

5. AIR QUALITY, GREENHOUSE GAS EMISSIONS, AND ENERGY

5.1 INTRODUCTION

The Air Quality, Greenhouse Gas Emissions, and Energy chapter of the EIR describes the potential impacts of the proposed project on local and regional air quality emissions, potential impacts related to greenhouse gas emissions (GHGs) and climate change, and potential impacts related to energy. The chapter includes a discussion of the existing air quality, GHG, and energy setting, construction-related air quality impacts resulting from grading and equipment emissions, direct and indirect emissions associated with operations of the project, the impacts of these emissions on both the local and regional scale, impacts associated with energy use, and mitigation measures warranted to reduce or eliminate any identified significant impacts. This chapter is based on the Placer County General Plan¹ and associated EIR,² the Placer County Air Pollution Control District's (PCAPCD) *CEQA Air Quality Handbook*,³ PCAPCD's *Review of Land Use Projects Under CEQA*,⁴ the *Placer County Sustainability Plan: A Greenhouse Gas Emission Reduction Plan and Adaptation Strategy*,⁵ and the technical analysis performed by Raney Planning and Management, Inc.

5.2 EXISTING ENVIRONMENTAL SETTING

The following information provides an overview of the existing environmental setting in relation to air quality within the proposed project area. Air basin characteristics, ambient air quality standards (AAQS), attainment status and regional air quality plans, local air quality monitoring, odors, and sensitive receptors are discussed. In addition to the information pertaining to air quality, information related to climate change, GHGs, and energy is provided as well.

Air Basin Characteristics

The project site is located in eastern Placer County, which falls within the Mountain Counties Air Basin (MCAB) and is within the jurisdictional boundaries of the PCAPCD. The MCAB includes portions of Amador, Calaveras, El Dorado, Mariposa, Nevada, Placer, Plumas, Sierra, and Tuolumne counties, and is composed of seven air districts within the central and northern Sierra Nevada mountain range with elevations ranging from several hundred feet in the foothills to over 6,000 feet above mean sea level along the Sierra ridge.

The climate of the MCAB is influenced by the foothill and mountainous terrain unique to the counties included in the MCAB. The general climate of the MCAB varies considerably with elevation and proximity to the Sierra ridge. The terrain features of the MCAB allow various climates to exist in relatively close proximity. The pattern of mountains and hills causes 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,

¹ Placer County. *Countywide General Plan Policy Document*. August 1994 (Updated May 2013).

² Placer County. *Countywide General Plan EIR*. July 1994.

³ Placer County Air Pollution Control District. *CEQA Air Quality Handbook*. November 21, 2017.

⁴ Placer County Air Pollution Control District. *Review of Land Use Projects Under CEQA*. October 13, 2016.

⁵ Placer County Community Development Resource Agency. *Placer County Sustainability Plan: A Greenhouse Gas Emission Reduction Plan and Adaptation Strategy*. January 28, 2020.



vertical mixing, and photochemistry. In the winter, the Sierra Nevada Range receives large amounts of precipitation from storms moving in from the Pacific. In the summer, the area receives lighter amounts of precipitation from intermittent “monsoonal” moisture flows from the south and cumulus buildup. Precipitation levels 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 depths of snow can accumulate, while in the summer, temperatures in the mountains are mild, with daytime peaks in the 70s to low 80s Fahrenheit.

Due to the topographical features and meteorological conditions of the region, local conditions predominate in determining the effect of emissions in the MCAB, and, thus, the MCAB is more sensitive to negative impacts on air quality than most other areas of the State. Regional air flows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing and hinder dispersion, creating areas of high pollutant concentrations. Cold temperatures and mild winds often result in temperature inversions in which upper layers of warmer air trap colder air near the land surface. Local pollutant sources within the area are trapped by frequent inversions, which limit the volume of air into which pollutants can be mixed and result in elevated pollutant concentrations. The most frequent episodes of high pollution occur during local basin inversions, when emissions from local sources such as motor vehicles, chimney smoke, and forest burning are trapped in the basin. In the winter, local basin inversions can lead to CO “hotspots” along heavily traveled roads and at busy intersections. Local air basin inversions in the project area are a result of the cold temperatures of Lake Tahoe, which contribute to the occurrence of subsidence and radiation inversions throughout the year. The nighttime cooling effects of the lake result in down-slope nocturnal winds, which transport local pollutants from developed areas around the lake out onto the lake and contribute to increased pollutant deposition into the lake, which is the most common meteorological condition contributing to air quality degradation in the project area. Lake Tahoe is located approximately four miles east of the project site. While the lake is outside of the MCAB boundaries, information regarding Lake Tahoe is noted herein, as the lake can affect the climate and air quality of the region.

