LU-P8.2 The County shall direct projected growth to areas where the appropriate level of transportation infrastructure is or will be available during the planning period.

- LU-P8.3 Applicants intending to develop sites served by existing public facilities shall be encouraged to develop at the highest allowable density and intensity.
- LU-P8.4 New industrial development shall be encouraged to locate in existing industrial areas until existing industrial areas have been fully utilized.
- LU-P8.5 Stores providing goods and services to support daily life in neighborhoods should be located within walking distance to the majority of neighborhoods.

### Economic Development Element

- Goal ED-2 Promote and support the local agricultural economic sector.
  - ED-P2.6 The County supports programs and projects that would help Butte County farmers provide carbon offsets, if and when new regulations require industries to provide carbon offsets.
  - ED-P2.7 The County supports programs and projects that utilize agricultural by-products for “green” building material production and/or renewable energy production, such as using straw bales for building or converting rice straw to bio-fuels.

### Circulation Element

- Goal CIR-2 Plan for transportation modes and strategies that ensure good air quality, reduce greenhouse gas emissions, reduce petroleum consumption and reduce the need to devote additional lands to transportation uses.
  - CIR-P2.1 Carpooling shall be encouraged by providing additional carpool pickup and park-and-ride locations near transit centers and at freeway interchanges.
  - CIR-P2.2 Trip reduction among County employees shall be encouraged. Specific measures to encourage trip reduction could include providing subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpools/vanpools.
  - CIR-P2.4 Employers shall be encouraged to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpools/vanpools.
  - CIR-P2.5 Transportation corridors for renewable energy transmission and for new transit lines shall be preserved.
  - CIR-P2.6 The County shall incorporate “Complete Streets” policies that are designed and built to be safe for all users, including pedestrians, bicyclists and transit users.
  - CIR-P2.7 Where feasible and appropriate, and where non-motorized travel is reasonably expected, the width of existing streets shall be reduced through bulb outs, medians, pedestrian islands and similar methods, and planting shade trees in landscaped areas within and adjacent to streets, while not jeopardizing emergency response and future capacity requirements as determined by the Butte County Fire Department and Public Works Department.

## AIR QUALITY

### Conservation and Open Space Element

- Goal COS-1 Reduce greenhouse gas emissions to 1990 levels by 2020.
  - COS-P1.5 New developments should have street systems that support the use of Neighborhood Electric Vehicles (NEV).
  - COS-P1.7 New commercial and institutional development projects shall provide prioritized parking for electric vehicles, hybrid vehicles, alternative fuel vehicles and carpools.
- Goal COS-2 Promote green building, planning and business.
  - COS-P2.1 County staff shall work cooperatively with the municipalities to ensure consistent standards for green building codes and other methods to reduce greenhouse gas emissions throughout the county.
  - COS-P2.2 New development shall comply with Green Building Standards adopted by the California Building Standards Commission at the time of building permit application, including requirements about low- or no-toxicity building materials.
  - COS-P2.3 All new County buildings and major renovations designed for public access and/or primary workspace shall meet, at a minimum, LEED-Silver or equivalent and the County shall use these buildings to demonstrate green building practices to builders, developers, homeowners and others. Minor buildings of an accessory nature that are not used as public spaces and that do not serve as a primary work space are not required to meet LEED-Silver or equivalent, but shall implement practical building design, construction, and maintenance solutions as set forth under the LEED rating system or equivalent.
  - COS-P2.4 All new subdivisions and developments should meet green planning standards such as LEED for Neighborhood Design.
- Goal COS-5 Minimize air pollutant emissions.
  - COS-P5.1 Air quality planning efforts shall be coordinated with local, regional and State agencies, and shall encourage community participation in air quality planning.
  - COS-P5.2 Developers shall implement best available mitigation measures to reduce air pollutant emissions associated with the construction and operation of development projects.\*
  - COS-P5.3 Only EPA Phase II certified wood burning or equivalent devices maybe installed in any residential projects.
  - COS-P5.4 Stationary air pollutant emission sources, such as factories, shall be located more than 500 feet and/or downwind from residential areas and other sensitive receptors.\*
  - COS-P5.5 Residential developments and other projects with sensitive receptors shall be located more than 500 feet from stationary air pollutant sources. Residential developments and other projects with sensitive receptors (e.g. housing, schools, child

care centers, playgrounds, hospitals, and senior centers) that are located within 500 feet of a high-volume roadway that carries over 50,000 vehicles per day shall incorporate feasible mitigation measures to protect sensitive receptors from harmful concentrations of air pollutants, as recommended in the California Air Resources Board's (CARB's) Air Quality and Land Use Handbook.\*

- COS-P5.6 New sources of toxic air pollutants shall comply with the permitting requirements of the Butte County Air Quality Management District and Section 44300 et. seq. of the California Health and Safety Code.\*
- COS-P5.7 The County shall cooperate with Butte County Air Quality Management District in efforts to reduce traffic-related emissions below levels that violate national ambient air quality standards in Butte County.
- COS-P5.8 The County shall encourage the Butte County Air Quality Management District to work in partnership with fire managers to balance natural resource needs (e.g. prescribed burning) with air quality needs.

### **5.3.2.3 EXISTING CONDITIONS**

#### **Sacramento Valley Air Basin**

CARB has delineated the jurisdiction of regional air basins and local air districts throughout the state. Butte County is in the Sacramento Valley Air Basin (SVAB), which is the northern half of California's 400-mile-long Great Central Valley. The SVAB encompasses approximately 14,994 square miles with a largely flat valley floor (excepting the Sutter Buttes); is about 200 miles long and up to 150 miles wide; and is bordered on its east by the Sierra Nevada, on the north by the Cascade Range, and on the west by the Coast range (BCAQMD 2014).

The SVAB, containing 11 counties and some 2 million people, is divided into two air quality planning areas based on the amount of pollutant transport from one area to the other and the level of emissions within each. Butte County is in the Northern Sacramento Valley Air Basin (NSVAB) of the SVAB. The NSVAB is composed of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba Counties.

Emissions from the urbanized portion of the basin (Sacramento, Yolo, Solano, and Placer Counties) dominate the emission inventory for the SVAB, and on-road motor vehicles are the primary source of emissions in the Sacramento metropolitan area. Though pollutant concentrations have generally declined over the years, additional emission reductions will be needed to attain the State and national ambient air quality standards in the SVAB.

Air pollutants are not confined by jurisdictional boundaries but disperse through the atmosphere. For example, depending upon the time of year and meteorological conditions, a significant share of Butte County's air pollutants may come from the Sacramento metropolitan area, which, in turn, may receive a share of its air pollutants from the San Francisco Bay Area or the San Joaquin Valley (BCAQMD 2014).

## AIR QUALITY

### Regional Climate and Meteorology

Seasonal weather patterns have a significant effect on regional and local air quality. The Sacramento Valley and Butte County have a Mediterranean climate, characterized by hot, dry summers and cool, wet winters. Winter weather is governed by cyclonic storms from the North Pacific, and summer weather is typically subject to a high-pressure cell that deflects storms from the region.

In Butte County, winters are generally mild, with daytime average temperatures in the low 50s and nighttime temperatures in the upper 30s. Temperatures range from an average January low of approximately 36°F to an average July high of approximately 96°F, although periodic lower and higher temperatures are common. Rainfall between October and May averages about 26 inches but varies considerably year to year. Heavy snowfall often occurs in the northeastern, mountainous portion of the county. Periodic rainstorms contrast with occasional stagnant weather and thick ground or “tule” fog in the moister, flatter parts of the valley. Winter winds generally come from the south, although north winds also occur.

Diminished air quality in Butte County largely results from local air pollution sources, transport of pollutants into the area from the south, the NSVAB topography, prevailing wind patterns, and certain inversion conditions that differ with the season. During the summer, sinking air forms a “lid” over the region, confining pollution within a shallow layer near the ground that leads to photochemical smog and visibility problems. During winter nights, air near the ground cools while the air above remains relatively warm, resulting in little air movement and localized pollution “hot spots” near emission sources. Carbon monoxide, nitrogen oxides, particulate matters, and lead particulate concentrations tend to elevate during winter inversion conditions when little air movement may persist for weeks.

As a result, high levels of particulate matter (primarily PM<sub>2.5</sub>) and ground-level ozone are the pollutants of most concern to the NSVAB Districts. Ground-level ozone, the principal component of smog, forms when VOC and NO<sub>x</sub>—together known as ozone precursor pollutants—react in strong sunlight. Ozone levels tend to be highest in Butte County during late spring through early fall, when sunlight is strong and constant and emissions of the precursor pollutants are highest (BCAQMD 2014).

### Ambient Air Quality Conditions

CARB, in cooperation with BCAQMD and other air districts, monitors air quality throughout the SVAB. In Butte County, CARB monitors air quality at the following stations: Chico (East Avenue); Paradise (4405 Airport Road and Paradise Theater); and Gridley (Cowee Avenue). The Paradise Theater and Gridley Cowee Avenue monitoring sites do not have official air quality data on record. The Paradise 4405 Airport Road site has data for ozone, and the Chico East Avenue site has data for ozone, CO, NO<sub>2</sub>, and PM (BCAQMD 2014). Data from the Chico East Avenue site and the Paradise Airport monitoring stations are shown in Table 5.3-4, *Ambient Air Quality Monitoring Data*, for the last three available years.



**TABLE 5.3-4 AMBIENT AIR QUALITY MONITORING DATA**

Pollutant Standards	Chico			Paradise Airport Road		
	2019	2020	2021	2019	2020	2021
<b>Ozone</b>						
State 1-Hour $\geq$ 0.09 ppm	0	1	0	0	2	0
State 8-hour $\geq$ 0.070 ppm	0	1	0	0	11	10
Federal 8-hour $\geq$ 0.070 ppm	0	1	0	0	10	9
Maximum 1-Hour Conc. (ppm)	0.072	0.097	0.078	0.075	0.110	0.093
Maximum 8-Hour Conc. (ppm)	0.064	0.083	0.069	0.070	0.098	0.079
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>						
State 1-Hour $\geq$ 0.18 (ppm)	0	0	0	n/a	n/a	n/a
Federal 1-Hour $\geq$ 0.100 (ppm)	0	0	0	n/a	n/a	n/a
Maximum 1-Hour Conc. (ppb)	0.0421	0.0334	0.0318	n/a	n/a	n/a
<b>Particulate Matter (PM<sub>10</sub>)</b>						
State 24-Hour $\geq$ 50 $\mu\text{g}/\text{m}^3$	4	53	33	n/a	n/a	n/a
Federal 24-Hour $\geq$ 150 $\mu\text{g}/\text{m}^3$	3	8	0	n/a	n/a	n/a
Maximum 24-Hour Conc. ( $\mu\text{g}/\text{m}^3$ )	55.7	391.3	130.3	n/a	n/a	n/a
<b>Particulate Matter (PM<sub>2.5</sub>)</b>						
Federal 24-Hour $\geq$ 35 $\mu\text{g}/\text{m}^3$	0	33	13	n/a	n/a	n/a
Maximum 24-Hour Conc. ( $\mu\text{g}/\text{m}^3$ )	34.6	329.3	102.7	n/a	n/a	n/a

Source: CARB 2022b.

