4.3 AIR QUALITY

This section includes a description of existing regional and local air quality conditions, a summary of applicable regulations, and an analysis of potential air quality impacts related to implementing the Draft General Plan. Mitigation measures are presented, as necessary, to reduce significant impacts on air quality, where feasible.

4.3.1 REGULATORY SETTING

The project site is the unincorporated portion of the County, for which air quality is regulated by the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and the Amador Air District. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent. Applicable regulations associated with emissions of criteria air pollutants, toxic air contaminants (TACs), and odors are described separately below.

Federal Plans, Policies, Regulations, and Laws

EPA has been charged with implementing national air quality programs. EPA’s air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major CAA amendments made by Congress were in 1990.

The CAA requires EPA to establish National Ambient Air Quality Standards (NAAQS), shown in Table 4.3-1. The CAA also requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. EPA must review all state SIPs to determine whether they conform to the mandates of the CAA and the amendments thereof, and to determine whether implementing them will achieve air quality goals. If EPA determines a SIP to be inadequate, a Federal Implementation Plan that imposes additional control measures may be prepared for the nonattainment area. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may cause sanctions to be applied to transportation funding and stationary air pollution sources in the respective air basin.

State Plans, Policies, Regulations, and Laws

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA was adopted in 1988 and required ARB to establish the California Ambient Air Quality Standards (CAAQS). ARB has established CAAQS for criteria air pollutants, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulate matter. In most cases, CAAQS are more stringent than NAAQS, and incorporate a margin of safety to protect sensitive individuals. The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. California’s adopted 2007 State Strategy was submitted to EPA as a revision to the SIP in November 2007. The 2007 State Strategy was designed to attain federal ozone and PM$_{2.5}$ air quality standards through a combination of technically feasible, cost-effective measures, and new technologies. ARB adopted revisions to the 2007 State Strategy in 2011 (ARB 2014).

ARB is also responsible for developing statewide programs and strategies to reduce the emissions from mobile sources. These include both on- and off-road sources such as passenger cars, motorcycles, trucks, busses, heavy-duty construction equipment, recreational vehicles, marine vessels, lawn and garden equipment, and small utility engines.

In addition, ARB published the Air Quality and Land Use Handbook: A Community Health Perspective, which provides guidance on land use compatibility with sources of TACs (ARB 2005). The handbook is not a law or adopted policy but offers advisory recommendations for the siting of sensitive receptors near uses associated with
TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities, to help protect children and other sensitive members of the population.

Regional and Local Plans, Policies, Regulations, and Ordinances

Amador Air District Rules and Regulations

The project site is located within the jurisdiction of the Amador Air District. The role of the Air District is to achieve clean air to protect public health and the environment. The Air District’s primary responsibility is to attain and maintain the NAAQS and CAAQS in the Mountain Counties Air Basin (MCAB) by regulating air pollution emissions from stationary and industrial sources. These responsibilities are met by adopting and enforcing Rules and Regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, and inspecting stationary sources of air pollutants.

The Air District’s Rules and Regulations most relevant to the Draft General Plan include, but are not limited to:

- Rule 202-Visible emissions,
- Rule 205 - Nuisance,
- Rule 207 - Particulate Matter,
- Rule 210-Specific Contaminants (sulfur compounds, combustion contaminants),
- Rule 218 - Fugitive Dust Emissions,
- Regulation IV – Authority to Construct, and
- Regulation V – Permit to Operate.

4.3.2 ENVIRONMENTAL SETTING

Air quality is defined by the concentration of pollutants related to human health. Ambient concentrations of air pollutants are determined by the rate and location of pollutant emissions from pollution sources, and the regional or local atmosphere’s ability to transport and disperse pollutant emissions. Natural factors that affect pollutant transport and dispersion include terrain, wind, atmospheric stability, and sunlight. Therefore, ambient air quality conditions within the local air basin are influenced by such natural factors as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

TOPOGRAPHY, CLIMATE, AND METEOROLOGY

The County is located in the MCAB. The MCAB lies along the northern Sierra Nevada mountain range, close to or contiguous with the Nevada border, covering an area of approximately 11,000 square miles. Elevations in Amador County range from over 9,000 feet at the Sierra crest down to several hundred feet above sea level at the County’s boundary with Sacramento County.

Topography is highly variable throughout the County and includes rugged mountain peaks and valleys with extreme slopes and elevation variations in the Sierra range, as well as rolling foothills to the west. The general climate of the MCAB varies considerably with elevation and proximity to the Sierra range. The terrain features of the MCAB allow for several climates to exist in relative proximity. The terrain of mountains and hills results in a wide variation in rainfall, temperature, and localized winds throughout the MCAB. Temperature variations have an important influence on basin wind flow, dispersion along mountain ridges, vertical air mixing, and photochemistry.

The Sierra Nevada range receives large amounts of precipitation from storms moving inland from the Pacific Ocean in the winter, with lesser amounts from intermittent “Monsoonal” moisture flows from the south and cumulus buildup in the summer. Precipitation amounts are high in the highest mountain elevations, but decline
rapidly toward the western portion of the MCAB. Winter temperatures in the mountains can be below freezing for weeks at a time, and substantial amounts of snow can accumulate, but in the western foothills, winter temperatures usually drop below freezing only at night and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime highs in the 70s to low 80s °F, but the western end of the County can routinely exceed 100 °F. From an air quality perspective, the topography and meteorology of the MCAB combine such that local conditions are the predominate factor in determining the effect of emissions in the MCAB.

Regional airflows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion.

Inversion layers, where warm air inversely overlays cooler air, frequently occur in the MCAB and trap pollutants close to the ground. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunlight provide the conditions and energy for the photochemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NOX) that results in the formation of ozone. Because of its long formation time, ozone is a regional pollutant rather than a local hotspot problem. In the summer, the strong upwind valley air flowing into the basin from the Central Valley to the west is an effective transport medium for ozone precursors and ozone generated in the Bay Area and the Sacramento and San Joaquin Valleys.

**CRITERIA AIR POLLUTANTS**

The ARB and the EPA focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), respirable particulate matter with a diameter of 10 micrometers or less (PM10), fine particulate matter with a diameter of 2.5 micrometers or less (PM2.5), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documentation is available for these pollutants, they are commonly referred to as “criteria air pollutants.”

Health-based air quality standards have been established for these criteria pollutants by ARB at the state level and by EPA at the national level. These standards were established to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution. California has also established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. A brief description of each criteria air pollutant including source types and impacts to health is provided below along with the most current monitoring station data and attainment designations for the project study areas. Table 4.3-1 presents the CAAQS and the NAAQS.

Concentrations of criteria air pollutants: ozone, CO, NO2, SO2, PM10, PM2.5, and lead, are used as indicators of ambient air quality conditions. A brief description of each criteria air pollutant, including source types, health effects, and future trends, is provided below along with the most current attainment area designations and monitoring data for Amador County.