During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy necessary for the photochemical reaction between reactive organic compounds (ROG) and oxides of nitrogen (NO_x), which results in the formation of ozone. Ozone is considered a regional pollutant rather than a local hotspot problem due to the prolonged formation time of the pollutant. In addition, summer conditions allow strong upwind valley air to flow into the MCAB from the Central Valley, creating an effective transport medium for ozone precursors and for ozone generated in the Bay Area and the Sacramento and San Joaquin Valleys. The transported pollutants are the predominant cause of ozone in the MCAB.

Air quality in the project vicinity is influenced by both local and distant emission sources. Air pollutant sources in the immediate project vicinity primarily include emissions from vehicle traffic on nearby roadways. Other sources of air pollutants in the area include activities associated with commercial, residential, and industrial land uses.

Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established AAQS for common pollutants. The federal standards are divided into primary standards, which are designed to protect the public health, and secondary standards, which are designed to protect the public welfare. The AAQS for each contaminant represent safe



levels that avoid specific adverse health effects. Pollutants for which AAQS have been established are called “criteria” pollutants. Table 5-1 identifies the major pollutants, characteristics, health effects and typical sources.

Table 5-1 Summary of Criteria Pollutants			
Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive gas produced by the photochemical process involving a chemical reaction between the sun’s energy and other pollutant emissions. Often called photochemical smog.	<ul style="list-style-type: none"> • Eye irritation • Wheezing, chest pain, dry throat, headache, or nausea • Aggravated respiratory disease such as emphysema, bronchitis, and asthma 	Combustion sources such as factories, automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	An odorless, colorless, highly toxic gas that is formed by the incomplete combustion of fuels.	<ul style="list-style-type: none"> • Impairment of oxygen transport in the bloodstream • Impaired vision, reduced alertness, chest pain, and headaches • Can be fatal in the case of very high concentrations 	Automobile exhaust, combustion of fuels, and combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	A reddish-brown gas that discolors the air and is formed during combustion of fossil fuels under high temperature and pressure.	<ul style="list-style-type: none"> • Lung irritation and damage • Increased risk of acute and chronic respiratory disease 	Automobile and diesel truck exhaust, industrial processes, and fossil-fueled power plants.
Sulfur Dioxide	A colorless, irritating gas with a rotten egg odor formed by combustion of sulfur-containing fossil fuels.	<ul style="list-style-type: none"> • Aggravation of chronic obstruction lung disease • Increased risk of acute and chronic respiratory disease 	Diesel vehicle exhaust, oil-powered power plants, and industrial processes.
Particulate Matter (PM ₁₀ and PM _{2.5})	A complex mixture of extremely small particles and liquid droplets that can easily pass through the throat and nose and enter the lungs.	<ul style="list-style-type: none"> • Aggravation of chronic respiratory disease • Heart and lung disease • Coughing • Bronchitis • Chronic respiratory disease in children • Irregular heartbeat • Nonfatal heart attacks 	Combustion sources such as automobiles, power generation, industrial processes, and wood burning. Also from unpaved roads, farming activities, and fugitive windblown dust.
Lead	A metal found naturally in the environment as well as in manufactured products.	<ul style="list-style-type: none"> • Loss of appetite, weakness, apathy, and miscarriage • Lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract 	Industrial sources and combustion of leaded aviation gasoline.
<p>Sources:</p> <ul style="list-style-type: none"> • California Air Resources Board. <i>California Ambient Air Quality Standards (CAAQS)</i>. Available at: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed November 2022. • Sacramento Metropolitan, El Dorado, Feather River, Placer, and Yolo-Solano Air Districts, <i>Spare the Air website. Air Quality Information for the Sacramento Region</i>. Available at: sparetheair.com. Accessed November 2022. • California Air Resources Board. <i>Glossary of Air Pollution Terms</i>. Available at: https://ww2.arb.ca.gov/glossary. Accessed November 2022. 			