Notes: ppm = parts per million; ppb = parts per billion;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter; n/a = Not Available  
Data may include exceptional events (e.g., wildfires).

## Attainment Status and Air Quality Planning

If monitored pollutant concentrations meet State or federal standards over a designated period of time, the area is classified “attainment” for that pollutant. If monitored pollutant concentrations violate the standards, the area is considered “nonattainment” for that pollutant. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated “unclassified.” Attainment status for various pollutants is summarized for the region in Table 5.3-5, *State and Federal Attainment Designations for Butte County*.

## AIR QUALITY

**TABLE 5.3-5 STATE AND FEDERAL ATTAINMENT DESIGNATIONS FOR BUTTE COUNTY**

Pollutant	Federal Standards	State Standards
1-hour ozone	No Standard <sup>1</sup>	Nonattainment
8-hour ozone	Nonattainment	Nonattainment
Carbon monoxide (CO)	Attainment	Attainment
Nitrogen dioxide (NO <sub>2</sub> )	Attainment	Attainment
Sulfur dioxide	Attainment	Attainment
24-hour Inhalable particulate matter (PM <sub>10</sub> )	Attainment	Nonattainment
24-hour Inhalable particulate matter (PM <sub>2.5</sub> )	Attainment	No Standard
Annual Inhalable particulate matter (PM <sub>10</sub> )	No Standard	Attainment
Annual Inhalable particulate matter (PM <sub>2.5</sub> )	Attainment	Nonattainment

Source: BCAQMD 2018.

Notes: n/a = not applicable.

<sup>1</sup> The federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards.

### Existing Air Quality Inventory

Butte County consists of commercial, retail, industrial, and institutional land uses and single- and multifamily residences. These uses currently generate criteria air pollutant emissions from natural gas use for energy, heating, and cooking; vehicle trips associated with each land use; and area sources such as landscaping equipment and consumer cleaning products.<sup>1</sup> Table 5.3-6, *2019 Butte County Criteria Air Pollutant Emissions Inventory*, identifies the existing criteria air pollutant emissions inventory for Butte County using emission rates for year 2019. The inventory is based on existing land uses in Butte County and represents the calculated emissions currently generated by existing land uses.

**TABLE 5.3-6 2019 BUTTE COUNTY CRITERIA AIR POLLUTANT EMISSIONS INVENTORY**

Source Type	Existing Criteria Air Pollutant Emissions (pounds per day)		
	VOC	NO <sub>x</sub>	PM <sub>10</sub>
Transportation <sup>1</sup>	200	1,547	31
Energy (natural gas and propane) <sup>2</sup>	173	373	24
Offroad Equipment <sup>3</sup>	624	3,754	217
Consumer Products <sup>4</sup>	1,196	N/A	N/A
<b>Total Maximum Daily</b>	<b>2,193</b>	<b>5,674</b>	<b>272</b>

<sup>1</sup> Based on calendar year 2019 emissions data from EMFAC2021, Version 1.0.2, and daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips.

<sup>2</sup> Based on natural gas and propane consumption data unitized for the Butte County 2021 Climate Action Plan.

<sup>3</sup> Based on offroad equipment emissions data from OFFROAD2021, Version 1.0.2., and include emissions from the following equipment category: Agricultural, Airport Ground Support, Construction and Mining, Forestry, Oil Drilling, Pleasure Craft, Locomotive, Recreational, and Transport Refrigeration Unit.

<sup>4</sup> Based on CalEEMod, Version 2022.1 User's Guide methodology utilized to calculate VOC emissions from use of household consumer cleaning products.

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<sup>1</sup> Emissions from permitted sources are excluded from the existing emissions inventory because the reductions associated with the Industrial sector are regulated separately by BCAQMD and are not under the jurisdiction of Butte County.

### 5.3.3 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant air quality impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. During construction, result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
3. During operation, 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.
4. During construction, expose sensitive receptors to substantial pollutant concentrations.
5. During operation, expose sensitive receptors to substantial pollutant concentrations.
6. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
7. In combination with past, present, and reasonably foreseeable projects, result in cumulative impacts with respect to air quality.

#### 5.3.3.1 BUTTE COUNTY AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

The analysis of the project’s air quality impacts follows the guidance and methodologies and utilizes the significance thresholds in the BCAQMD *CEQA Air Quality Handbook* (Handbook) (BCAQMD 2014).

#### Regional Significance Thresholds

The BCAQMD Handbook established the regional significance thresholds for operation and construction shown in Table 5.3-7, *BCAQMD Regional Significance Thresholds*. Per the BCAQMD Handbook, the significance thresholds are derived from District Rule 430, which in turn is based on the State ambient air quality standards. Projects that do not exceed the regional significance thresholds may be assumed to have a less than significant impact in regard to a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment (BCAQMD 2014).

**TABLE 5.3-7 BCAQMD REGIONAL SIGNIFICANCE THRESHOLDS**

Air Pollutant	Construction		Operational
	Daily (Pounds Per Day)	Annual (Tons Per Year)	Daily (Pounds Per Day)
Reactive Organic Gases (ROG)	137	4.5	25
Nitrogen Oxides (NO <sub>x</sub> )	137	4.5	25
Particulates (PM <sub>10</sub> )	80	n/a	80

Source: BCAQMD 2014.

Notes: N/A = Not Available.

## AIR QUALITY

If projects exceed the emissions in Table 5.3-7, emissions would cumulatively contribute to the nonattainment status and would contribute to elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants.

However, for projects that exceed the emissions in Table 5.3-7, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited above. The BCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in its jurisdiction within SVAB, and at the present time, it has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S21978 (*Friant Ranch*).

Ozone concentrations depend on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the EPA, the air districts prepare air quality management plans that details regional programs to attain the AAQS. However, if a project in Butte County exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SVAB.

### Community Health Risk

The BCAQMD recommends the following health risk impact significance thresholds for TACs and PM<sub>2.5</sub> generated from project-related construction and operational phase activities.

#### *Project Level*

Project-level emissions of TACs or PM<sub>2.5</sub> from individual sources that exceed any of the thresholds listed here are considered a potentially significant community health risk:

- 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 project contribution.
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m<sup>3</sup>) annual average PM<sub>2.5</sub> from a single source would be a significant project contribution (BCAQMD 2014).

*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 cumulatively 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:

- An excess cancer risk level of more than 10 in one million or a chronic noncancer hazard index (from all local sources) greater than 1.0.
- 0.8 µg/m<sup>3</sup> annual average PM<sub>2.5</sub> (BCAQMD 2014).

**Odors**

Odor impacts associated with a proposed project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors. Due to the subjective nature of odor impacts, BCAQMD does not provide quantitative or formulaic methodologies to determine if potential odors would have a significant impact. However, because potential significant odor impacts are generally related to the intensity with distance from a source, BCAQMD identified screening distances for various odor sources as shown in Table 5.3-8, *BCAQMD Screening Levels for Potential Odor Sources*. For new odor sources that would be developed and sited near existing receptors within the screening distances, an information request and analysis should be made and based on a review of odor complaints for similar facilities. Additionally, the significance determination should be assessed on a case-by-case basis in consideration of any relevant information about the source (e.g., nature of the odor) and the setting (e.g., local meteorology, wind direction, etc.).

**TABLE 5.3-8 BCAQMD SCREENING LEVELS FOR POTENTIAL ODOR SOURCES**

<b>Land Use/Type of Operation</b>	<b>Screening Distance</b>
Wastewater Treatment Plan	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	4 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Feed Lot/ Dairy	1 mile
Green Waste and Recycling Operations	2 miles
Metal Smelting Plants	1 mile

Source: BCAQMD 2014.

## AIR QUALITY

For a project locating near an existing source of odors, in *California Building Industry Association v. Bay Area Air Quality Management District (CBIA vs BAAQMD)*, the California Supreme Court ruled that CEQA generally does not require an evaluation of impacts of the environment on a project unless a project will exacerbate an existing environmental hazard. As shown in Table 5.3-8, sensitive receptors such as residential, commercial, office, and institutional uses (such as the hospital land uses) would not be the types of land uses that are associated with generating substantial odors and would not be anticipated to exacerbate existing odor impacts. Thus, evaluation of this scenario is not considered for purposes of this analysis.

### Air Quality Plan Consistency

In general, a project conflicts with or obstructs implementation of the applicable attainment plan if it would result in or induce growth in population, employment, land use, or regional VMT that is inconsistent with the growth assumptions (and therefore the emission projection) in the applicable attainment plan (BCAQMD 2014).

### 5.3.1 PROPOSED GENERAL PLAN POLICIES

The following are relevant policies and actions of the General Plan Update that may contribute to the reduction of air quality pollutants as a result of implementation of the proposed project.

#### Land Use Element

- **LU-P3.1:** The County shall encourage housing that meets the needs of the local workforce, jobs that are suitable for local residents, and programs that reduce commuting and improve opportunities to live and work in the same community.
- **LU-P3.3:** Newly-developed neighborhoods shall include parks and recreation facilities. Sidewalks, bike paths, and other routes shall provide circulation to surrounding areas.
- **LU-P4.3:** Generally, higher density housing shall be along collector and arterial streets and within easy walking distance of public facilities.
- **LU-P5.3:** New industrial uses shall be designed to avoid adverse impacts to adjacent uses, particularly residential neighborhoods, with respect to, but not limited to, noise, dust and vibration, water quality, air quality, agricultural resources, and biological resources.
- **LU-P8.4:** New industrial development shall be encouraged to locate in existing industrial areas until existing industrial areas have been fully utilized.
- **LU-P8.5:** Stores providing goods and services to support daily life in neighborhoods should be within walking distance to the majority of neighborhoods.
- **LU-P8.6:** The County shall encourage the construction of housing near employment centers, along with additional employment-generating uses near areas that are primarily residential.
- **LU-P8.7:** Land use patterns and development shall support the State's ability to achieve its vehicle miles traveled (VMT) and greenhouse gas (GHG) reduction goals, and the County's own VMT thresholds of significance.