**Ozone**

Ozone is a colorless, odorless gas that primarily exists in the upper atmosphere (stratosphere) as the ozone layer and in the lower atmosphere (troposphere) as a pollutant. Tropospheric ozone is a principal cause of lung and eye irritation in the urban environment and is the principal component of smog, which is formed in the troposphere through a series of reactions involving ROG and NOX in the presence of sunlight. Therefore, ROG and NOX are precursors of ozone. ROG and NOX emissions are both considered critical in ozone formation. Control strategies for ozone have focused on reducing these emissions from vehicles, industrial processes using solvents and coatings, and consumer products. Ozone concentrations are generally highest in the summer, when atmospheric inversions are greatest, and sunlight is abundant and temperatures are high.
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California Standards</th>
<th>National Standards</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>1 hour</td>
<td>0.09 ppm (180 μg/m³)</td>
<td>–</td>
<td>Ultraviolet photometry</td>
</tr>
<tr>
<td></td>
<td>8 hours</td>
<td>0.070 ppm (137 μg/m³)</td>
<td>0.075 ppm (147 μg/m³)</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>50 μg/m³</td>
<td>150 μg/m³</td>
<td>Inertial separation and gravimetric analysis</td>
</tr>
<tr>
<td></td>
<td>Annual arithmetic mean</td>
<td>20 μg/m³</td>
<td>–</td>
<td>Gravimetric or beta attenuation</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>–</td>
<td>35 μg/m³</td>
<td>Inertial separation and gravimetric analysis</td>
</tr>
<tr>
<td></td>
<td>Annual arithmetic mean</td>
<td>12 μg/m³</td>
<td>–</td>
<td>Gravimetric or beta attenuation</td>
</tr>
<tr>
<td></td>
<td>1 hour</td>
<td>20 ppm (23 mg/m³)</td>
<td>35 ppm (40 mg/m³)</td>
<td>Nondispersive infrared photometry (NDIR)</td>
</tr>
<tr>
<td></td>
<td>8 hours</td>
<td>9.0 ppm (10 mg/m³)</td>
<td>9 ppm (10 mg/m³)</td>
<td>Nondispersive infrared photometry (NDIR)</td>
</tr>
<tr>
<td></td>
<td>8 hours</td>
<td>6 ppm (Lake Tahoe) (7 mg/m³)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>1 hour</td>
<td>0.18 ppm (339 μg/m³)</td>
<td>100 ppb (188 μg/m³)</td>
<td>Gas phase Chemiluminescence</td>
</tr>
<tr>
<td></td>
<td>Annual arithmetic mean</td>
<td>0.030 ppm (57 μg/m³)</td>
<td>0.053 ppm (100 μg/m³)</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td>3 hours</td>
<td>–</td>
<td>–</td>
<td>Gas phase Chemiluminescence</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>0.04 ppm (105 μg/m³)</td>
<td>0.14 ppm (for certain areas)</td>
<td>Spectrophotometry (paraosaniline method)</td>
</tr>
<tr>
<td></td>
<td>Annual arithmetic mean</td>
<td>–</td>
<td>0.030 ppm (for certain areas)</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td>30-day average</td>
<td>1.5 μg/m³</td>
<td>–</td>
<td>High-volume sampler and atomic absorption</td>
</tr>
<tr>
<td></td>
<td>Calendar quarter</td>
<td>–</td>
<td>1.5 μg/m³ (for certain areas)</td>
<td>Same as primary standard</td>
</tr>
<tr>
<td></td>
<td>Rolling 3-month average</td>
<td>–</td>
<td>0.15 μg/m³</td>
<td>High-volume sampler and atomic absorption</td>
</tr>
</tbody>
</table>
### Table 4.3.1
National and California Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California Standards</th>
<th>National Standards</th>
<th>Method</th>
<th>Primary</th>
<th>Secondary</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility-reducing particles j</td>
<td>8 hours</td>
<td>See footnote j</td>
<td>Beta attenuation and transmittance through filter tape</td>
<td>No national standards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfates</td>
<td>24 hours</td>
<td>25 µg/m³</td>
<td>Ion chromatography</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen sulfide</td>
<td>1 hour</td>
<td>0.03 ppm (42 µg/m³)</td>
<td>Ultraviolet fluorescence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinyl chloride j</td>
<td>24 hours</td>
<td>0.01 ppm (26 µg/m³)</td>
<td>Gas chromatography</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: mg/m³ = milligrams per cubic meter; PM<sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM<sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppb = parts per billion; ppm = parts per million; µg/m³ = micrograms per cubic meter.

a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, 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.

b National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standards. Contact the U.S. Environmental Protection Agency for further clarification and current national policies.

c Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and reference pressure of 760 torr; parts per million (ppm) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

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

f To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

Source: ARB 2013
Particulate Matter (PM)

PM is a complex mixture of extremely small particles and liquid droplets. PM consists of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Natural sources of PM include windblown dust and ocean spray. Some particles are emitted directly into the atmosphere. Others, referred to as secondary particles, result from gases that are transformed into particles through physical and chemical processes in the atmosphere.

The size of PM is directly linked to the potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects such as aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat. Individuals particularly sensitive to fine particle exposure include older adults, people with heart and lung disease, and children. EPA groups PM into two categories, coarse PM or PM_{10}, and fine PM or PM_{2.5}, as described below.

PM_{10}, such as found near roadways and dusty industries, are 10 micrometers or smaller in diameter. Sources of PM_{10} include crushing or grinding operations and dust from paved or unpaved roads. Control of PM_{10} is primarily achieved through the control of dust at construction and industrial sites, the cleaning of paved roads, and the wetting or paving of frequently used unpaved roads.

PM_{2.5}, such as found in smoke and haze, are 2.5 micrometers or smaller in diameter. PM_{2.5} poses an increased health risk because they can deposit deep in the lungs and contain substances that are particularly harmful to human health. Sources of PM_{2.5} include all types of combustion activities such as motor vehicles, power plants, wood burning, and certain industrial processes. PM_{2.5} is the major cause of reduced visibility (haze) in California.

Carbon Monoxide (CO)

CO is a colorless and odorless gas that, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. In addition to regional CO emissions, localized CO emissions can be of concern. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways and intersections. Overall, CO emissions are decreasing because of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO concentrations are typically higher in the winter; therefore, California has required the use of oxygenated gasoline in the winter months to reduce CO emissions.

Nitrogen Dioxide (NO_{2})

NO_{2} is a gas that is a product of the combustion of fossil fuels generated from vehicles and stationary sources, such as power plants and boilers. NO_{2} can cause lung damage. As noted above, NO_{2} is a type of NO_{x} and is a principal contributor to ozone and smog production.

Sulfur Dioxide (SO_{2})

SO_{2} is a gas that is a product of the combustion of fossil fuels, with the primary source being power plants and heavy industry that utilize coal or oil as fuel. SO_{2} is also a product of diesel engine emissions. The human health effects of SO_{2} include lung disease and breathing problems for asthmatics. SO_{2} in the atmosphere contributes to the formation of acid rain. In the MCAB, there is relatively little combustion of coal and oil; therefore, SO_{2} is less of a concern than in other parts of the country.
Lead

Lead is a highly toxic metal that may cause a range of human health effects. Lead anti-knock additives in gasoline represent a major source of lead emissions to the atmosphere. However, lead emissions have significantly decreased due to the near elimination of leaded gasoline use. Lead-based paint, banned or limited by EPA in the 1980s, is a health hazard when it deteriorates by peeling, chipping, or cracking; or generates lead dust when scraped, sanded, or heated.

Amador County Emission Sources

Emissions of criteria air pollutants in Amador County include stationary, area, and mobile sources. According to the 2008 emissions inventory for Amador County, the majority of ROG, NOx, and CO emissions are attributable to mobile sources (ARB 2012). Area-wide and stationary sources are the largest contributors of PM_{10} and PM_{2.5}, respectively. Figure 4.3-1 summarizes emissions of criteria air pollutants and precursors within Amador County for various source categories.