The national and California AAQS (NAAQS and CAAQS, respectively) are summarized in Table 5-2. The NAAQS and CAAQS were developed independently with differing purposes and methods. As a result, the federal and State standards differ in some cases. In general, the State of California standards are more stringent than the federal standards, particularly for ozone and particulate matter (PM).

A description of each criteria pollutant and its potential health effects is provided in the following section.

Table 5-2 Ambient Air Quality Standards				
Pollutant	Averaging Time	CAAQS	NAAQS	
			Primary	Secondary
Ozone	1 Hour	0.09 ppm	-	Same as primary
	8 Hour	0.070 ppm	0.070 ppm	
Carbon Monoxide	8 Hour	9 ppm	9 ppm	-
	1 Hour	20 ppm	35 ppm	
Nitrogen Dioxide	Annual Mean	0.030 ppm	53 ppb	Same as primary
	1 Hour	0.18 ppm	100 ppb	-
Sulfur Dioxide	24 Hour	0.04 ppm	-	-
	3 Hour	-	-	0.5 ppm
	1 Hour	0.25 ppm	75 ppb	-
Respirable Particulate Matter (PM ₁₀)	Annual Mean	20 ug/m ³	-	Same as primary
	24 Hour	50 ug/m ³	150 ug/m ³	
Fine Particulate Matter (PM _{2.5})	Annual Mean	12 ug/m ³	12 ug/m ³	15 ug/m ³
	24 Hour	-	35 ug/m ³	Same as primary
Lead	30 Day Average	1.5 ug/m ³	-	-
	Calendar Quarter	-	1.5 ug/m ³	Same as primary
Sulfates	24 Hour	25 ug/m ³	-	-
Hydrogen Sulfide	1 Hour	0.03 ppm	-	-
Vinyl Chloride	24 Hour	0.010 ppm	-	-
Visibility Reducing Particles	8 Hour	see note below	-	-

ppm = parts per million
ppb = parts per billion
ug/m³ = micrograms per cubic meter

Note: Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Source: California Air Resources Board. Ambient Air Quality Standards. May 4, 2016. Available at: <https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf>. Accessed November 2022.

Ozone

Ozone is a reactive gas consisting of three oxygen atoms. In the troposphere, ozone is a product of the photochemical process involving the sun's energy, and is a secondary pollutant formed as a result of a complex chemical reaction between ROG and NO_x emissions in the presence of sunlight. As such, unlike other pollutants, ozone is not released directly into the atmosphere from



any sources. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation. The primary source of ozone precursors is mobile sources, including cars, trucks, buses, construction equipment, and agricultural equipment. Ground-level ozone reaches the highest level during the afternoon and early evening hours. High levels occur most often during the summer months. Ground-level ozone is a strong irritant that could cause constriction of the airways, forcing the respiratory system to work harder in order to provide oxygen. Ozone at the Earth's surface causes numerous adverse health effects and is a major component of smog. High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments.

Reactive Organic Gas

ROG refers to several reactive chemical gases composed of hydrocarbon compounds typically found in paints and solvents that contributes to the formation of smog and ozone by involvement in atmospheric chemical reactions. A separate health standard does not exist for ROG. However, some compounds that make up ROG are toxic, such as the carcinogen benzene.

Oxides of Nitrogen

NO_x are a family of gaseous nitrogen compounds and are precursors to the formation of ozone and particulate matter. The major component of NO_x, nitrogen dioxide (NO₂), is a reddish-brown gas that discolors the air and is toxic at high concentrations.