## **Environmental Justice Element**

- **EJ-P2.1:** The County shall prioritize improvements to bikeways and sidewalks that are in Communities of Opportunity to make active transportation more accessible, user friendly, and safer in these communities.
- **EJ-P2.2:** Where supported by the community, street lighting for public safety shall be provided, prioritizing implementation in Communities of Opportunity, particularly at parks, transit stops, bike and pedestrian paths, and along commercial corridors.
- **EJ-P2.3:** The County shall encourage development in Communities of Opportunity that combines employment, housing, and services close to transit facilities.
- **EJ-P2.4:** The County shall work with transit providers to expand the hours of transit operation, operational boundaries, convenience, and quality of transit services that connect Communities of Opportunity with educational and economic opportunities, medical services, and other needed goods and services.
- **EJ-P2.5:** The County shall encourage transit providers to offer small or less frequent buses on routes with low passenger demand and connections between unincorporated and incorporated bus routes, with a focus on bridging service gaps in Communities of Opportunity.
- **EJ-P2.6:** The County shall provide support to carpooling and vanpooling programs, particularly among Communities of Opportunity, such as by assisting with outreach and program facilitation.
- **EJ-P5.4:** The County shall support efforts to retrofit existing housing units in Communities of Opportunity with improvements that reduce indoor air and noise pollution and improve energy efficiency.
- **EJ-P8.3:** The County supports the development of high-quality, local jobs within and near Communities of Opportunity to reduce long commutes and resultant vehicle emissions.

## **Conservation and Open Space Element**

- **COS-P1.7:** New development projects shall provide electric vehicle charging stations and prioritized parking for electric vehicles, hybrid vehicles, alternative fuel vehicles and carpools.
- **COS-P2.3:** All new County buildings and major renovations designed for public access and/or primary workspace shall meet, at a minimum, LEED-Silver or equivalent and the County shall use these buildings to demonstrate green building practices to builders, developers, homeowners, and others. Minor buildings of an accessory nature that are not used as public spaces and that do not serve as a primary workspace are not required to meet LEED-Silver or equivalent, but shall implement practical building design, construction, and maintenance solutions as set forth under the LEED rating system or equivalent.
- **COS-P2.4:** All new subdivisions and developments should meet green planning standards such as LEED for Neighborhood Design.
- **COS-P2.5:** The County shall work with property owners and property management groups to increase overall building electrification and adoption of modern, efficient appliances in residential rental properties.

## AIR QUALITY

- **COS-P5.1:** Air quality planning efforts shall be coordinated with local, regional, and State agencies, and shall encourage community participation in air quality planning.
- **COS-P5.2:** Developers shall implement best available mitigation measures to reduce air pollutant emissions associated with the construction and operation of development projects.
- **COS-P5.3:** Only EPA Phase II certified wood burning, or equivalent devices maybe installed in any residential projects.
- **COS-P5.4:** Stationary air pollutant emission sources, such as factories, shall be located more than 500 feet and/or downwind from residential areas and other sensitive receptors.
- **COS-P5.5:** Residential developments and other projects with sensitive receptors shall be located more than 500 feet from stationary air pollutant sources. Residential developments and other projects with sensitive receptors (e.g. housing, schools, child care centers, playgrounds, hospitals, and senior centers) that are located within 500 feet of a high-volume roadway that carries over 50,000 vehicles per day shall incorporate feasible mitigation measures to protect sensitive receptors from harmful concentrations of air pollutants, as recommended in the California Air Resources Board's (CARB's) Air Quality and Land Use Handbook.
- **COS-P5.6:** New sources of toxic air pollutants shall comply with the permitting requirements of the Butte County Air Quality Management District and Section 44300 et. seq. of the California Health and Safety Code.
- **COS-P5.7:** The County shall cooperate with Butte County Air Quality Management District in efforts to reduce traffic-related emissions below levels that violate national ambient air quality standards in Butte County.
- **COS-P5.8:** The County shall encourage the Butte County Air Quality Management District to work in partnership with fire managers to balance natural resource needs (e.g., prescribed burning) with air quality needs.

## Circulation Element

- **CIR-P2.1:** Carpooling shall be encouraged at major job and activity centers by providing information on how to participate in available private and public programs.
- **CIR-P2.2:** Trip reduction among County employees shall be encouraged. Specific measures to encourage trip reduction could include providing subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- **CIR-P2.3:** Home occupations shall be encouraged through streamlined application processes that are appropriate to the intensity and proposed uses of the home business.
- **CIR-P2.4:** Employers shall be encouraged to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpools/vanpools.
- **CIR-P2.5:** Transportation corridors for renewable energy transmission and for new transit lines shall be preserved.



- **CIR-P2.6:** The County shall incorporate “Complete Streets” policies that are designed and built to accommodate pedestrians, bicyclists, and transit users.
- **CIR-P3.1:** The County supports improved connections to other regional transportation services, such as rail and regional/national bus lines, to connect Butte County communities with each other.
- **CIR-P3.2:** A continuous, integrated, and accessible pedestrian network shall be provided in urbanized areas to encourage walking as a viable transportation mode and as a form of recreation and exercise.
- **CIR-P3.3:** Travel modes shall be interconnected to form an integrated, coordinated, and balanced multimodal transportation system.
- **CIR-P3.4:** New development projects shall provide adequate pedestrian, bicycle, and multiuse facilities in a way that integrates circulation and recreational use, commensurate with the impacts of the project, local and regional plans, and consistent with surrounding development.
- **CIR-P3.5:** New neighborhoods shall provide bike and pedestrian connectivity between streets.
- **CIR-P3.6:** Arterial and collector streets shall be designed to enhance the integrity and cohesiveness of urban neighborhoods.
- **CIR-P3.7:** Major residential development projects shall be designed with interconnected collector street patterns and short block lengths. Cul-de-sac and dead-end streets shall conform to County design standards.
- **CIR-P3.8:** Public facilities shall be located and designed to allow for convenient access from public transit and/or bicycle and pedestrian facilities.
- **CIR-P4.1:** The County supports public transit as a viable and attractive alternative to the use of single occupant motor vehicles.
- **CIR-P4.2:** The County supports improved public transit service to be determined through the public process to identify unmet needs and prioritize feasible solutions. Potential improvements could include serving an expanded geographic area, more frequent buses at key times of the day, and improved transit amenities such as bus shelters.
- **CIR-P4.3:** The County supports public transportation programs that promote access to shopping, employment, education, health care, and recreation.
- **CIR-P4.4:** The County encourages the Butte County Association of Governments to provide shuttles from local transit stations to special event centers.
- **CIR-P4.5:** The County continues to support local Amtrak passenger services.
- **CIR-P4.6:** New development projects in areas served by existing or planned transit shall provide fixed transit facilities such as bus shelters and pullouts, according to expected demand and in coordination with Butte Regional Transit.
- **CIR-P5.1:** Bicycle facilities shall be developed in accordance with the County’s adopted Bicycle Master Plan.

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- **CIR-P5.2:** New bicycle routes and paths shall create a bicycle environment that minimizes harm when people ride.
- **CIR-P5.3:** The bicycle system shall be integrated with other transportation modes by connecting bicycle routes and transit stops, providing secure bicycle parking facilities and supporting efforts to expand accommodation of bicycles aboard buses.
- **CIR-P5.4:** Transportation service providers shall be encouraged to incorporate bicycle storage facilities into bus stops and rail stations.
- **CIR-P5.5:** Construction or expansion of major arterials shall incorporate Class II bicycle facilities whenever feasible. Class III Bike routes will be considered where appropriate.
- **CIR-P5.6:** Residential development projects shall incorporate internal circulation networks that encourage bicycle use and that connect to the external bicycle circulation system.
- **CIR-P5.7:** Owners of apartment complexes and major commercial, office, industrial, and educational sites shall provide plentiful, convenient, and centrally located bicycle parking facilities.
- **CIR-P5.8:** All County facilities and park-and-ride lots shall provide appropriate bicycle amenities, including bicycle racks and storage facilities.

### 5.3.2 IMPACT DISCUSSION

#### 5.3.2.1 METHODOLOGY

##### Emissions Sectors

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the General Plan Update. The BCAQMD Handbook provides local governments with guidance for analyzing and mitigating air quality impacts and was used in this analysis. Where applicable, assumptions and data from the Butte County 2021 Climate Action Plan (CAP) were utilized (Butte County 2021). The General Plan Update criteria air pollutant emissions inventory includes the following sectors:

- **Transportation:** Transportation emissions forecasts were modeled using year 2019 and year 2040 vehicle emissions data from CARB's EMFAC2021, version 1.0.2, and VMT data utilized for the Butte County 2021 CAP. VMT data is based on the Origin Destination (OD) Method and on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under SB 375. For accounting purposes, there are three types of trips:
  - **Internal-Internal.** Vehicle trips that originated and terminated within the county (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips and their emissions are attributed to the county.
  - **Internal-External/External-Internal.** Vehicle trips that either originated or terminated (but not both) in the county (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for these trips is attributed to the County.

- **External-External.** Vehicle trips that neither originated nor terminated in the county. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not counted toward the county's VMT or emissions.
- **Energy:** Emissions associated with natural gas use for residential and nonresidential land uses and propane use for residential land uses in the county were modeled based on energy use data compiled as part of the Butte County 2021 CAP (see Appendix 5.3-1).
- **Off-Road Equipment:** Emission rates from CARB's OFFROAD2021, version 1.0.2, were used to estimate criteria air pollutant emissions from off-road equipment. OFFROAD is a database of equipment use and associated emissions for each county compiled by CARB.
- **Area Sources:** Area sources are based on the emission factors from the California Emissions Estimator Model (CalEEMod), Version 2022.1, for emissions generated from use of consumer products and cleaning supplies.

## Impacts of the Environment on a Project

The BCAQMD Handbook includes methodology for jurisdictions to evaluate the potential impacts from placing sensitive receptors proximate to major air pollutant sources. For assessing community risk and hazards for siting a new receptor, sources within a 1,000-foot radius of a project site are typically considered.