Exhibit 4.3-1  2008 Emissions Inventory for Amador County

Ambient Air Quality

Air pollutant concentrations are measured at several monitoring stations in the MCAB. The Jackson air quality monitoring station on Clinton Road is the only monitoring station in Amador County with sufficient data to meet EPA and ARB criteria for quality assurance. The San Andreas air quality monitoring station on Gold Strike Road in Calaveras County is located 15 miles south of Jackson. In general, the ambient air quality measurements from these monitoring stations are representative of the air quality in the County. The Jackson and San Andreas monitoring stations eliminated monitoring for CO after 2005 because CO is not a pollutant of concern within the County. Table 4.3-2 summarizes the air quality data for these monitoring stations from the most recent available data at the time of Draft EIR preparation.
## Table 4.3-2
### Amador County Ambient Air Quality Summary

<table>
<thead>
<tr>
<th>Pollutant Standards</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carbon Monoxide (CO)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State maximum 8-hour/1-hour concentration (ppm)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Number of Days Standard Exceeded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAAQS 8-hour (&gt;9.0 ppm)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>CAAQS 8-hour (&gt;9.0 ppm)/CAAQS 1-hour (&gt;20.0 ppm)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Ozone</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum 1-hour concentration (ppm)</td>
<td>0.094</td>
<td>0.102</td>
<td>0.088</td>
</tr>
<tr>
<td>Maximum 8-hour concentration (ppm)</td>
<td>0.076</td>
<td>0.088</td>
<td>0.073</td>
</tr>
<tr>
<td>Number of Days Standard Exceeded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAAQS 1-hour (&gt;0.09 ppm)</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>NAAQS 8-hour (&gt;0.075 ppm)/CAAQS 8-hour (&gt;0.070 ppm)</td>
<td>2/4</td>
<td>7/22</td>
<td>0/2</td>
</tr>
<tr>
<td><strong>Particulate Matter (PM10) a</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National maximum 24-hour concentration (µg/m3)</td>
<td>32.2</td>
<td>44.6</td>
<td>55.6</td>
</tr>
<tr>
<td>State maximum 24-hour concentration (µg/m3)</td>
<td>34.1</td>
<td>43.8</td>
<td>54.1</td>
</tr>
<tr>
<td>State annual average concentration (µg/m3)</td>
<td>*</td>
<td>*</td>
<td>16.4</td>
</tr>
<tr>
<td>Estimated Number of Days Standard Exceeded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAAQS 24-hour (&gt;150 µg/m3)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CAAQS 24-hour (&gt;50 µg/m3)</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Particulate Matter (PM2.5) a</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National maximum 24-hour concentration (µg/m3)</td>
<td>33.9</td>
<td>26.9</td>
<td>41.8</td>
</tr>
<tr>
<td>State maximum 24-hour concentration (µg/m3)</td>
<td>33.9</td>
<td>26.9</td>
<td>41.8</td>
</tr>
<tr>
<td>National annual average concentration (µg/m3)</td>
<td>9.1</td>
<td>7.0</td>
<td>9.1</td>
</tr>
<tr>
<td>State annual average concentration (µg/m3)</td>
<td>*</td>
<td>7.0</td>
<td>9.2</td>
</tr>
<tr>
<td>Estimated Number of Days Standard Exceeded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAAQS 24-hour (&gt;35 µg/m3)</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes:
* Data unavailable

a State and national statistics may differ for the following reasons: State statistics are based on California-approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers. State statistics are based on local conditions; national statistics are based on standard conditions. State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria. ppm = parts per million; µg/m³ = micrograms per cubic meter

Source: ARB 2014b

Both ARB and EPA use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify those areas with air-quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are “nonattainment,” “attainment,” and “unclassified.” “Unclassified” is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation, called “nonattainment-transitional.” The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment.
Amador County is designated as attainment or unclassified for the criteria air pollutants, except for ozone. Amador County is designated as nonattainment with respect to the state and federal 8-hour ozone standards (ARB 2014a).

**TOXIC AIR CONTAMINANTS**

In addition to criteria pollutants, both federal and state air quality regulations also focus on toxic air contamintants (TACs). Federal laws use the term “hazardous air pollutants” (HAPs) to refer to the same types of compounds that are referred to as TACs under state law. The California Health and Safety Code defines TACs as air pollutants that may cause or contribute to an increase in mortality or serious illness, or that may pose a present or potential hazard to human health. TACs can be separated into carcinogens and noncarcinogens based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens such as diesel PM are assumed to have no safe threshold below which health impacts would not occur. Any exposure to a carcinogen poses some risk of contracting cancer. Noncarcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

TACs may be emitted by stationary, area, or mobile sources. Common stationary sources of TAC emissions include gasoline stations, dry cleaners, and diesel backup generators, which are subject to local air district permit requirements. The other, often more significant, sources of TAC emissions are motor vehicles on freeways, high-volume roadways, or other areas with high numbers of diesel vehicles, such as distribution centers. Off-road mobile sources are also major contributors of TAC emissions and include construction equipment, ships, and trains. EPA and ARB have ongoing programs to identify and regulate HAPs and TACs. The State Air Toxics Program was established in 1983 by Assembly Bill (AB) 1807. A total of 243 substances have been designated TACs under California law; they include the 189 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities must perform a health risk assessment and, if specific thresholds are violated, must communicate the results to the public in the form of notices and public meetings. The regulation of TACs is generally through statutes and rules that require the use of the maximum or best available control technology (MACT or BACT) to limit TAC emissions.

Among the many substances identified as TACs are diesel exhaust particulates, asbestos, and lead. Particulate exhaust emissions from diesel-fueled engines (diesel PM) were identified as a TAC by ARB in 1998. The majority of the estimated local health risk from TACs is from diesel PM. The composition of diesel PM emissions from diesel-fueled engines varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. In California, on-road diesel vehicles contribute approximately 38% of the statewide total diesel PM emissions (ARB 2009). Off-road mobile sources, such as construction and mining equipment and agricultural equipment, are approximately 60% of the total emissions (ARB 2009).

The control of diesel PM emissions is a very active current concern of regulatory agencies at all levels. Federal and state efforts to reduce diesel PM emissions have focused on the use of improved fuels, adding particulate filters to engines, and requiring the production of new-technology engines that emit fewer exhaust particulates. In 2000, ARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled vehicles and engines. ARB estimated that an average statewide concentration of 1.8 μg/m³ and an associated health risk of 540 excess cancer cases per million people (ARB 2009). The regulation is anticipated to result in an 85% decrease in statewide diesel health risk in 2020 relative to the year 2000 diesel risk (ARB 2009).

Additional diesel PM regulations apply to new trucks and diesel fuel. Subsequent ARB regulations on diesel emissions include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Offroad Diesel Vehicle Regulation, and the New Offroad Compression Ignition
Diesel Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment.

MACT/BACT for asbestos and lead TACs have been identified for many years and there are established rules and procedures to prevent dispersion and inhalation of these substances. Asbestos is a naturally occurring mineral that was used in building materials for thermal and acoustical insulation and fire resistance until the mid-1980s and a partial ban by EPA was imposed in 1989. Lead was used in paint for housing until 1978 when lead-based paint was banned by EPA for use in housing. Asbestos and lead, when disturbed during building demolition, can become airborne as inhalable health hazard pollutants and, therefore, require abatement before demolition.

**NATURALLY OCCURRING ASBESTOS**

Naturally occurring asbestos (NOA), which was identified as a TAC in 1986 by ARB, is located in many parts of California and is commonly associated with ultramafic rocks (Clinkenbeard et al. 2002). Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers that can become airborne and inhaled by humans. Ultramafic rocks form in high-temperature environments well below the surface of the earth. By the time they are exposed at the surface by geologic uplift and erosion, ultramafic rocks may be partially to completely altered into a type of metamorphic rock called serpentine. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in the bodies of these rocks or along their boundaries (Churchill and Hill 2000).