NO_x results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of NO_x. NO_x reacts with ROG to form smog, which could result in adverse impacts to human health, damage the environment, and cause poor visibility. Additionally, NO_x emissions are a major component of acid rain. Health effects related to NO_x include lung irritation and lung damage and can cause increased risk of acute and chronic respiratory disease.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, poisonous gas produced by incomplete burning of carbon-based fuels such as gasoline, oil, and wood. When CO enters the body, the CO combines with chemicals in the body, which prevents blood from carrying oxygen to cells, tissues, and organs. Symptoms of exposure to CO can include problems with vision, reduced alertness, and general reduction in mental and physical functions. Exposure to CO can result in chest pain, headaches, reduced mental alertness, and death at high concentrations.

Sulfur Dioxide

Sulfur dioxide (SO₂) is a colorless, irritating gas with a rotten egg odor formed primarily by the combustion of sulfur-containing fossil fuels from mobile sources, such as locomotives, ships, and off-road diesel equipment. SO₂ is also emitted from several industrial processes, such as petroleum refining and metal processing. Similar to airborne NO_x, suspended sulfur oxide particles contribute to poor visibility. The sulfur oxide particles are also a component of PM₁₀.

Particulate Matter

Particulate matter, also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health impacts. The USEPA is concerned about particles that are 10 micrometers in diameter or smaller (PM₁₀) because those



are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, the particles could affect the heart and lungs and cause serious health effects. The USEPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles (PM_{2.5-10})," which are found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. PM_{2.5-10} is deposited in the thoracic region of the lungs.
- "Fine particles (PM_{2.5})," which are found in smoke and haze, are 2.5 micrometers in diameter and smaller. PM_{2.5} particles could be directly emitted from sources such as forest fires, or could form when gases emitted from power plants, industries, and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- "Ultrafine particles (UFP)," are very, very small particles (less than 0.1 micrometers in diameter) largely resulting from the combustion of fossil fuels, meat, wood, and other hydrocarbons. While UFP mass is a small portion of PM_{2.5}, their high surface area, deep lung penetration, and transfer into the bloodstream could result in disproportionate health impacts relative to their mass. UFP is not currently regulated separately, but is analyzed as part of PM_{2.5}.

PM₁₀, PM_{2.5}, and UFP include primary pollutants, which are emitted directly to the atmosphere and secondary pollutants, which are formed in the atmosphere by chemical reactions among precursors. Generally speaking, PM_{2.5} and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM₁₀ sources include the same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust. Long-term PM pollution, especially fine particles, could result in significant health problems including, but not limited to, the following: increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; decreased lung function; aggravated asthma; development of chronic respiratory disease in children; development of chronic bronchitis or obstructive lung disease; irregular heartbeat; heart attacks; and increased blood pressure.

Lead

Lead is a relatively soft and chemically resistant metal that is a natural constituent of air, water, and the biosphere. Lead forms compounds with both organic and inorganic substances. As an air pollutant, lead is present in small particles. Sources of lead emissions in California include a variety of industrial activities. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically. However, because lead was emitted in large amounts from vehicles when leaded gasoline was used, lead is present in many soils (especially urban soils) as a result of airborne dispersion and could become re-suspended into the air.

Because lead is slowly excreted by the human body, exposures to small amounts of lead from a variety of sources could accumulate to harmful levels. Effects from inhalation of lead above the level of the AAQS may include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms could include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children. Lead also causes cancer.



Sulfates

Sulfates are the fully oxidized ionic form of sulfur and are colorless gases. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. The sulfur is oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The sulfates standard established by CARB is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, because they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide

Hydrogen sulfide (H₂S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations, especially in enclosed spaces (800 ppm can cause death).

Vinyl Chloride

Vinyl chloride (C₂H₃Cl, also known as VCM) is a colorless gas that does not occur naturally, but is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC) which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

Visibility Reducing Particles

Visibility reducing particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are also a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Common stationary sources of TACs include gasoline stations, dry cleaners, and diesel backup generators, which are subject to PCAPCD stationary source permit requirements. The other, often more significant, common source type is on-road motor vehicles, such as cars and trucks, on freeways and roads, and off-road sources such as construction equipment, ships, and trains.