Buildout under the proposed project could result in siting sensitive uses (e.g., residential) near sources of emissions (e.g., freeways, industrial uses, etc.). Developing new sensitive land uses near sources of emissions could expose persons that inhabit these sensitive land uses to potential air-quality-related impacts. However, the purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project (*CBIA vs BAAQMD*). Thus, CEQA does not require analysis of the potential environmental effects from siting sensitive receptors near existing sources, and this type of analysis is not provided below in the Impact Analysis section.

While it is generally not within the purview of CEQA to analyze impacts of the environment on a project, the proposed project includes policies that prioritize the health of Butte County residents through enforcement of County codes and incorporation of design features to minimize air quality impacts and to achieve appropriate health standards.

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<b>AQ-1</b>	<b>Implementation of the General Plan Update and URCP would conflict with or obstruct implementation of the applicable air quality plan.</b>
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The following evaluates consistency of the General Plan Update and URCP to the AQAP.

## General Plan 2040

CEQA requires that projects be evaluated for consistency with the applicable air quality management plan(s). A consistency determination plays an important role in local agency project review by linking local

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planning and individual projects to the air quality plans. It fulfills the CEQA goal of informing decision makers of the environmental effects of a project under consideration at a stage early enough 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 the clean air goals of the air quality plans. Typically, a project is deemed inconsistent with air quality plans if it would result in population, employment, land use, or VMT that exceeds the growth estimates assumed in the applicable air quality plan, since such exceedances would hinder achievement of Federal and State air quality standards (BCAQMD 2014).

Table 5.3-9, *Comparison of the Change in Population and VMT in Butte County*, shows the project year 2040 population growth and VMT assumptions of the 2021 AQAP compared to the growth and VMT projections resulting from implementation of the General Plan Update. As shown in the table, the projected population growth of 267,791 under the General Plan Update for year 2040 would be higher than the population growth of 260,890 assumed in the 2021 AQAP. However, the projected daily VMT of 5,620,000 miles per day under the General Plan Update would be less than the projected daily VMT of 7,102,000 miles per day assumed in the 2021 AQAP. Similarly, the daily VMT per person of 20.99 miles per person per day (mi/person/day) under the General Plan Update would be smaller than the 27.22 mi/person/day rate assumed in the 2021 AQAP. Overall, daily VMT and daily VMT per person projections for year 2040 under the General Plan Update would be less than the projections assumed in the 2021 AQAP, and the projected population growth would be higher. And because the population projection is higher for the General Plan Update, growth under the General Plan Update would be inconsistent with growth assumed for the 2021 AQAP, and impacts are considered potentially significant.

**TABLE 5.3-9 COMPARISON OF THE CHANGE IN POPULATION AND VMT IN BUTTE COUNTY**

Category	2021 AQAP Year 2040 Projection <sup>1</sup>	General Plan Update Year 2040 Projection <sup>1</sup>	Net Difference	Percent Difference (%)
Population	260,890	267,791	6,901	3%
Daily VMT	7,102,000	5,620,000	(1,482,000)	(21%)
VMT/person	27.22	20.99	(6.23)	(23%)

Source: SVABCC 2021.

Notes: ( )= negative value.

<sup>1</sup> Data presented are for all of Butte County, i.e., both incorporated and unincorporated areas.

**Level of Significance Before Mitigation:** AQ-1 would be potentially significant.

**Impact AQ-1a:** Implementation of the General Plan Update would contribute to population growth that would exceed the Butte County population growth assumed in the 2021 AQAP.

### Mitigation Measures

Implement Mitigation Measures AQ-1 and AQ-2 to further reduce criteria air pollutant emissions.

**Level of Significance After Mitigation:** AQ-1 would be significant and unavoidable. The various goals, policies, and actions of the General Plan Update; applicable BCAQMD rules and regulations; and Mitigation Measure AQ-1 would contribute to reducing long-term criteria air pollutant emissions to the extent feasible.

However, the population assumptions of the AQAP would continue to be exceeded until the AQAP is updated and accounts for the additional population growth associated with the General Plan Update. Therefore, in regard to the General Plan Update, the impact is considered significant and unavoidable.

## **Upper Ridge Community Plan**

As discussed in Chapter 3, *Project Description*, the URCP would increase development potential in the Upper Ridge community by redesignating 28 parcels from Retail and Office to Mixed-use land uses in the Old Magalia and Magalia Center neighborhoods. Potential future development of up to 851 new dwelling units in the Upper Ridge community could increase the number of residents by 1,915 residents. Furthermore, as discussed in Impact 5.14-1 of this DEIR, the General Plan Update land use model estimates a population of approximately 11,881 residents in the community of Magalia. When compared to the 2020 population of 10,635 residents, the addition of 1,915 new residents would exceed the projected population increase in the community. As discussed above, the year 2040 population projection for the entirety of Butte County with implementation of the General Plan Update would exceed the year 2040 population projection assumed by the 2021 AQAP. The URCP is within the General Plan Update planning area and would therefore also contribute to the overall increase in population projection for year 2040. Thus, the above AQAP consistency analysis prepared for the General Plan Update would also apply to the URCP. Therefore, the URCP would also be inconsistent with the 2021 AQAP and impacts are potentially significant.

**Level of Significance Before Mitigation:** AQ-1 would be potentially significant.

**Impact AQ-1b:** Implementation of the URCP would contribute to population growth that would exceed the Butte County population growth assumed in the 2021 AQAP.

### Mitigation Measures

Implement Mitigation Measures AQ-1 and AQ-2 to further reduce criteria air pollutant emissions.

**Level of Significance After Mitigation:** AQ-1 would be significant and unavoidable. Implementation of Mitigation Measures AQ-1 and AQ-2 would contribute to reducing criteria air pollutant emissions to the extent feasible. However, the population assumptions of the AQAP would continue to be exceeded until the AQAP is updated and accounts for the additional population growth associated with the URCP. Therefore, the impact is considered significant and unavoidable.

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<b>AQ-2</b>	<b>Construction of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.</b>
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The following evaluates potential regional air quality impacts associated with construction of development projects accommodated by the General Plan Update and URCP.

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### General Plan 2040

Construction activities would temporarily increase VOC, NO<sub>x</sub>, and PM<sub>10</sub> regional emissions within the SVAB. The primary source of NO<sub>x</sub> emissions is the operation of construction equipment. The primary sources of PM<sub>10</sub> emissions are activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary sources of VOC emissions are the application of architectural coating and off-gas emissions associated with asphalt paving. A general discussion of health impacts associated with air pollutant emissions generated by construction activities is included under Section 5.3.2.1, *Air Pollutants of Concern*, of this DEIR.

Construction activities associated with the General Plan Update would occur over the buildout horizon of the plan, causing short-term emissions of criteria air pollutants. For the General Plan Update, which is a broad-based policy plan, it is not possible to determine whether the scale and phasing of individual projects would exceed the BCAQMD's short-term regional construction emissions thresholds. Overall, air quality emissions related to construction must be addressed on a project-by-project basis, and information regarding specific development projects, soil types, and the locations of receptors would be needed in order to quantify the level of impact associated with construction activity.

The Conservation and Open Space Element of the General Plan Update includes the following policy that would contribute to minimizing construction-related criteria air pollutant emissions:

- **COS-P5.2:** Developers shall implement best available mitigation measures to reduce air pollutant emissions associated with the construction and operation of development projects.

Furthermore, in addition to regulatory measures—e.g., BCAQMD Rule 205 for fugitive dust control and Rule 230 for architectural coatings—mitigation imposed at the project level may include extension of construction schedules and/or use of special equipment.

While individual projects accommodated under the General Plan Update may not exceed the BCAQMD regional significance thresholds, the scale of development activity associated with buildout of the General Plan Update would likely result in emissions that exceed the BCAQMD regional significance thresholds. In accordance with the BCAQMD methodology, emissions that exceed the regional significance thresholds would cumulatively contribute to the nonattainment designations of the SVAB. The SVAB is designated nonattainment for O<sub>3</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Emissions of VOC and NO<sub>x</sub> are precursors to the formation of O<sub>3</sub>. In addition, NO<sub>x</sub> is a precursor to the formation of particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Thus, the General Plan Update would cumulatively contribute to the nonattainment designations of the NSVAB for O<sub>3</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Therefore, construction-related regional air quality impacts of developments that would be accommodated by the General Plan Update would be potentially significant.

**Level of Significance Before Mitigation:** AQ-2 would be potentially significant.

**Impact AQ-2a:** Construction activities associated with implementation of the General Plan Update could exceed the BCAQMD regional significance thresholds.

### Mitigation Measures

**Mitigation Measure AQ-1:** Prior to discretionary approval by Butte County for development projects subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the Butte County Planning Division for review and approval. The evaluation shall be prepared in conformance with Butte County Air Quality Management District (BCAQMD) methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the BCAQMD-adopted thresholds of significance, Butte County shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the County and shall be verified by the County's Planning Division. Mitigation measures to reduce construction-related emissions could include, but are not limited to:

- Using nontoxic soil stabilizers to reduce wind erosion.
- Applying water every four hours to active soil-disturbing activities.
- Tarping and/or maintaining a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.
- Using construction equipment rated by the United States Environmental Protection Agency as having Tier 4 Interim or higher exhaust emission limits, applicable for engines between 50 and 750 horsepower.
- Ensuring that construction equipment is properly serviced and maintained to the manufacturer's standards.
- Limiting nonessential idling of construction equipment to no more than five consecutive minutes.
- Posting signs in the designated queueing areas, entries, and jobs sites reminding drivers of the five-minute idling limit.
- Limiting onsite vehicle travel speeds on unpaved roads to 15 miles per hour.
- Installing wheel washers for all exiting trucks or wash off all trucks and equipment leaving the project area.
- Using electric-powered construction equipment where feasible.
- Using zero- or low-VOC paints for coating of architectural surfaces.

**Level of Significance After Mitigation:** Significant and unavoidable. Buildout of the General Plan Update would occur over a period of 18 years or longer. Construction activities associated with buildout of the General Plan Update could generate short-term emissions that exceed the BCAQMD'S significance thresholds during this time and cumulatively contribute to the nonattainment designations of the SVAB. Implementation of Mitigation Measure AQ-2a would reduce criteria air pollutant emissions from construction-related activities to the extent feasible. However, construction time frames and equipment for site-specific development projects are not available at this time and there is a potential for multiple development projects to be constructed at one time, resulting in significant construction-related emissions.

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Therefore, despite adherence to Mitigation Measure AQ-1, Impact AQ-2a as it pertains to the General Plan Update would remain significant and unavoidable.