For individuals living in areas of NOA, there are many potential pathways for airborne exposure. Exposure to soil dust containing asbestos can occur under a variety of scenarios, including children playing in the dirt; dust raised from unpaved roads and driveways covered with crushed serpentine; grading and earth disturbance associated with construction activity; rock blasting; quarrying; gardening; and other human activities. For homes built on asbestos outcroppings, asbestos can be tracked into the home and can also enter as fibers suspended in outdoor air. Once such fibers are indoors, they can be entrained into the air by normal household activities, such as vacuuming (as many respirable fibers will simply pass through vacuum cleaner bags).

People exposed to low levels of asbestos may be at elevated risk (e.g., above background rates) of lung cancer and mesothelioma. The risk is proportional to the cumulative inhaled dose (quantity of fibers), and also increases with the time since first exposure. Although there are a number of factors that influence the disease-causing potency of any given asbestos (such as fiber length and width, fiber type, and fiber chemistry), all forms are carcinogens. Areas with ultramafic (um) rocks are most likely to contain asbestos (Higgins and Clinkenbeard 2006). Amador County contains several areas of ultramafic rock, including a north-south trending belt between Ione and Highway 49, and smaller areas north of Pioneer and south of River Pines.

Areas which are moderately likely to contain NOA include metamorphosed mafic volcanic rocks (mv); metamorphosed intrusive rocks (mi); and gabbroic (mafic intrusive) rocks (gb) (Higgins and Clinkenbeard 2006). Rocks of these types in Amador County include the Copper Hill Volcanics (Jch), the Gopher Ridge Volcanics (Jgo), and the Logtown Ridge (Jlr) geologic formations. Chapter 4.6, “Geology, Soils, and Mineral and Paleontological Resources,” provides additional information regarding NOA. Exhibit 4.6-3 (in that section) is a geologic map of Amador County, illustrating the locations of these formations.

**ODORS**

Odor is considered an air quality issue, either at the local level (e.g., odor from wastewater treatment) or at the regional level (e.g., smoke from wildfires). Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).
Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

4.3.3 IMPACTS AND MITIGATION MEASURES

ANALYSIS METHODOLOGY

Temporary and short-term emissions of criteria air pollutants and ozone precursors from construction activities and operations associated with the implementation of the Draft General Plan were analyzed in accordance with standard methods. Where quantification was required, temporary, short-term construction and long-term operational emissions were modeled using California Emissions Estimator Model (CalEEMod), Version 2013.2.2, and EMFAC 2011. CalEEMod allows the user to enter project-specific construction information, such as the types, number, and horsepower of construction equipment, and the number and length of off-site motor vehicle trips. Operational emissions associated with area sources were also modeled using CalEEMod. The EMFAC 2011 model was used along with VMT estimates from the traffic analysis prepared for this project to calculate daily operational emissions associated with motor vehicles upon buildout of the Draft General Plan.

Modeling was based on plan-specific data, when available. However, when information was not available (e.g., amount of land to be disturbed/graded per day, types of equipment to be used, number of construction employees), reasonable assumptions and default settings were used to estimate air pollutant emissions.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, an impact on air quality is considered significant if implementation of the Draft General Plan would do any of the following:

► violate any air quality standard or contribute substantially to an existing or projected air quality violation;

► result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors);

► expose sensitive receptors to substantial pollutant concentrations; or

► create objectionable odors affecting a substantial number or people.

As stated in Appendix G, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations. The Amador Air District does not have adopted thresholds of significance to determine significant increases in levels of criteria air pollutant emissions. Therefore, any net increase in emissions would be considered a significant impact for the purposes of the air quality impact analysis in this section. This approach is for the Draft General Plan EIR only and does not imply that future projects developed as a result of the Draft General Plan would be required to use this threshold.
Construction emissions are described as “short-term” or temporary in duration but have the potential to adversely affect air quality. Construction-related activities such as site preparation (e.g., excavation, grading, and clearing), use of off-road equipment, material delivery, and exhaust emissions from construction worker commutes would result in project-generated emissions of ROG, NOX, PM10, and PM2.5.

Emissions of ROG and NOX are associated primarily with exhaust from construction equipment. Given that exhaust emission rates of the construction equipment fleet in the state are expected to decrease over time as stricter standards take effect and older equipment is retired, maximum daily construction emissions were estimated using the earliest calendar year when construction could begin to generate conservative estimates. In later years, advancements in engine technology, retrofits, and turnover in the equipment fleet are anticipated to result in lower levels of emissions.

Fugitive dust emissions are associated primarily with site preparation and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, VMT, and other factors. During typical construction projects, the majority of PM emissions are generated in the form of fugitive dust during ground disturbance activities. Most fugitive dust is generated during the grading phase. PM emissions are also generated by equipment exhaust and reentrained road dust from vehicle travel on paved and unpaved surfaces.

Construction under the Draft General Plan would occur from 2013 through 2030 (assuming a baseline year of 2013), but the timing of construction activities each year is unknown. Therefore, it was assumed that construction under the Draft General Plan would occur evenly between 2013 and 2030, and approximately 6 percent of the construction activity would occur during any given year. It is likely that the different types of construction activities (i.e. site grading, trenching, asphalt paving, building construction, and application of architectural coatings) would occur simultaneously at various locations within the planning area. Modeling of construction emissions was conducted for the year 2013, as this is assumed to be the earliest year during which construction would occur.

Table 4.3-3 summarizes the modeled emissions of ROG, NOX, PM10 and PM2.5 associated with construction under the Draft General Plan. Refer to Appendix B of the Draft EIR for a detailed summary of the CalEEMod modeling assumptions, inputs, and outputs.

As shown in Table 4.3-3, annual emissions of ROG, NOX, PM10, and PM2.5 would increase as a result of implementation of the Draft General Plan and could violate or contribute substantially to an existing or projected air quality violation, result in a cumulatively considerable net increase in non-attainment criteria pollutants and/or expose sensitive receptors to substantial pollutant concentrations. These emissions increases could also contribute to adverse health impacts caused by ROG, NOX, PM10, and PM2.5 as described in Section 4.3.2, Environmental Setting. Therefore, ROG, NOX, PM10, and PM2.5 emissions associated with construction under the Draft General Plan could result in a significant impact.
Table 4.3-3
Summary of Modeled Maximum Annual Criteria Air Pollutant and Precursor Emissions Associated with Construction Activities of the Draft General Plan

<table>
<thead>
<tr>
<th>Source</th>
<th>ROG</th>
<th>NOx</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft General Plan Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>8</td>
<td>28</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Notes: ROG = reactive organic gases; NOx = oxides of nitrogen; PM10 = respirable particulate matter; PM2.5 = fine particulate matter

1 Maximum annual construction emissions are representative of the earliest construction year (2013) assuming that each type of construction activity (i.e., grading, asphalt paving, building construction, and architectural coatings) would take place simultaneously at various locations of the project site. The detailed breakdown of land use types and other input parameters used in the modeling, as well as detailed modeling outputs, are included in Appendix B.

Source: Modeling performed by AECOM in 2014

Mitigation Measure 4.3-1a: Implement Measures to Control Particulate Matter Emissions Generated by Construction Activities

a. The County will require each project applicant, as a condition of development project discretionary approval, to implement fugitive dust control measures to meet the requirements of Amador Air District Rule 218 (Fugitive Dust). Example measures include, but are not limited to:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along major roadways should be covered.
- Limit vehicle speeds on unpaved construction roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Maintain all construction equipment in proper working condition according to manufacturer’s specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.
- Water exposed soil with adequate frequency for continued moist soil. However, do not overwater to the extent that sediment flows off the site.
- Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph.
- Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible. Water appropriately until vegetation is established.
- Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads.
• Post a publicly visible sign with the telephone number and person to contact at the construction site regarding dust complaints. This person shall respond and take corrective action within 48 hours.