Fossil fueled combustion engines, including those used in cars, trucks, and some pieces of construction equipment, release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene, toluene, xylenes, and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust, DPM, is composed of carbon



particles and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of such chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including ROG and NO_x. Due to the published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects, the CARB has identified DPM from diesel-fueled engines as a TAC. Although a variety of TACs are emitted by fossil fueled combustion engines, the cancer risk due to DPM exposure represents a more significant risk than the other TACs discussed above.⁶

More than 90 percent of DPM is less than one micrometer in diameter, and, thus, DPM is a subset of PM_{2.5}. As a California statewide average, DPM comprises about eight percent of PM_{2.5} in outdoor air, although DPM levels vary regionally due to the non-uniform distribution of sources throughout the State. Most major sources of diesel emissions, such as ships, trains, and trucks, operate in and around ports, rail yards, and heavily-traveled roadways. Such areas are often located near highly populated areas. Thus, elevated DPM levels are mainly an urban problem, with large numbers of people exposed to higher DPM concentrations, resulting in greater health consequences compared to rural areas.

Due to the high levels of diesel activity, high volume freeways, stationary diesel engines, rail yards and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Construction-related activities also have the potential to generate concentrations of DPM from on-road haul trucks and off-road equipment exhaust emissions.

The size of diesel particulates that are of the greatest health concern are fine particles (i.e., PM_{2.5}) and UFPs. The small diameter of UFPs imparts the particulates with unique attributes, such as high surface areas and the ability to penetrate deeply into lungs. Once UFPs have been deposited in lungs, the small diameter allows the UFPs to be transferred to the bloodstream. The high surface area of the UFPs also allows for a greater adsorption of other chemicals, which are transported along with the UFPs into the bloodstream of the inhaler, where the chemicals can eventually reach critical organs.⁷ The penetration capability of UFPs may contribute to adverse health effects related to heart, lung, and other organ health.⁸ UFPs are a subset of DPM and activities that create large amounts of DPM, such as the operations involving heavy diesel-powered engines, also release UFPs. Considering that UFPs are a subset of DPM, and DPM represents a subset of PM_{2.5}, estimations of either concentrations or emissions of PM_{2.5} or DPM include UFPs.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, which typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer can include birth defects, neurological damage, and death. Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to criteria air pollutants that have established AAQS. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an AAQS or emission-based threshold.

⁶ California Air Resources Board. *Reducing Toxic Air Pollutants in California's Communities*. February 6, 2002.

⁷ Health Effects Institute. *Understanding the Health Effects of Ambient Ultrafine Particles*. January 2013.

⁸ South Coast Air Quality Management District. *Final 2012 Air Quality Management Plan*. December 2012.



Naturally Occurring Asbestos

Another concern related to air quality is naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Because asbestos is a known carcinogen, NOA is considered a TAC. Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock; construction activities in ultramafic rock deposits; or rock quarrying activities where ultramafic rock is present.

NOA is typically associated with fault zones, and areas containing serpentinite or contacts between serpentinite and other types of rocks. According to the *Special Report 190: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California* prepared by the Department of Conservation, the project site is located within an area categorized as least likely to contain NOA, because faults and serpentinite outcroppings are not known to exist in the project area.⁹

Attainment Status and Regional Air Quality Plans

The Federal Clean Air Act (FCAA) and the California Clean Air Act (CCAA) require all areas of California to be classified as attainment, nonattainment, or unclassified as to their status with regard to the NAAQS and/or CAAQS. The FCAA and CCAA require that the CARB, based on air quality monitoring data, designate portions of the State where the federal or State AAQS are not met as “nonattainment areas.” Because of the differences between the national and State standards, the designation of nonattainment areas is different under the federal and State legislation. The CCAA requires local air pollution control districts to prepare air quality attainment plans. These plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or, provide for adoption of “all feasible measures on an expeditious schedule.”

As presented in Table 5-3, under the CCAA, the MCAB has been designated nonattainment for the State one-hour ozone, State and federal eight-hour ozone, State PM₁₀ and federal PM_{2.5} standards. The MCAB is designated attainment or unclassified for all other AAQS. Due to the nonattainment designations, the PCAPCD, along with the other air districts in the MCAB region, is required to develop plans to attain the federal and State standards for ozone and particulate matter. The air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control measures have worked, and show how air pollution would be reduced. In addition, the plans include the estimated future levels of pollution to ensure that the area would meet air quality goals. Each of the attainment plans currently in effect are discussed in further detail in the Regulatory Context section of this chapter.