### Upper Ridge Community Plan

The above analysis prepared for the General Plan Update regarding potential regional air quality impacts from construction activities would also apply to the URCP. Overall, construction-related regional air quality impacts associated with the land uses accommodated under the URCP are considered potentially significant.

**Level of Significance Before Mitigation:** AQ-2 would be potentially significant.

**Impact AQ-2b:** Construction activities associated with implementation of the URCP could exceed the BCAQMD regional significance thresholds.

#### Mitigation Measures

Implement Mitigation Measure AQ-1.

**Level of Significance After Mitigation:** Significant and unavoidable. Similar to the General Plan Update, implementation of Mitigation Measure AQ-1 would reduce criteria air pollutant emissions from construction-related activities to the extent feasible. However, because construction time frames and equipment for site-specific development projects are not available at this time and there is a potential for multiple development projects to be constructed at one time, construction activities associated with implementation of the URCP could result in significant construction-related emissions. Therefore, Impact AQ-2b would remain significant and unavoidable.

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<b>AQ-3</b>	<b>Operation of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.</b>
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The following evaluates potential regional air quality impacts associated with operation of development projects accommodated by the General Plan Update and URCP.

### General Plan 2040

The General Plan Update guides growth and development in the county by designating land uses in the proposed land use map and through implementation of its goals and policies. New development would increase air pollutant emissions in the county and contribute to the overall emissions inventory in the SVAB. A general discussion of health impacts associated with air pollutant emissions generated by operational activities is included under Section 5.3.2.1, *Air Pollutants of Concern*.



*Butte County Emissions Inventory*

The emissions inventory for the county under the General Plan Update is shown in Table 5.3-10, *Butte County Horizon Year 2040 Regional Criteria Air Pollutant Emissions Inventory*. As shown in the table, implementation of the General Plan Update would result in an increase in VOC and NO<sub>x</sub> emissions from existing conditions. This increase is based on the difference between existing land uses and land uses associated with buildout of the General Plan Update as well as an estimate of population and employment in the county in year 2040. Buildout of the General Plan Update would generate long-term emissions that exceed the daily BCAQMD threshold for VOC. Emissions of VOC is a precursor to the formation of O<sub>3</sub>. Therefore, emissions of VOC that exceed the BCAQMD regional significance threshold would contribute to the O<sub>3</sub> nonattainment designation of the SVAB.

**TABLE 5.3-10 BUTTE COUNTY HORIZON YEAR 2040 REGIONAL CRITERIA AIR POLLUTANT EMISSIONS INVENTORY**

Sector	Criteria Air Pollutant Emissions (pounds per day)		
	VOC	NO <sub>x</sub>	PM <sub>10</sub>
<b>Existing Land Uses – Year 2040</b>			
Transportation <sup>1</sup>	29	336	7
Energy (natural gas and propane) <sup>2</sup>	173	373	24
Area – Offroad Equipment <sup>3</sup>	624	3,754	217
Area – Consumer Products <sup>4</sup>	1,196	N/A	N/A
<b>Existing Land Uses Total</b>	<b>2,022</b>	<b>4,463</b>	<b>248</b>
<b>Proposed Land Use Plan – Horizon Year 2040</b>			
Transportation <sup>1</sup>	37	410	9
Energy (propane and natural gas) <sup>2</sup>	180	299	18
Area – Offroad Equipment <sup>3</sup>	629	3,806	219
Area – Consumer Products <sup>4</sup>	1,785	N/A	N/A
<b>Proposed Land Use Plan Total</b>	<b>2,630</b>	<b>4,515</b>	<b>247</b>
Net Change in Emissions	608	52	(2)
BCAQMD Regional Significance Threshold	54	54	82
<b>Significant?</b>	<b>Yes</b>	<b>No</b>	<b>No</b>

<sup>1</sup>Based on calendar year 2040 emissions data from EMFAC2021, Version 1.0.2, and daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips.

<sup>2</sup>Based on natural gas and propane consumption data unitized for the Butte County 2021 Climate Action Plan.

<sup>3</sup>Based on calendar year 2019 offroad equipment emissions data from OFFROAD2021, Version 1.0.2., and adjusted to the household, employment, and population year 2040 projects under the General Plan Update. Include emissions from the following equipment category: Agricultural, Airport Ground Support, Construction and Mining, Forestry, Oil Drilling, Pleasure Craft, Locomotive, Recreational, and Transport Refrigeration Unit.

<sup>4</sup>Based on CalEEMod, Version 2020.4.0 User’s Guide methodology utilized to calculate VOC emissions from use of household consumer cleaning products.

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Implementation of the following General Plan Update policies and actions could contribute to reducing criteria air pollutant emissions from mobile sources by reducing single passenger vehicle trips and VMT, reducing vehicle idling, supporting the transition to low- and zero-emission vehicles, and increasing active and public transit infrastructure:

- **COS-P1.7:** New development projects shall provide electric vehicle charging stations and prioritized parking for electric vehicles, hybrid vehicles, alternative fuel vehicles and carpools.
- **COS-A1.2:** Continue to update the County program to replace County fleet vehicles with the lowest emission technology vehicles, wherever possible, including landscaping and other equipment.
- **COS-A1.3:** Consider the establishment of a motor vehicle emissions budget for County vehicles, including a plan to reduce motor vehicle emissions.
- **COS-A1.4:** Coordinate with the Butte County Air Quality Management District on anti-idling programs that will reduce idling by heavy duty vehicles.
- **COS-A1.5:** Cooperate with the school districts to develop school access plans that substantially reduce automobile trips to, and congestion surrounding, schools. Each District's School Access Plan could address necessary infrastructure improvements, potential funding sources, replacing older diesel buses with low or zero-emission vehicles, and mitigation fees to expand school bus service.
- **COS-P5.7:** The County shall cooperate with Butte County Air Quality Management District in efforts to reduce traffic-related emissions below levels that violate national ambient air quality standards in Butte County.
- **LU-P3.1:** The County shall encourage housing that meets the needs of the local workforce, jobs that are suitable for local residents, and programs that reduce commuting and improve opportunities to live and work in the same community.
- **LU-P3.3:** Newly-developed neighborhoods shall include parks and recreation facilities. Sidewalks, bike paths, and other routes shall provide circulation to surrounding areas.
- **LU-P4.3:** Generally, higher density housing shall be along collector and arterial streets and within easy walking distance of public facilities.
- **LU-P8.5:** Stores providing goods and services to support daily life in neighborhoods should be within walking distance to the majority of neighborhoods.
- **LU-P8.6:** The County shall encourage the construction of housing near employment centers, along with additional employment-generating uses near areas that are primarily residential.
- **LU-P8.7:** Land use patterns and development shall support the State's ability to achieve its vehicle miles traveled (VMT) and greenhouse gas (GHG) reduction goals, and the County's own VMT thresholds of significance.
- **CIR-P2.1:** Carpooling shall be encouraged at major job and activity centers by providing information on how to participate in available private and public programs.

- **CIR-P2.2:** Trip reduction among County employees shall be encouraged. Specific measures to encourage trip reduction could include providing subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- **CIR-P2.3:** Home occupations shall be encouraged through streamlined application processes that are appropriate to the intensity and proposed uses of the home business.
- **CIR-P2.4:** Employers shall be encouraged to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking for carpools/vanpools.
- **CIR-P2.5:** Transportation corridors for renewable energy transmission and for new transit lines shall be preserved.
- **CIR-P2.6:** The County shall incorporate “Complete Streets” policies that are designed and built to accommodate pedestrians, bicyclists, and transit users.
- **CIR-A2.1:** Prepare, adopt, and maintain a VMT environmental threshold and development project screening process.
- **CIR-P3.1:** The County supports improved connections to other regional transportation services, such as rail and regional/national bus lines, to connect Butte County communities with each other.
- **CIR-P3.2:** A continuous, integrated, and accessible pedestrian network shall be provided in urbanized areas to encourage walking as a viable transportation mode and as a form of recreation and exercise.
- **CIR-P3.3:** Travel modes shall be interconnected to form an integrated, coordinated, and balanced multimodal transportation system.
- **CIR-P3.4:** New development projects shall provide adequate pedestrian, bicycle, and multiuse facilities in a way that integrates circulation and recreational use, commensurate with the impacts of the project, local and regional plans, and consistent with surrounding development.
- **CIR-P3.5:** New neighborhoods shall provide bike and pedestrian connectivity between streets.
- **CIR-P3.6:** Arterial and collector streets shall be designed to enhance the integrity and cohesiveness of urban neighborhoods.
- **CIR-P3.7:** Major residential development projects shall be designed with interconnected collector street patterns and short block lengths. Cul-de-sac and dead-end streets shall conform to County design standards.
- **CIR-P3.8:** Public facilities shall be located and designed to allow for convenient access from public transit and/or bicycle and pedestrian facilities.
- **CIR-A3.1:** In conjunction with the Butte County Association of Governments, seek funding to develop a plan to support and promote rail service that will connect Butte County with other regions and connect Butte County communities with each other.

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- **CIR-P4.1:** The County supports public transit as a viable and attractive alternative to the use of single occupant motor vehicles.
- **CIR-P4.2:** The County supports improved public transit service to be determined through the public process to identify unmet needs and prioritize feasible solutions. Potential improvements could include serving an expanded geographic area, more frequent buses at key times of the day, and improved transit amenities such as bus shelters.
- **CIR-P4.3:** The County supports public transportation programs that promote access to shopping, employment, education, health care, and recreation.
- **CIR-P4.4:** The County encourages the Butte County Association of Governments to provide shuttles from local transit stations to special event centers.
- **CIR-P4.5:** The County continues to support local Amtrak passenger services.
- **CIR-P4.6:** New development projects in areas served by existing or planned transit shall provide fixed transit facilities such as bus shelters and pullouts, according to expected demand and in coordination with Butte Regional Transit.
- **CIR-A4.1:** Support efforts by the Butte County Association of Governments to evaluate alternate sources of funding for public transit, such as advertising revenue from buses and bus shelters.
- **CIR-P5.1:** Bicycle facilities shall be developed in accordance with the County's adopted Bicycle Master Plan.
- **CIR-P5.2:** New bicycle routes and paths shall create a bicycle environment that minimizes harm when people ride.
- **CIR-P5.3:** The bicycle system shall be integrated with other transportation modes by connecting bicycle routes and transit stops, providing secure bicycle parking facilities and supporting efforts to expand accommodation of bicycles aboard buses.
- **CIR-P5.4:** Transportation service providers shall be encouraged to incorporate bicycle storage facilities into bus stops and rail stations.
- **CIR-P5.5:** Construction or expansion of major arterials shall incorporate Class II bicycle facilities whenever feasible. Class III Bike routes will be considered where appropriate.
- **CIR-P5.6:** Residential development projects shall incorporate internal circulation networks that encourage bicycle use and that connect to the external bicycle circulation system.
- **CIR-P5.7:** Owners of apartment complexes and major commercial, office, industrial, and educational sites shall provide plentiful, convenient, and centrally located bicycle parking facilities.
- **CIR-P5.8:** All County facilities and park-and-ride lots shall provide appropriate bicycle amenities, including bicycle racks and storage facilities.
- **CIR-A5.1:** Periodically update the Bicycle Master Plan.
- **CIR-A5.2:** Continue to utilize BCAG's GIS mapping database of current and proposed bicycle routes and facilities countywide.