**Responsible Agencies/Departments:** Planning Department

**Working With:** Amador Air District

**Mitigation Measure 4.3-1b: Reduce Exhaust Emissions from Construction Equipment**

a. The County will require each project applicant, as a condition of development project discretionary approval, to implement measures to reduce exhaust emissions from construction equipment. Example measures include:

• Where feasible, equipment requiring the use of fossil fuels (e.g., diesel) shall be replaced or substituted with electrically driven equivalents (provided that they are not run via a portable generator set).

• To the extent feasible, alternative fuels and emission controls shall be used to further reduce exhaust emissions.

• Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (as required by the state airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site.

• The hours of operation of heavy-duty equipment and/or the amount of equipment in use at any one time shall be limited.

• Staging areas for heavy-duty construction equipment shall be located as far as possible from sensitive receptors.

• Implement construction best management practices to minimize fugitive dust emissions. Best management practices should be approved by AAD and could include, but are not limited to Sacramento Metropolitan Air Quality Management District’s Basic Construction Emission Control Practices. To the extent feasible, use best available control technology at the time of construction activities to minimize exhaust emissions from construction equipment and vehicles. Provide construction management plan for minimizing fugitive dust and exhaust emissions to Amador Air District prior to commencing construction activities.

**Responsible Agencies/Departments:** Planning Department

**Working With:** Amador Air District

**Time Frame:** Ongoing

**Significance after Mitigation**

Mitigation Measures 4.3-1a and 4.3-1b would reduce this impact, but not to a less-than-significant level. Construction ROG, NOx PM10, and PM2.5 emissions could still violate or contribute substantially to an existing or projected air quality violation, result in a cumulatively considerable net increase in non-attainment criteria pollutants, and/or expose sensitive receptors to substantial pollutant concentrations because the intensity of construction activity and the acreage of ground disturbance that could occur at any one point in time, would be
substantially high and/or take place in close proximity to existing or future planned sensitive receptors (e.g., residents, schools). No additional feasible mitigation is available to reduce this impact to a less-than-significant level. The impact would remain significant and unavoidable.

**IMPACT 4.3-2 Generation of Long-Term Operational (Regional) Emissions of ROG, NOX, PM10, and PM2.5.** Operational area- and mobile-source emissions from implementation of the Draft General Plan would lead to long-term operational emissions of ROG, NOx, PM10, and PM2.5 that could violate or contribute substantially to an existing or projected air quality violation, result in a cumulatively considerable net increase in non-attainment criteria pollutants, and/or expose sensitive receptors to substantial pollutant concentrations. This impact would be significant.

Implementation of the Draft General Plan would include new development in the planning area, including buildings, structures, paved areas, roadways, utilities, and other improvements. Daily activities associated with the operation of these land uses would generate criteria air pollutant and precursor emissions from mobile and area sources. Mobile sources include vehicle trips coming to and leaving from the planned land uses. Area sources include, but are not limited to, natural gas combustion for water and space heating, landscape maintenance equipment, hearth operation in residential homes, and periodic architectural coatings. While construction emissions are considered short-term and temporary, operational emissions are considered long-term and occur for the lifetime of the project. Therefore, operational emissions have greater potential to affect the attainment status of an air basin, particularly as a result of increased traffic from additional development.

The operational emissions associated with the Draft General Plan were quantified using CalEEMod and EMFAC 2011, as mentioned earlier. This modeling assumes that the new residential, commercial, and industrial uses specified on Table 3-1 (page 3-9) in Chapter 3 “Project Description,” would be constructed by 2030.

Implementation of the Draft General Plan would also result in new stationary sources of pollutants, requiring the obtainment of permits to operate from the Amador Air District. These sources could include, but are not limited to, diesel engine or gas turbine generators for emergency power generation; central heating boilers for commercial or large residential buildings; process equipment for light industrial uses; kitchen equipment at restaurants and schools; service station equipment; and dry cleaning equipment. Information on stationary sources that could operate within the planning area in the future is not available at this time, and there is no reliable methodology to estimate these emissions. Nonetheless, the emissions from these sources would be an addition to the estimated area and mobile source emissions described above.

Modeled operational emissions are summarized in Table 4.3-4 for the existing land uses in 2013 and for development under the Draft General Plan in 2030. Refer to Appendix B for a detailed summary of the modeling assumptions, inputs, and outputs.

<table>
<thead>
<tr>
<th>Source</th>
<th>Emissions (tons/year) 1</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
<td>NOx</td>
<td>PM10</td>
<td>PM2.5</td>
</tr>
<tr>
<td><strong>Existing (2013)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area-Source</td>
<td>534</td>
<td>7</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>Energy</td>
<td>2</td>
<td>18</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mobile-Source</td>
<td>311</td>
<td>542</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>Total Unmitigated</td>
<td>847</td>
<td>567</td>
<td>108</td>
<td>93</td>
</tr>
</tbody>
</table>

Table 4.3-4 Summary of Modeled Long-Term Operational Emissions Under the Draft General Plan
Implementation of the General Plan would lead to long-term operational emissions of ROG, NOx, PM10, and PM2.5, including emissions from stationary sources. As summarized in Table 4.3-4, operation of the projects developed as part of the Draft General Plan would result in unmitigated long-term regional emissions of approximately 727 tons per year of ROG, 221 tons per year of NOx, 115 tons per year of PM10, and 97 tons per year of PM2.5. The additional land uses that would be developed as a result of the General Plan would generate ROG, NOx, PM10 and PM2.5 emissions. However, even considering the operation of those additional land uses, implementation of the Draft General Plan would result in a net decrease of ROG and NOx emissions compared to existing conditions. The net decrease is related to federal and state regulations that would reduce vehicle emissions from advancements in engine technology and fleet turnover. Thus, because long-term operational emissions of ROG and NOx would result in a net decrease with implementation of the Draft General Plan, the impacts of long-term operational ROG and NOx emissions would be less than significant.

The Draft General Plan can also be evaluated by the impacts associated with continued and future operation of developed land uses, including increased vehicle trips. The relationship between the projected VMT and population growth can indicate whether the plan is successful in addressing motor vehicle emissions (i.e., whether VMT increases at a slower rate than population growth). The existing VMT per service population, where service population is the number of residents plus the number of jobs, is 41.20-96 (1,192,077 VMT/22,12321,944 people + 6,465 jobs). The Draft General Plan would result in a VMT per service population of 35.51 (1,520,801 VMT/25,241 people + 17,586 jobs) in 2030.1 Therefore, implementation of the Draft General Plan would reduce VMT per service population for the region compared to existing conditions. The Draft General Plan’s Land Use Element contains several policies that would promote high-density, mixed-use, and infill development. Policies LU-1.2 and 1.3 would help promote areas with higher density residential land uses that are connected via transit, bicycle, and pedestrian transportation, which would reduce the need for single-occupancy vehicle trips and vehicle miles traveled in the region. Policies LU-10.1 to 10.3 would promote mixed use Town Centers that site residents, jobs, and retail amenities in proximity of

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**Table 4.3-4**

Summary of Modeled Long-Term Operational Emissions Under the Draft General Plan

<table>
<thead>
<tr>
<th>Source</th>
<th>Emissions (tons/year) 1</th>
<th>ROG</th>
<th>NOx</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2030</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area-Source</td>
<td>584</td>
<td>8</td>
<td>80</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>3</td>
<td>13</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Mobile-Source</td>
<td>140</td>
<td>200</td>
<td>33</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Total Unmitigated</td>
<td>727</td>
<td>221</td>
<td>115</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td><strong>Net Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area-Source</td>
<td>50</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>1</td>
<td>(5)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mobile-Source</td>
<td>(171)</td>
<td>(342)</td>
<td>3</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Net Change in Total</td>
<td>(120)</td>
<td>(346)</td>
<td>7</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Notes: ROG = reactive organic gases; NOx = oxides of nitrogen; PM10 = respirable particulate matter; PM2.5 = fine particulate matter

See Appendix B for modeling assumptions and results.