Local Air Quality Monitoring

Air quality is monitored by CARB at various locations to determine which air quality standards are being violated, and to direct emission reduction efforts, such as developing attainment plans and rules, incentive programs, etc.

⁹ California Department of Conservation, California Geological Survey. *Special Report 190: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California*. Published 2006.



**Table 5-3
MCAB Attainment Status Designations**

Pollutant	Averaging Time	California Standards	Federal Standards
Ozone	1 Hour	Nonattainment	Revoked in 2005
	8 Hour	Nonattainment	Nonattainment
Carbon Monoxide	8 Hour	Unclassified	Unclassified/Attainment
	1 Hour	Unclassified	Unclassified/Attainment
Nitrogen Dioxide	Annual Mean	Attainment	Unclassified/Attainment
	1 Hour	Attainment	Unclassified/Attainment
Sulfur Dioxide	Annual Mean	Attainment	Unclassified/Attainment
	24 Hour	Attainment	Unclassified/Attainment
	3 Hour	Attainment	Unclassified/Attainment
	1 Hour	Attainment	Unclassified/Attainment
Respirable Particulate Matter (PM₁₀)	Annual Mean	Nonattainment	-
	24 Hour	Nonattainment	Unclassified
Fine Particulate Matter (PM_{2.5})	Annual Mean	Unclassified	Unclassified/Attainment
	24 Hour	-	Nonattainment
Lead	30 Day Average	Attainment	Unclassified/Attainment
	Calendar Quarter	Attainment	Unclassified/Attainment
	Rolling 3-Month Average	Attainment	Unclassified/Attainment
Sulfates	24 Hour	Attainment	-
Hydrogen Sulfide	1 Hour	Unclassified	-
Visibility Reducing Particles	8 Hour	Unclassified	-
<i>Source: California Air Resources Board. Maps of State and Federal Area Designations. Available at: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations. Accessed November 2022.</i>			

The nearest local air quality monitoring station to the project site is the Tahoe City – 221 Fairway Drive station, which is located approximately 5.4 miles southeast of the project site. However, the Tahoe City – 221 Fairway Drive station does not provide data for 24-hour PM₁₀ or 1-hour NO₂ concentrations; thus, the next closest station to the project site with such data available was used, which was the Roseville-N Sunrise station, located at 151 North Sunrise Avenue. Although the Roseville-N Sunrise station is located approximately 65 miles southwest of the project site, as stated, the station is the nearest to the project site with such data available and, thus, would be considered the most reasonable representation for the project region. Based on the data available from the aforementioned monitoring stations, Table 5-4 presents the number of days that the State and federal AAQS were exceeded for the three-year period from 2019 to 2021.

Odors

While offensive odors rarely cause physical harm, they can be unpleasant, leading to considerable annoyance and distress among the public and can generate citizen complaints to local governments and air districts. Adverse effects of odors on residential areas and other sensitive receptors warrant the closest scrutiny; but consideration is also given to other land use types where people congregate, such as recreational facilities, worksites, and commercial areas. The potential for an odor impact is dependent on a number of variables including the nature of the odor source, distance between a receptor and an odor source, and local meteorological conditions.



One of the most important factors influencing the potential for an odor impact to occur is the distance between the odor source and receptors, also referred to as a buffer zone or setback.

Pollutant	Standard	Days Standard Was Exceeded		
		2019	2020	2021
1-Hour Ozone	State	0	1	2
	Federal	0	0	0
8-Hour Ozone	State	0	7	14
	Federal	0	7	12
24-Hour PM _{2.5}	Federal	*	*	*
24-Hour PM ₁₀	State	2	38	11
	Federal	0	5	1
1-Hour Nitrogen Dioxide	State	0	0	0
	Federal	0	0	0

Notes:

- All measurements are from the Tahoe City – 221 Fairway Drive station, with the exception of the 24-hour PM₁₀ and the 1-hour NO₂ measurements, which are from the Roseville-N Sunrise station.
- * indicates that sufficient data was not available to determine the value.