- **CIR-A5.3:** Pursue sources of funding to improve and maintain the existing bicycle system and to plan and construct new bicycle facilities that encourage commuting and recreation.
- **EJ-P2.1:** The County shall prioritize improvements to bikeways and sidewalks that are in Communities of Opportunity to make active transportation more accessible, user friendly, and safer in these communities.
- **EJ-P2.2:** Where supported by the community, street lighting for public safety shall be provided, prioritizing implementation in Communities of Opportunity, particularly at parks, transit stops, bike and pedestrian paths, and along commercial corridors.
- **EJ-P2.3:** The County shall encourage development in Communities of Opportunity that combines employment, housing, and services close to transit facilities.
- **EJ-P2.4:** The County shall work with transit providers to expand the hours of transit operation, operational boundaries, convenience, and quality of transit services that connect Communities of Opportunity with educational and economic opportunities, medical services, and other needed goods and services.
- **EJ-P2.5:** The County shall encourage transit providers to offer small or less frequent buses on routes with low passenger demand and connections between unincorporated and incorporated bus routes, with a focus on bridging service gaps in Communities of Opportunity.
- **EJ-P2.6:** The County shall provide support to carpooling and vanpooling programs, particularly among Communities of Opportunity, such as by assisting with outreach and program facilitation.
- **EJ-A2.1:** Seek opportunities to identify and construct multi-modal improvements in Communities of Opportunity.
- **EJ-P8.3:** The County supports the development of high-quality, local jobs within and near Communities of Opportunity to reduce long commutes and resultant vehicle emissions.

The proposed General Plan Update also includes the following policies and actions that would contribute to reducing criteria air pollutant emissions from area sources:

- **COS-P5.3:** Only EPA Phase II certified wood burning or equivalent devices maybe installed in any residential projects.
- **COS-A5.1:** Support Air Quality Management District programs that would offer a rebate or incentive to replace wood-burning fireplaces and stoves with EPA-certified wood stoves or gas stoves.
- **COS-A5.2:** Expand services and conduct outreach to discourage burning household waste.

Furthermore, the General Plan Update includes the following policies that would contribute in reducing emissions from energy consumption by increasing energy efficiency and transitioning from natural gas to electric appliances and full electric homes.

- **COS-P2.3:** All new County buildings and major renovations designed for public access and/or primary workspace shall meet, at a minimum, LEED-Silver or equivalent and the County shall use these buildings to demonstrate green building practices to builders, developers, homeowners, and others. Minor buildings of an accessory nature that are not used as public spaces and that do not

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serve as a primary workspace are not required to meet LEED-Silver or equivalent, but shall implement practical building design, construction, and maintenance solutions as set forth under the LEED rating system or equivalent.

- **COS-P2.4:** All new subdivisions and developments should meet green planning standards such as LEED for Neighborhood Design.
- **COS-P2.5:** The County shall work with property owners and property management groups to increase overall building electrification and adoption of modern, efficient appliances in residential rental properties.
- **COS-A2.3:** Provide incentives for installation of all-electric appliances in new residential construction and remodels through partnerships with existing and future community partners.
- **COS A2.4:** Explore and adopt, as feasible, Building Code amendments requiring replacement of natural gas space and water heaters with electric models at end of life during the 2022 and successive Buildings Standards Code updates.
- **COS A2.5:** Identify and remove existing Code, permitting, or other County requirements that provide barriers to all-electric conversions of existing homes and businesses and consider incentives, such as permit streamlining or fee reductions, as feasible.
- **COS A2.6:** Promote and support opportunities for residents to test electric equipment, such as portable induction cooktops, to encourage transitioning from gas to electric appliances.

However, while the above proposed policies and actions of the General Plan Update could contribute to reducing criteria air pollutant emissions, future development projects that would be accommodated by the General Plan Update could exceed the BCAQMD regional emissions threshold for VOC. Therefore, operational air quality impacts associated with future development of the General Plan Update would be potentially significant.

**Level of Significance Before Mitigation:** AQ-3 would be potentially significant.

**Impact AQ-3a:** Operation of development projects allowed under the General Plan Update would generate emissions that would exceed the BCAQMD regional significance thresholds for VOC.

### Mitigation Measures

**Mitigation Measure AQ-2:** Prior to discretionary approval by Butte County for development projects subject to California Environmental Quality Act (CEQA) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project operation phase-related air quality impacts to the Butte County Planning Division for review and approval. The evaluation shall be prepared in conformance with Butte County Air Quality Management District (BCAQMD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the BCAQMD-adopted thresholds of significance, the Butte County Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval.

Possible mitigation measures to reduce long-term emissions can include, but are not limited to the following:

- For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions.
- Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.
- Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with Section 2485 of 13 CCR Chapter 10.
- Provide changing/shower facilities as specified, at minimum, or greater than in the guidelines in Section A5.106.4.3 of the CALGreen Code (Nonresidential Voluntary Measures).
- Provide bicycle parking facilities equivalent to or greater than as specified in Section A4.106.9 (Residential Voluntary Measures) of the CALGreen Code.
- Provide preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles equivalent to or greater than Section A5.106.5.1 of the CALGreen Code (Nonresidential Voluntary Measures).
- Provide facilities to support electric charging stations per Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A4.106.8.2 (Residential Voluntary Measures) of the CALGreen Code.
- Applicant-provided appliances shall be Energy Star-certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star-certified or equivalent appliances shall be verified by Building & Safety during plan check.
- Applicants for future development projects along existing and planned transit routes shall coordinate with the Butte County and Butte Regional Transit to ensure that bus pad and shelter improvements are incorporated, as appropriate.
- Applicants for future development projects shall use paints with a VOC content lower than required under BCAQMD Rule 230.

**Level of Significance After Mitigation:** AQ-3 would be significant and unavoidable. Application of State and BCAQMD rules and regulations, and implementation of the General Plan Update goals, policies, and actions would contribute to reducing operation-related criteria air pollutants generated from energy, area, and mobile sources to the extent feasible. Incorporation of Mitigation Measure AQ-3a would also contribute in reducing criteria air pollutants. Implementation of the aforementioned rules, goals and policies, and mitigation could contribute in reducing operation-phase regional air quality impacts of future individual projects to a less than significant level. However, due to the magnitude of the overall land use development associated with the General Plan Update, Impact AQ-3 would remain *significant and unavoidable*.

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Contributing to the nonattainment status would also contribute to elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants.

It is speculative for this broad-based policy plan to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions, or how many additional individuals in the air basin would be affected by the health effects cited above.

This DEIR quantifies the increase in criteria air pollutants emissions in the unincorporated county. However, at a program-level analysis, it is not feasible to quantify the increase in TACs from stationary sources associated with the proposed project or meaningfully correlate how regional criteria air pollutant emissions above the BCAQMD significance thresholds correlate with basinwide health impacts.

To determine cancer and noncancer health risk, the location, velocity of emissions, meteorology and topography of the area, and locations of receptors are equally important as model parameters as the quantity of TAC emissions. The white paper in Appendix 5.3-1, “We Can Model Regional Emissions, But Are the Results Meaningful for CEQA?” describes several of the challenges of quantifying local effects—particularly health risks—for large-scale, regional projects, and these are applicable to both criteria air pollutants and TACs. Similarly, the two amicus briefs filed by the air districts on the *Friant Ranch* case (see Appendix 5.3-1) describe two positions regarding CEQA requirements, modeling feasibility, variables, and reliability of results for determining specific health risks associated with criteria air pollutants. The discussions also include the distinction between criteria air pollutant emissions and TACs with respect to health risks. The following summarizes major points about the infeasibility of assessing health risks of criteria air pollutant emissions and TACs associated with implementation of a general plan.

To achieve and maintain air quality standards, the BCAQMD has established numerical emission indicators of significance for regional and localized air quality impacts for both construction and operational phases of a local plan or project. The BCAQMD has established the thresholds based on its Rule 430, which is based on the California AAQS that have been promulgated to protect public health. The thresholds represent the maximum emissions from a plan or project that are expected not to cause or contribute to an exceedance of the most stringent applicable national or state AAQS. By analyzing the plan’s emissions against the thresholds, an EIR assesses whether these emissions directly contribute to any regional or local exceedances of the applicable ambient air quality standards and exposure levels.

BCAQMD currently does not have methodologies that would provide the County with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project’s mass emissions.<sup>2</sup> For criteria air pollutants, exceedance of the regional significance thresholds cannot be used to

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<sup>2</sup> In April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing *Friant Ranch* in the review and analysis of proposed projects under CEQA in Sacramento County (see Appendix 5.3-1). Consistent with the expert opinions submitted to the court in *Friant Ranch* by the San Joaquin Valley Air



correlate a project to quantifiable health impacts unless emissions are sufficiently high to use a regional model. BCAQMD has not provided methodology to assess the specific correlation between mass emissions generated and their effect on health (see Appendix 5.3-1: San Joaquin Valley Air Pollution Control District's amicus brief, and South Coast AQMD's amicus brief).

As previously stated, ozone concentrations depend on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of particulate matter (PM) and ozone can occur far from sources as a result of regional transport due to wind and topography (e.g., low-level jet stream). Photochemical modeling depends on all emission sources in the entire domain (i.e., modeling grid). Low resolution and spatial averaging produce "noise" and modeling errors that usually exceed individual source contributions. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds.