1 Operational emissions shown represent the maximum annual emissions in the year 2030. Totals may not add exactly due to rounding.

Source: Modeling performed by AECOM in 2014

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1 Using approximately 6.1 million square feet of non-residential square feet and 350 square feet on average for each employee, it equates to an estimated 17,586 employees by 2030.
each other to reduce the need for motor vehicle travel and facilitate the use of transit, bicycle, and walking to reach daily necessities. Policies LU-11.1 and 11.2 further support these development patterns (i.e., mixed use, high density) in the Martell RSC. In addition, Policy LU-11.2 promotes low impact development and green building standards to reduce energy and water consumption, which would also indirectly reduce air quality emissions in the region.

The Conservation Element of the Draft General Plan also contains policies aimed to reduce water consumption and wastewater production, both of which would indirectly reduce regional air quality emissions associated with energy use for water treatment and conveyance. Policy C-1.4 encourages new development to be designed with water conservation features and low-water landscapes to reduce water consumption, which indirectly reduces energy-related air quality emissions. Policies C-4.1, 4.3, and 4.4 promote sites with permeable surfaces to increase infiltration and minimize stormwater runoff, thereby reducing energy demands for wastewater treatment. Policies C-9.1 to 9.6 would promote energy efficiency and recycled materials in new development to reduce indirect air quality emissions associated with energy production and construction material manufacturing. These policies would also promote infill and transit-serviced development to reduce dependency on motor vehicle travel and provide feasible and safe methods to reach amenities (e.g., homes, jobs, retail) using non-vehicular modes of transportation. Finally, the Draft General Plan’s Circulation Element would encourage new roadway improvements and construction to consider alternative modes of transportation. Policies CM-2.1 and 3.1 to 3.7 would encourage projects to consider providing multimodal roadways to accommodate bicycles and pedestrians that would promote non-vehicular modes of travel in the County. In addition, these policies recommend that new projects consider the availability of public transit and proximity to activity centers and essential services when developing new land uses to minimize the need for motor vehicle travel and reduce air quality emissions.

The Draft General Plan policies mentioned above would help reduce air quality emissions in the County from various emissions sources (e.g., energy, water, transportation). However, as shown in Table 4.3-4, operational area- and mobile-source emissions from implementation of the Draft General Plan would still result in a net increase of PM$_{10}$ and PM$_{2.5}$ emissions, which could result in or substantially contribute to emission concentrations that exceed the NAAQS or CAAQS. Therefore, even with implementation of the Draft General Plan policies mentioned above, operational emissions of these criteria air pollutants (i.e., PM$_{10}$ and PM$_{2.5}$) could violate or contribute substantially to an existing or projected air quality violation, result in a cumulatively considerable net increase in non-attainment criteria pollutants, and/or expose sensitive receptors to substantial pollutant concentrations. Emissions increases of PM$_{10}$ and PM$_{2.5}$ could also contribute to adverse health impacts caused by PM$_{10}$ and PM$_{2.5}$ as described in Section 4.3.2, Environmental Setting. Long-term operational emissions of PM$_{10}$ and PM$_{2.5}$ associated with the Draft General Plan implementation would result in a significant impact.

Mitigation Measure 4.3-2a: Implement Reduction Measures for Discretionary Projects

a. The County will require each project applicant, as a condition of development project discretionary approval, to implement measures to reduce operational emissions of criteria air pollutants. Measures to reduce operational emissions will only be required for projects that exceed the applicable thresholds of significance for ROG, NOx, PM$_{10}$, or PM$_{2.5}$ emissions, as demonstrated by project-level CEQA analysis. It should be noted that measures and programs implemented as a result of the climate action plan would also reduce air quality emissions from new and existing projects. Example measures include:

- Install solar, wind, and geothermal power systems and solar hot water heaters.
- Install solar panels on unused roof and ground space and over carports and parking areas.
- Promote “least polluting” ways to connect people and goods to their destinations.
- Incorporate bicycle lanes, routes and facilities into roadway systems.
• Require amenities for non-motorized transportation, such as secure and convenient bicycle parking.

• Institute teleconferencing, telecommute and/or flexible work hour programs to reduce unnecessary employee transportation

• Provide information on alternative transportation options for consumers, residents, tenants and employees to reduce transportation-related emissions.

• Purchase, or create incentives for purchasing, low or zero-emission vehicles.

• Create a ride sharing program. Promote existing ride sharing programs e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles, and providing a web site or message board for coordinating rides.

• Enforce and follow limits regarding idling times for commercial vehicles, including delivery and construction vehicles.

• To the extent feasible and practical, construct new roadways for residential, commercial, or industrial projects in the County using materials that minimize particulate matter emissions (e.g., paved roads rather than unpaved, dirt roads). Roads should also be permeable when feasible and appropriate for the scale and intensity of planned use.

**Responsible Agencies/Departments:** Planning Department

**Time Frame:** Ongoing

**Mitigation Measure 4.3-2b: Implement Program D-7, Air Emissions and Sensitive Receptors**

a. In the review of development proposals, the County will require projects to comply with all applicable Amador Air District (AAD) rules, and obtain all required AAD permits.

b. In the review of development proposals, the County will reference the guidelines presented in the California Air Resources Board’s Air Quality and Land Use Handbook: A Community Health Perspective, or the Amador Air District guidelines and recommendations available at the time, when establishing buffers around existing or proposed sources of toxic air contaminants or odorous emissions. During future environmental CEQA review for individual projects, projects that would result in substantial TAC emissions directly or indirectly (e.g., industrial sources), or for land use projects that would expose sensitive receptors to substantial TAC concentrations (e.g., residential land uses located near existing TAC sources), the County will require an HRA to be performed by project applicants to determine whether existing or proposed on-site sensitive receptors will be exposed to significant levels of TAC emissions. An HRA would only be required for those projects that would be anticipated to expose sensitive receptors to substantial TAC concentrations based on the project description or other relevant characteristics as determined by County Planning staff during the environmental review process. If the results of the HRA indicate a significant impact, the individual project applicant shall employ measures (e.g., air filters, project redesign) to reduce exposures to levels below the acceptable limits (e.g., 10 in a million excess cancer risk, 1.0 health hazard index).

**Responsible Agencies/Departments:** Planning Department

**Working With:** Amador County Air District

**Time Frame:** Ongoing
Significance after Mitigation

Mitigation Measures 4.3-2a and 4.3-2b would reduce this impact, but not to a less-than-significant level, because project-level mitigation cannot be guaranteed to be effective for all projects. Operational PM$_{10}$ and PM$_{2.5}$ concentrations could still violate or contribute substantially to an existing or projected air quality violation, result in a cumulatively considerable net increase in non-attainment criteria pollutants, and/or expose sensitive receptors to substantial pollutant concentrations. No additional feasible mitigation is available to reduce this impact to a less-than-significant level. The impact would remain significant and unavoidable.

**IMPACT 4.3-3** Generation of Long-Term, Operational, and Local Mobile-Source Emissions of CO. Emissions of CO from local mobile sources and generated by long-term project operations would not result in or substantially contribute to emissions concentrations that exceed the 1-hour ambient air quality standard of 20 ppm or the 8-hour standard of 9 ppm, respectively. As a result, this impact would be less than significant.

A mobile-source pollutant of localized concern is CO. Local mobile-source emissions of CO near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels for local sensitive land uses such as residential units, hospitals, schools, and childcare facilities.