Source: California Air Resources Board. Aerometric Data Analysis and Management (iADAM) System. Available at: <http://www.arb.ca.gov/adam/welcome.html>. Accessed November 2022.

The greater the distance between an odor source and receptor, the less concentrated the odor emission would be when reaching the receptor. Meteorological conditions also affect the dispersion of odor emissions, which determines the exposure concentration of odiferous compounds at receptors. The predominant wind direction in an area influences which receptors are exposed to the odiferous compounds generated by a nearby source. Receptors located upwind from a large odor source may not be affected due to the produced odiferous compounds being dispersed away from the receptors. Wind speed also influences the degree to which odor emissions are dispersed away from any area.

Odiferous compounds could be generated from a variety of source types including both construction and operational activities. Examples of common land use types that typically generate significant odor impacts include, but are not limited to, wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities. The closest sensitive receptors to the project site are the single-family residences located approximately 550 feet to the southeast of the project site.



Atmospheric Deposition into Lake Tahoe

The Tahoe Regional Planning Agency (TRPA) Bi-State Compact, as revised in 1980, gave TRPA authority to adopt environmental quality standards, called thresholds, and to enforce ordinances designed to achieve the thresholds. In 1982, TRPA adopted various environmental threshold carrying capacities (thresholds), which set environmental standards for the Lake Tahoe basin and indirectly define the capacity of the region to accommodate additional land development.

Among the thresholds adopted in 1982 was threshold AQ14. Threshold AQ14 set a goal of reducing in-basin nitrogen emissions by 10 percent from 1981 levels and benchmarked its performance to total regional VMT. In 1981, increased algal growth because of elevated nutrient inputs (phosphorus and nitrogen) was thought to be the primary driver of Lake Tahoe's clarity loss. The intent of this air quality threshold was to preserve lake clarity by minimizing atmospheric nitrogen deposition (i.e., material landing on the lake surface from the air that contributes nitrogen to the water and therefore also contribute to algal growth). However, since 1982 a number of developments have occurred that have functionally rendered the original intent of the nitrate reduction threshold standard (AQ14) moot (TRPA 2021). First, improvements in tailpipe emissions controls have reduced nitrogen emissions by more than 66 percent, far greater than the 10 percent objective of the adopted standard, functionally accomplishing the goal of the standard. Second, scientific research conducted as part of establishing the Total Maximum Daily Load (TMDL) for Lake Tahoe (a regulatory program focused on restoring lake clarity) established that fine particles were the principal driver of clarity loss rather than nutrient inputs (although nutrient inputs from sources other than atmospheric deposition still remain important). Every four years a Threshold Evaluation Report is prepared providing information on the trends in achieving each threshold. Each of the last four Threshold Evaluation Reports (2001, 2006, 2011, and 2015) has recommended that the 1982 VMT nitrogen deposition threshold standard (AQ14) be reviewed and updated, and in 2021 threshold standard AQ14 was officially replaced with a per capita VMT standard intended to reduce reliance on the automobile, reduce GHG emissions, and promote mobility. There is no longer a VMT threshold directly tied to vehicle emissions and lake clarity.

Part of the reason for replacing threshold AQ14 is because the goals of the threshold have been met; a 10 percent reduction of mobile source nitrogen (i.e., NO_x) emissions from 1981 levels was accomplished more than 25 years ago (i.e., before 2000). Beyond that, mobile source NO_x emissions today are less than a third of what they were in 2000 and are forecast to continue to decline as a result of increasingly clean automobiles, with a projection that in 2030 emissions will be 1/10 of 2000 levels. This means that today the goal of threshold AQ14 has been exceeded by more than 3-fold, and by 2030 the goal will be exceeded by more than 10-fold.

In summary, current evidence indicates that (a) atmospheric nitrogen deposition resulting from vehicle exhaust is not a substantial contributor to losses in lake clarity, and (b) the implementation of stricter vehicle emissions standards at the State and federal levels are sufficient on their own to exceed atmospheric nitrogen deposition objectives.