Current models used in CEQA air quality analyses are designed to estimate potential project construction and operation emissions for defined projects. The estimated emissions are compared to significance thresholds, which are keyed to reducing emissions to levels that will not interfere with the region's ability to attain the health-based standards. This serves to protect public health in the overall region, but there is currently no CEQA methodology to determine the impact of emissions (e.g., pounds per day) on future concentration levels (e.g., parts per million or micrograms per cubic meter) in specific geographic areas. CEQA thresholds, therefore, are not specifically tied to potential health outcomes in the region.

The EIR must provide an analysis that is understandable for decision making and public disclosure. Regional-scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation. Additionally, this type of analysis is not feasible at a general plan level because the locations of emissions sources and quantity of emissions are not known. However, because cumulative development within Butte County would exceed the regional significance thresholds, the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the SVAB.

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Pollution Control District (SJVAPCD) and South Coast AQMD, the SMAQMD guidance confirms the absence of an acceptable or reliable quantitative methodology that would correlate the expected criteria air pollutant emissions of projects to likely health consequences for people from project-generated criteria air pollutant emissions. The SMAQMD interim guidance explains that while it is in the process of developing a methodology to assess these impacts, lead agencies should follow the *Friant* court's advice to explain in meaningful detail why this analysis is not yet feasible. Since this interim memorandum, SMAQMD has provided methodology to address health impacts. However, though Butte County is in the SVAB, it is outside the study area and scope covered by the health impact assessment methodology developed by SMAQMD (SMAQMD 2020).

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### Upper Ridge Community Plan

As discussed in Chapter 3, *Project Description*, the URCP would increase development potential in the Upper Ridge community by redesignating 28 parcels from retail and office to mixed-use land uses in the Old Magalia and Magalia Center neighborhoods. Potential future development in the Upper Ridge community could accommodate up to 851 new dwelling units or 926,739 square feet of new retail space.

The above analysis prepared for the General Plan Update regarding potential regional air quality impacts from operation activities would also apply to the URCP. Overall, operation-related regional air quality impacts associated with the land uses accommodated under the URCP are considered potentially significant.

**Level of Significance Before Mitigation:** AQ-3 would be potentially significant.

**Impact AQ-3b:** Operations associated with implementation of the URCP could exceed the BCAQMD regional significance thresholds.

#### Mitigation Measures

Implement Mitigation Measure AQ-2.

**Level of Significance After Mitigation:** AQ-3 would be significant and unavoidable.

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<b>AQ-4</b>	<b>Construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations with incorporation of mitigation.</b>
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### General Plan 2040

Future construction of individual development projects accommodated under the General Plan Update would temporarily elevate concentrations of TACs and DPM in the vicinity of sensitive land uses during construction activities. Since the details regarding future construction activities are not known at this time, quantification of health risk levels is not applicable for the program-level analysis of the General Plan Update. Subsequent environmental review of future development projects would be required to assess potential impacts under BCAQMD's project-level thresholds. However, construction emissions associated with the proposed project could exceed BCAQMD's project level and cumulative significance thresholds for off-site community risk and hazards. Therefore, construction-related health risk impacts associated with the land uses accommodated under the General Plan Update are considered potentially significant.

**Level of Significance Before Mitigation:** AQ-4 would be potentially significant.

**Impact AQ-4a:** Construction activities associated with development accommodated under the General Plan Update could expose receptors to substantial air toxic pollutant concentrations.

### Mitigation Measures

**Mitigation Measure AQ-3:** Applicants for construction within 1,000 feet of residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers, and elementary schools) in the unincorporated county, 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 Butte County Planning Division prior to future discretionary project approval. The HRA shall be prepared in accordance with policies and procedures of the Office of Environmental Health Hazard Assessment (OEHHA) and the Butte County 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<sub>2.5</sub> concentrations exceed 0.3 µg/m<sup>3</sup>, 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 construction equipment rated as US EPA Tier 4 Interim for equipment of 50 horsepower or more.
- During construction, use of construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more.

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 Butte County Planning Division clearly show incorporation of all applicable mitigation measures.

**Level of Significance After Mitigation:** AQ-4 would be less than significant. Mitigation Measure AQ-3 would require preparation of a construction HRA that would identify measures that would reduce health risk levels below the BCAQMD significance thresholds by requiring use of newer, lower-emitting construction equipment and would not expose sensitive receptors to substantial pollutant concentrations. Therefore, Impact AQ-4a would be reduced to less than significant.

### **Upper Ridge Community Plan**

The analysis prepared for the General Plan Update would also apply to the URCP. Therefore, construction-related health risk impacts associated with the land uses accommodated under the URCP are considered potentially significant.

**Level of Significance Before Mitigation:** AQ-4 would be potentially significant.

**Impact AQ-4b:** Construction activities associated with development accommodated under the URCP could expose receptors to substantial air toxic pollutant concentrations.

### Mitigation Measures

Implement Mitigation Measure AQ-3.

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**Level of Significance After Mitigation:** AQ-4 would be less than significant. For the same reasons described for Impact AQ-4a, implementation of Mitigation Measure AQ-3 would reduce Impact AQ-4b to less than significant.

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**AQ-5                      Operation of nonpermitted sources accommodated under the General Plan Update would expose sensitive receptors to substantial pollutant concentrations of toxic air contaminants.**

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Development and operation of new land uses accommodated under the General Plan Update and the URCP could generate new sources of criteria air pollutants and TACs from area/stationary sources and mobile sources. The following describes potential localized operational air quality impacts from implementation of the General Plan Update and URCP.

### General Plan 2040

#### *CO Hotspots*

In general, 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 ppm or the 8-hour standard of 9.0 ppm. Butte County was redesignated from nonattainment to attainment in 1998 for CO (USEPA 2022b). Additionally, and overall, CO concentration levels and emissions in Butte County have declined. Per the CARB 2013 *Almanac*, CO concentrations in Butte County showed a general downward trend between 1992 and 2011 (e.g., a maximum 1-hour concentration of 14 ppm in 1992 down to 2.6 ppm in 2011) (CARB 2013). Furthermore, CO emissions estimates prepared for the 2004 “Revision to the California State Implementation Plan for Carbon Dioxide” also indicated a downward trend for Butte County and the state as a whole between 1993 and 2018.

BCAQMD previously included guidelines and a threshold of significance to evaluate CO hotspots in its 2008 Handbook and excluded them in the 2014 Handbook, which is the latest and most current version. However, according to other air district CO hotspot screening thresholds, peak hour traffic volumes would need to be high to potentially create a significant CO hotspot impact. Per the Bay Area Air Quality Management District’s “2017 CEQA Guidelines,” traffic volumes would need to reach 44,000 vehicles per hour to potentially result in a significant CO hotspot impact (BAAQMD 2017). Similarly, the Sacramento Metropolitan Air Quality Management District revised its 2016 CEQA guidelines to include a screening criterion of 31,000 vehicles per hour (SMAQMD 2016). Based on peak hour roadway segment volume data provided by Fehr & Peers, implementation of the General Plan Update would not result in the amount of peak hour vehicle trips under horizon year 2040 conditions that are near the aforementioned screening levels.<sup>3</sup> Overall, implementation of the General Plan Update would not have the potential to substantially increase CO hotspots at intersections in Butte County, and impacts would be less than significant.

**Level of Significance Before Mitigation:** AQ-5 would be less than significant.

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<sup>3</sup> See Appendix 5.3-1 of this DEIR.

### Mitigation Measures

No mitigation measures are required.

### *Toxic Air Contaminants*

### Permitted Stationary Sources

Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the General Plan Update would be expected to release TACs. TAC emissions generated by stationary and point sources of emissions within the SVAB are regulated and controlled by BCAQMD. However, emissions of TACs from mobile sources when operating at a property (e.g., truck idling) are regulated by statewide rules and regulations, not by BCAQMD, and have the potential to generate substantial concentrations of air pollutants.

Land uses that would require a permit from BCAQMD for emissions of TACs include chemical processing facilities, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. Emissions of TACs from stationary sources would be controlled by BCAQMD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under BCAQMD Regulation 4 (e.g., Rule 400, Permit Requirement, and Rule 430, State New Source Review). The BCAQMD permitting process would control potential health risk impacts from permitted stationary sources because new stationary sources would only receive a permit to operate if they do not exceed the 10 in a million cancer risk threshold and the hazard index threshold of 1.

In addition, the General Plan Update includes the following policies under Goal COS-5:

- **COS-P5.4:** Stationary air pollutant emission sources, such as factories, shall be located more than 500 feet and/or downwind from residential areas and other sensitive receptors.
- **COS-P5.6:** New sources of toxic air pollutants shall comply with the permitting requirements of the Butte County Air Quality Management District and Section 44300 et. seq. of the California Health and Safety Code.
- **LU-P5.3:** New industrial uses shall be designed to avoid adverse impacts to adjacent uses, particularly residential neighborhoods, with respect to, but not limited to, noise, dust and vibration, water quality, air quality, agricultural resources, and biological resources.

These proposed General Plan policies would contribute to minimizing potential health risk impacts to sensitive receptors. Overall, combined with the standards and permitting processes, impacts related to permitted stationary sources of TACs are considered less than significant.

**Level of Significance Before Mitigation:** AQ-5 would be less than significant.

### Mitigation Measures

No mitigation measures are required.

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### Nonpermitted Sources

Mobile sources of TACs are not regulated by BCAQMD. The primary mobile source of TACs within the EIR Study Area is truck idling and use of off-road equipment. New warehousing operations could generate substantial diesel particulate matter emissions from off-road equipment use and truck idling. In addition, some warehousing and industrial facilities may include use of transport refrigeration units (TRUs) for cold storage. New land uses in the EIR study area that would be permitted under the General Plan Update that use trucks, including trucks with TRUs, could generate an increase in diesel particulate matter that would contribute to cancer and noncancer health risk in the SVAB. These types of facilities could also generate particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) that may cause an exceedance or contribute to the continuing exceedance of the federal and State AAQS. These new land uses could be near existing sensitive receptors within and outside the EIR study area. As shown in Figure 3-3, *General Plan Update Land Use Map*, in Chapter 3 of this DEIR, portions of areas designated Industrial in the planning area are in close proximity or adjacent to areas designated for residential use. In addition, trucks would travel on regional transportation routes through the SVAB, contributing to near-roadway DPM concentrations. Therefore, health risk impacts from nonpermitted sources associated with development of industrial and commercial land uses are considered potentially significant.