The Amador Air District does not provide guidelines for analysis of CO impacts. Therefore, guidelines from a neighboring air district are used for this analysis. Several air districts within the state, including the neighboring Sacramento Metropolitan Air Quality District (SMAQMD) have developed screening criteria to determine whether a proposed project would result in a CO hotspot. SMAQMD has established a two-tiered qualitative screening threshold to determine whether a project would have the potential to exceed the ambient air quality standard for CO. The Draft General Plan would result in a less-than-significant impact on air quality for local CO if:

- traffic generated by the Draft General Plan would not result in deterioration of intersection level of service (LOS) to LOS E or F; or
- the Draft General Plan would not contribute additional traffic to an intersection that already operates at LOS E or F.

As discussed in Chapter 4.14, “Transportation,” there are a number of locations where intersections would operate at LOS E or F under the Draft General Plan. These intersections are located on SR 49, SR 88, SR 104, Buena Vista Rd, Camanche Parkway, Camanche Road, Jackson Valley Rd (west), and Jackson Valley Road. Therefore, the first tier of screening criteria is not met.

- If the first tier of screening criteria is not met, SMAQMD provides a second tier of screening criteria. If all of the following criteria are met, the Draft General Plan would result in a less-than-significant impact on air quality for local CO:
  - The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour.
  - The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other locations where horizontal or vertical mixing of air would be substantially limited.
  - The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average.
Traffic volumes on the roadways and at intersections affected by the implementation of the Draft General Plan would not increase to more than 31,600 vehicles per hour. The maximum daily volumes on the above listed roadways would not exceed 22,200 vehicles, which would occur on SR 88, in 2030. Implementation of the Draft General Plan would also not contribute traffic to a location where horizontal or vertical mixing of air would be substantially limited, and the mix of vehicle types at these intersections is not anticipated to have a greater percentage of heavy-duty vehicles and would not be substantially different from the County average. Therefore, emissions of CO from local mobile sources and generated by long-term project operations under the Draft General Plan would not result in or substantially contribute to emissions concentrations that exceed the 1-hour ambient air quality standard of 20 ppm or the 8-hour standard of 9 ppm, respectively. As a result, this impact would be less than significant.

**Mitigation Measures:** No mitigation measures are required.

**Impact**

### Exposure of Sensitive Receptors to Short- and Long-Term Emissions of Toxic Air Contaminants.

Implementation of the Draft General Plan would result in exposure of sensitive receptors to short- and long-term emissions of TACs from on-site stationary and mobile sources, or from off-site mobile sources. This impact would be significant.

### Construction

Implementation of the Draft General Plan would result in the construction of new buildings, structures, paved areas, roadways, utilities, and other improvements. Heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles associated with this construction could generate diesel PM, which the ARB identified as a TAC. Generation of diesel PM from construction projects typically occurs in a single area (e.g., at the project site) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed would also vary throughout the construction period. During some equipment-intensive phases such as grading, construction-related emissions would be higher than other less equipment-intensive phases such as building construction or architectural coatings. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005).

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed amount of emissions would result in higher health risks for the Maximally Exposed Individual (MEI). According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments (HRAs) used to determine the exposure of sensitive receptors to TAC emissions should be based on a 70-year exposure period; however, such assessments should also be limited to the period/duration associated with construction activities which implement the Draft General Plan. Building construction activities for individual projects, as part of Draft General Plan implementation, are anticipated to last approximately 6 months to a year. Thus, if the duration of potentially harmful construction activities near a sensitive receptor was 1 year, the exposure would be approximately one percent of the total exposure period used for typical health risk calculations. Considering this information, the highly dispersive nature of diesel PM, and the fact that construction activities would occur intermittently and at various locations over approximately 17 years (i.e., 2013 to 2030), it is not anticipated that the implementation of the Draft General Plan would expose sensitive receptors to substantial construction-related TAC concentrations. Therefore, this impact would be less than significant.

### Operations

New land uses developed under the Draft General Plan would include new residential, commercial, and industrial uses. The Draft General Plan anticipates construction of commercial land uses, which may potentially include
stationary sources of TACs, such as dry-cleaning establishments and diesel-fueled back-up generators. These types of stationary sources, in addition to any other stationary sources, including industrial land uses, that may emit TACs, would be subject to the Air District’s Rules and Regulations.

ARB’s Air Quality and Land Use Handbook focuses on risks from emissions of diesel PM and establishes recommended siting distances for sensitive receptors. ARB’s recommendations include siting distances for both stationary and mobile sources of TACs. ARB’s recommendations for stationary sources include distribution centers with diesel-powered trucks, transport refrigeration units (TRUs), or TRU generator sets, and other facilities using diesel equipment. With respect to freeways, the handbook’s recommendations are: “Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with more than 100,000 vehicles per day or rural roads with 50,000 vehicles per day.” ARB notes that these recommendations are advisory and should not be interpreted as defined “buffer zones,” and that local agencies must balance other considerations such as transportation needs, the benefits of urban infill, community economic development priorities, and other quality-of-life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk, where necessary, ARB’s position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.

Implementation of the Draft General Plan would result in the operation of new land uses in areas that could be in proximity of existing TAC sources, which may expose sensitive receptors to adverse impacts associated with TAC emissions. Projects could be located within the siting distances recommended by ARB’s Air Quality and Land Use Handbook, and sensitive receptors could experience the adverse health effects from TACs described in Section 4.3.2, Environmental Setting Therefore, this impact would be significant.

Mitigation Measure: Implement Mitigation Measure 4.3-2b: Implement Program D-7, Air Emissions and Sensitive Receptors

See Mitigation Measure 4.3-2b (above) in Impact 4.3-2 and Amador County Implementation Plan page 23 for full description of Program D-7.

Mitigation Measure 4.3-4a: Implement Program D-7 (2) Air Emissions and Sensitive Receptors

a. In the review of development proposals, the County will reference the guidelines presented in the ARB’s Air Quality and Land Use Handbook: A Community Health Perspective, or the Amador Air District guidelines and recommendations available at the time, when establishing buffers around existing or proposed sources of toxic air contaminants or odorous emissions. During future environmental CEQA review for individual projects, projects that would result in substantial TAC emissions directly or indirectly (e.g., industrial sources), or for land use projects that would expose sensitive receptors to substantial TAC concentrations (e.g., residential land uses located near existing TAC sources), the County will require an HRA to be performed by project applicants to determine whether existing or proposed on-site sensitive receptors will be exposed to significant levels of TAC emissions. An HRA would only be required for those projects that would be anticipated to expose sensitive receptors to substantial TAC concentrations based on the project description or other relevant characteristics as determined by County Planning staff during the environmental review process. If the results of the HRA indicate a significant impact, the individual project applicant shall employ measures (e.g., air filters, project redesign) to reduce exposures to levels below the acceptable limits.

Responsible Agencies/Departments: Planning Department

Time Frame: Ongoing
Significance after Mitigation

Where environmental review under CEQA indicates TAC concerns, the County will require individual projects constructed under the Draft General Plan to also prepare an HRA, reduce exposure to sensitive receptors, and/or to implement alternative approaches to development that reduce exposure to toxic air contaminant sources. Implementation of Mitigation Measures 4.3-2b and 4.3-4a would lessen health-related risks associated with operational sources of TAC emissions. However, exposure to substantial TAC emissions concentrations would not necessarily be reduced to less-than-significant levels. No additional feasible mitigation is available to reduce this impact to a less-than-significant level. Therefore, this impact would remain significant and unavoidable.

IMPACT 4.3-5 Exposure of Sensitive Receptors to Construction-Generated Emissions of Naturally Occurring Asbestos. Asbestos is a toxic air contaminant. Residents and other receptors located close to construction activity would be exposed to dust from asbestos rock and soils during earth disturbance activities. This impact would be significant.