**Level of Significance Before Mitigation:** AQ-5 would be potentially significant.

**Impact AQ-5:** Implementation of the General Plan Update could expose sensitive receptors to substantial toxic air contaminant concentrations from nonpermitted sources

### Mitigation Measures

**Mitigation Measure AQ-4:** Prior to discretionary approval by the Butte County, project applicants for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, or nursing homes), as measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the Butte County Planning Division for review and approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the Butte County Air Quality Management District (BCAQMD). If the HRA shows that the incremental cancer risk and/or noncancer hazard index exceeds the respective thresholds, as established by the BCAQMD at the time a project is considered, the project applicant will be required to identify and demonstrate that best available control technologies for toxics (T-BACT), including appropriate enforcement mechanisms, are capable of reducing potential cancer and noncancer risks to an acceptable level. T-BACTs may include, but are not limited to, restricting idling onsite or electrifying warehousing docks to reduce diesel particulate matter, or requiring use of newer equipment and/or vehicles. T-BACTs identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.

**Level of Significance After Mitigation:** AQ-5 would be significant and unavoidable. Buildout of the General Plan Update could expose sensitive receptors to substantial concentrations of toxic air contaminants. Buildout could result in new sources of criteria air pollutant emissions and/or TACs near existing or planned

sensitive receptors. Review of development projects by BCAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Additionally, Mitigation Measure AQ-5 would ensure mobile sources of TACs not covered under BCAQMD permits are considered during subsequent project-level environmental review by the County. Individual development projects would be required to achieve the incremental risk thresholds established by BCAQMD, and TACs would be less than significant.

However, implementation of the General Plan Update would generate long-term TACs that could contribute to elevated levels in the air basin. Though individual projects could achieve the project-level risk threshold of 10 per million, they would nonetheless contribute to the higher levels of risk in the SVAB. Therefore, Impact AQ-5 is considered significant and unavoidable.

## **Upper Ridge Community Plan**

### *CO Hotspot*

The CO hotspot analysis discussed above for the General Plan Update would also be applicable to the URCP. In addition, land use development proposed under the URCP would be on a much smaller scale than the General Plan Update. Thus, it can be reasonably expected that implementation of the URCP would result in fewer vehicle trips compared to the General Plan Update. Therefore, overall, CO hotspot impacts associated with implementation of the URCP would be less than significant.

**Level of Significance Before Mitigation:** AQ-5 would be less than significant.

### Mitigation Measures

No mitigation measures are required.

### *Toxic Air Contaminants*

### Permitted Stationary Sources

As stated, the types of land uses that typically generate substantial quantities of criteria air pollutants and TACs include industrial (stationary sources) and warehousing (truck idling) land uses. These types of major air pollutant emissions sources are not permitted in the URCP. Therefore, the URCP would not result in creation of land uses that would generate substantial concentrations of TACs.

Development of the commercial land uses that are allowed under the URCP may result in stationary sources of TACs emissions—e.g., dry cleaners, restaurants with char broilers, or buildings with emergency generators and boilers. However, these sources are not considered by BCAQMD to be large emitters. Furthermore, these types of stationary sources are subject to BCAQMD's new source review through their permitting requirements and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under BCAQMD Regulation 4 (e.g., Rule 400, Permit Requirement, and Rule 430, State New Source Review). The permitting process ensures that stationary source emissions would be below the BCAQMD significance thresholds of 10 in a million cancer risk and 1

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for acute risk at the maximally exposed individual. Therefore, overall, impacts related to TACs are considered less than significant.

**Level of Significance Before Mitigation:** AQ-5 would be less than significant.

### Mitigation Measures

No mitigation measures are required.

### Nonpermitted Sources

Potential future development in the Upper Ridge community under the URCP could accommodate up to 851 new dwelling units or 926,739 square feet of new retail space. Overall, the type of land uses accommodated under the URCP would not be the type of land uses (e.g., warehouse) that could generate a substantial number of heavy-duty truck trips or off-road equipment (e.g., forklifts) used in daily business operations. Therefore, health risk impacts from nonpermitted sources associated with the URCP are considered less than significant.

**Level of Significance Before Mitigation:** AQ-5 would be less than significant.

### Mitigation Measures

No mitigation measures are required.

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## **AQ-6                      The General Plan Update would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.**

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The following discusses potential operation- and construction-related odor impacts associated with implementation of the General Plan Update and URCP.

## **General Plan 2040**

### *Operation-Related Odors*

As shown previously in Table 5.3-8, industrial land uses are the primary types of land uses that have the potential to generate objectionable odors. The General Plan Update would accommodate industrial land uses that could be in within the BCAQMD screening distances to sensitive receptors indicating potential odor impacts. The BCAQMD has Rule 200, Nuisance, which would contribute to control nuisance odors and is as follows:

No person shall discharge from any non-vehicular source such as quantifies of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, response, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.



In addition, the following General Plan Update policy would also contribute to minimizing potential nuisance odors:

- **COS-P5.4:** Stationary air pollutant emission sources, such as factories, shall be located more than 500 feet and/or downwind from residential areas and other sensitive receptors.

However, though industrial land uses accommodated under the General Plan Update would be required to comply with BCAQMD Rule 200 and implementation of Policy COS-5.4 would help minimize potential odor impacts to the extent feasible, future environmental review could be required for industrial projects to ensure that surrounding sensitive land uses are not exposed to nuisance odors. Facilities listed in Table 5.3-8 would need to consider measures to reduce odors as part of their CEQA review. Consequently, review of projects using the BCAQMD odor screening distances is necessary to ensure that odor impacts are minimized. Overall, sensitive receptors could be within the screening distances of future land use development projects that are the types of projects that could generate objectionable odors. Therefore, industrial uses accommodated under the General Plan Update could result in odor impacts that could be potentially significant.

**Level of Significance Before Mitigation:** AQ-6 would be potentially significant.

### Mitigation Measures

**Impact AQ-6:** Operation of new industrial land uses accommodated under the General Plan Update has the potential to create objectionable odors that could affect a substantial number of people.

**Mitigation Measure AQ-5:** Prior to project approval, if it is determined during project-level environmental review that a project has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared and submitted by the project applicant prior to project approval to ensure compliance with Butte County Air Quality Management District Rule 200, Nuisance. The following facilities that are within the buffer distances specified (in parentheses) from sensitive receptors have the potential to generate substantial odors.

- Wastewater Treatment Plant (2 miles)
- Wastewater Pumping Facilities (1 mile)
- Sanitary Landfill (1 mile)
- Transfer Station (1 mile)
- Composting Facility (2 miles)
- Petroleum Refinery (2 miles)
- Asphalt Batch Plant (2 miles)
- Chemical Manufacturing (1 mile)
- Fiberglass Manufacturing (1 mile)
- Painting/Coating Operations (1 mile)
- Rendering Plant (4 miles)

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- Coffee Roaster (1 mile)
- Food Processing Facility (1 mile)
- Feed Lot/ Dairy (1 mile)
- Green Waste and Recycling Operations (2 miles)
- Metal Smelting Plants (1 mile)

The Odor Management Plan prepared for these facilities shall identify control technologies that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. Control technologies may include, but are not limited to scrubbers (e.g., air pollution control devices) at an industrial facility. Control technologies identified in the odor management plan shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.

**Level of Significance After Mitigation:** Significant and unavoidable. Mitigation Measure AQ-5 would ensure that sources identified by BCAQMD are mitigated through adherence to an odor control plan and comply with BCAQMD Rule 200. However, due to the subjective nature of what constitutes an odor impact that could affect a substantial number of people, and the specific factors needed to evaluate potential odor impacts, Impact AQ-6 would be significant and unavoidable.

### *Construction-Related Odors*

During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent in nature. 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. Furthermore, short-term construction-related odors are expected to cease upon the drying or hardening of the odor-producing materials. Therefore, impacts associated with construction-generated odors are considered less than significant.

**Level of Significance Before Mitigation:** AQ-6 would be less than significant.

### Mitigation Measures

No mitigation measures are required.

## Upper Ridge Community Plan

### *Operation-Related Odors*

The types of residential and commercial land uses accommodated and permitted under the URCP would not be the types of land uses typically associated with generating odors that could affect a substantial number of people. While the types of land uses accommodated under the URCP could generate odors from cooking or operation of landscaping equipment, these sources of odors are not substantial enough to be considered nuisance odors that would affect a substantial number of people. Additionally, BCAQMD Rule 200 would ensure that odors generated from the land uses accommodated under the URCP are minimized

to less than significant.

**Level of Significance Before Mitigation:** AQ-6 would be less than significant.

Mitigation Measures

No mitigation measures are required.

*Construction-Related Odors*

The discussion above for the General Plan Update would also be applicable to the URCP. Overall, impacts associated with construction-generated odors from development of land uses accommodate under the URCP are considered less than significant.

**Level of Significance Before Mitigation:** AQ-6 would be less than significant.

Mitigation Measures

No mitigation measures are required.

### **5.3.3 CUMULATIVE IMPACTS**

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<b>AQ-7</b>	<b>The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to air quality.</b>
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#### **General Plan 2040 and URCP**

The cumulative area of analysis is the SVAB, which includes Butte County. As identified in Section 5.3.2.3, *Existing Conditions*, of this DEIR, California is divided into air basins for the purpose of managing the air resources of the state on a regional basis based on meteorological and geographic conditions. Similar to GHG emissions impacts, air quality impacts are regional in nature because no single project generates enough emissions that would cause an air basin to be designated a nonattainment area. Furthermore, per BCAQMD, projects generating emissions that exceed the regional significance thresholds would not only be considered to result in a significance project-level impact, but would also be considered to result in a cumulative impact. Thus, the impacts previously discussed are evaluated in the cumulative context and no additional cumulative analysis is needed.

In summary, implementation of Mitigation Measure AQ-3 would reduce construction level impacts to a less than significant level, and Mitigation Measures AQ-1, AQ-2, AQ-4, and AQ-5 would reduce project-level impacts on an individual basis; however, cumulative impacts are considered potentially significant for construction and operation-related criteria air pollutants and operation-related air toxics, as described above.

**Level of Significance Before Mitigation:** AQ-7 would be potentially significant.

## **AIR QUALITY**

**Impact AQ-7:** Implementation of the General Plan Update and the URCP would result in potentially significant cumulative air quality impacts.

Implement Mitigation Measures AQ-1, AQ-2, AQ-3, AQ-4, and AQ-5.

**Level of Significance After Mitigation:** AQ-7 would be significant and unavoidable. Though implementation of mitigation would reduce cumulative air quality impacts to the extent feasible, Impact AQ-7 would remain significant and unavoidable.

### 5.3.4 REFERENCES

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