Grading, blasting, and other forms of ground disturbance during construction would result in fugitive PM_{10} dust emissions. As described in Section 4.3.2, “Environmental Setting,” and in Chapter. 4.6, “Geology, Soils, and Mineral and Paleontological Resources,” some parts of the planning area may contain serpentine or ultramafic rock that is common to the Sierra Nevada foothills. These types of rock—ultramafic rocks (um), metamorphosed mafic volcanic rocks (mv), metamorphosed intrusive rocks (mi); and gabbroic (mafic intrusive) rocks (gb), including the Copper Hill Volcanics (Jch), the Gopher Ridge Volcanics (Jgo), and the Logtown Ridge (Jlr) geologic formations found in the planning area—can contain thin veins of asbestos that have the potential to become airborne when disturbed by grading or blasting. Although geologic conditions are more likely for asbestos formation in these areas, the actual presence of asbestos is uncertain.

During site grading and rock blasting activities related to the construction of new residential dwellings, non-residential buildings, roadways, or facilities which implement the Draft General Plan, serpentine soils could be disturbed. Without appropriate controls, sensitive receptors near construction sites could be exposed to localized high levels of re-entrained fugitive PM_{10} dust, potentially including NOA. Sensitive receptors could experience the adverse health effects from NOA described in Section 4.3.2, Environmental Setting. As a result, this potential impact would be significant.

Mitigation Measure 4.3-5: Naturally-Occurring Asbestos Control

a. The County will amend Chapter 15.40 of the County Code (governing grading and erosion control) to include a section addressing the reduction of asbestos exposure for grading permits in areas likely to contain naturally occurring asbestos (mapped as Ultramafic (um), Copper Hill Volcanics (Jch), the Gopher Ridge Volcanics (Jgo), or Logtown Ridge (Jlr) on the Geologic Atlas of California – Sacramento Sheet, or based on mapping developed by the California Geological Survey). Methods to reduce asbestos exposure may include requiring grading permits or building permits that would result in earth disturbance to have a California-registered geologist knowledgeable about asbestos-containing formations inspect the project area, using appropriate test methods, for the presence of asbestos. If the investigation determines that NOA is present, then the County will require the project applicant to prepare an Asbestos Dust Control Plan as required in Section 93105 of the California Health and Safety Code, including measures to reduce exposures consistent with Section 93105(d) and (e) of the California Health and Safety Code. These measures include wetting unpaved areas subject to vehicle traffic; limiting speed to 15 miles per hour; stabilizing storage piles and disturbed areas with water, cover, or chemical suppressant; washing down equipment before moving from the property onto a paved public road; and applying water to prevent visible dust in areas where ground disturbance or grading occurs.

Responsible Agencies/Departments: Building Department and Department of Transportation and Public Works
**Time Frame:** December 2015

Within 12 months after adoption of General Plan

### Significance after Mitigation

Implementation of Mitigation Measure 4.3-5 would reduce potential impacts related to exposure to NOA to a **less-than-significant** level because future projects that would occur under the Draft General Plan, having the potential to expose sensitive receptors to NOA, would be required to develop an Asbestos Dust Control Plan and implement specified measures that would avoid or substantially reduce health risks from asbestos exposure.

### IMPACT

**Exposure of Sensitive Receptors to Odors.** Long-term project operation would result in siting sensitive receptors near existing sources of odorous emissions. This impact would be **significant.**

As discussed previously, the human response to odors is subjective and sensitivity to odors varies greatly among the public. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headaches). The Amador Air District does not provide guidelines for analysis of odor impacts. Rule 205, “Nuisance,” prohibits sources from discharging air contaminants or other material which can cause injury, detriment, nuisance, or annoyance to any considerable number of persons. However, this rule does not apply to odors emanating from agricultural operations.

Since the Amador Air District does not provide guidelines for analysis of odor impacts, guidelines from other air districts are used for this analysis. Many regional air districts, including the neighboring SMAQMD, have developed screening-level distances to potential major odor sources (e.g., waste water treatment facilities, food processing facilities, landfills, etc.) (SMAQMD 2009). In the absence of local thresholds, SMAQMD screening distances have been used based on the broadly similar air conditions in the SMAQMD region and Amador County to evaluate the proposed project’s odors. Other minor sources of odors such as exhaust from mobile-sources, garbage collection areas, and charbroilers associated with commercial uses, are not typically associated with numerous odor complaints, but are known to have some temporary, less concentrated odorous emissions.

Two situations increase the potential for odor problems. The first occurs when a new odor source is located near existing sensitive receptors. The second occurs when new sensitive receptors are developed near existing sources of odors. For projects being developed near a source of odors where there is no nearby development that may have filed complaints, and for odor sources being developed near existing sensitive receptors, the determination of potential conflict should be based on the distance and frequency at which odor complaints from the public have occurred in the vicinity of a similar facility.

Potential sources that may emit odors during construction activities include equipment exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the development area. Exhaust odors from diesel engines, as well as emissions associated with asphalt paving and the application of architectural coatings, may be considered offensive to some individuals. Similarly, diesel-fueled trucks traveling on local roadways would produce associated diesel exhaust fumes. However, odors associated with diesel fumes, asphalt paving, and architectural coatings would be temporary and would disperse rapidly with distance from the source. Projects constructed under the Draft General Plan would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Therefore, construction-generated odors would not result in frequent exposure of on-site receptors to objectionable odor emissions.

Implementation of the Draft General Plan would apply a range of land use designations including retail, office, commercial and industrial uses. Major sources of odors could include new or expanded wastewater treatment and pumping facilities; manufacturing facilities with significant quantities of odorous materials; sanitary landfills and transfer stations; painting/coating operations (e.g., auto body shops); composting facilities; and, confined animal facilities. Minor sources of odors include restaurants, coffee roasters, and other urban land uses. This list is not meant to be entirely inclusive but illustrates common land uses that could locate in Amador County and emit...
odors. The County has anticipated the possibility that sensitive receptors may be exposed to sources of odor during implementation of the Draft General Plan. All new development projects will be required to meet existing regulations, including permitting requirements and disclosure laws. Individual development projects will also be required to undergo project-specific environmental review, and mitigation measures will be identified to reduce any project-specific significant impacts. Specific requirements would include:

- Prior to approval, new developments are required to demonstrate consistency with established standards for setbacks from landfills, airports, sewage treatment plants, and other similar uses, as applicable.
- For proposed odor-emitting land uses, installation of odor controls, as feasible, to reduce exposure for existing and future residents will be required.
- A requirement that deeds to all properties for proposed residential uses located near major odor sources (as defined by the Amador Air District) include a disclosure clause advising buyers and tenants of the potential adverse odor impacts.

However, even with these measures, projects constructed under the Draft General Plan could create objectionable odors affecting a substantial number of people. As a result, impacts related to odors would be significant.

**Mitigation Measure 4.3-6: Implement Measures to Control Exposure of Sensitive Receptors to Odorous Emissions**

a. The County will require the project applicant(s) for all project phases to implement the following measures:

- For every proposed land use that has the potential to emit odor, the project applicant shall perform a review as part of the CEQA analysis to determine whether existing or proposed sensitive receptors will be exposed to significant levels of odorous emissions.
- For existing odor-producing sources, sensitive receptors shall be sited as far away as possible from the existing sources.
- For new project-generated odor-producing sources, sensitive receptors shall be sited as far away as possible from the new sources.

**Responsible Agencies/Departments:** Planning Department

**Time Frame:** Ongoing

**Significance after Mitigation**

Implementation of Mitigation Measure 4.3-6 would reduce odor emissions, because project-level CEQA review and mitigation measures imposed at the project level would avoid conflicts between odor emissions and sensitive receptors. This impact would be less-than-significant.