Vehicle travel (i.e., VMT) can also result in atmospheric mobilization of fine sediment from paved roads (i.e., sediment or dust "kicked up" into the air by vehicle movement). When the Lake Tahoe Total Maximum Daily Load (TMDL) was being prepared, an assessment of the effects of this sediment mobilization mechanism on lake clarity estimated that atmospheric deposition accounted for 16 percent of the annual average fine sediment load to the lake. To restore the lake's historic clarity the TMDL established a target of reducing atmospheric deposition of fine sediments by 55 percent over 65 years. TMDL development considered a number of management



strategies for fine sediment load reduction. Such studies focused on, for example, the primary pathways by which atmospheric deposition of fine sediments to the lake occur. Studies conducted for the TMDL also explored the efficacy of VMT reduction as a strategy to reduce atmospheric fine sediment loading. The studies indicated that VMT reduction would likely not be a cost-effective strategy for fine sediment load reduction via atmospheric deposition (Lahontan RWQCB and NDEP 2008). This understanding was further supported by subsequent work that estimated that, “a 25 percent reduction in VMT would reduce fine sediment loads resulting from atmospheric mobilization by less than half of one percent (Lahontan RWQCB and NDEP 2008).”

Greenhouse Gas Emissions

GHGs are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth’s atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere due to human activities are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated carbons. Other common GHGs include water vapor, ozone, and aerosols. The increase in atmospheric concentrations of GHG due to human activities has resulted in more heat being held within the atmosphere, which is the accepted explanation for global climate change.

The primary GHG emitted by human activities is CO₂, with the next largest components being CH₄ and N₂O. A wide variety of human activities result in the emission of CO₂. Some of the largest sources of CO₂ include the burning of fossil fuels for transportation and electricity, industrial processes including fertilizer production, agricultural processing, and cement production. The primary sources of CH₄ emissions include domestic livestock sources, decomposition of wastes in landfills, releases from natural gas systems, coal mine seepage, and manure management. The main human activities producing N₂O are agricultural soil management, fuel combustion in motor vehicles, nitric acid production, manure management, and stationary fuel combustion. Emissions of GHG by economic sector indicate that energy-related activities account for the majority of U.S. emissions. Electricity generation is the largest single-source of GHG emissions, and transportation is the second largest source, followed by industrial activities. The agricultural, commercial, and residential sectors account for the remainder of GHG emission sources.¹⁰

Emissions of GHG are partially offset by uptake of carbon and sequestration in trees, agricultural soils, landfilled yard trimmings and food scraps, and absorption of CO₂ by the Earth’s oceans. Additional emission reduction measures for GHG could include, but are not limited to, compliance with local, State, or federal plans or strategies for GHG reductions, on-site and off-site mitigation, and project design features. Attainment concentration standards for GHGs have not been established by the federal or State government.

Global Warming Potential

Global Warming Potential (GWP) is one type of simplified index (based upon radiative properties) that can be used to estimate the potential future impacts of emissions of various gases. According to the USEPA, the GWP of a gas, or aerosol, to trap heat in the atmosphere is the “cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas.” The reference gas for comparison is CO₂. GWP is based on a number of factors, including the heat-absorbing ability of each gas relative to that of CO₂, as

¹⁰ U.S. Environmental Protection Agency. *Sources of Greenhouse Gas Emissions*. Available at: https://19january2017snapshot.epa.gov/ghgemissions/sources-greenhouse-gas-emissions_.html. Accessed November 2022.



well as the decay rate of each gas relative to that of CO₂. Each gas's GWP is determined by comparing the radiative forcing associated with emissions of that gas versus the radiative forcing associated with emissions of the same mass of CO₂, for which the GWP is set at one. Methane gas, for example, is estimated by the USEPA to have a comparative global warming potential 25 times greater than that of CO₂, as shown in Table 5-5.

As shown in the table, at the extreme end of the scale, sulfur hexafluoride is estimated to have a comparative GWP 22,800 times that of CO₂. The atmospheric lifetimes of such GHGs are estimated by the USEPA to vary from 50 to 200 years for CO₂, to 50,000 years for CF₄. Longer atmospheric lifetimes allow GHG to buildup in the atmosphere; therefore, longer lifetimes correlate with the GWP of a gas. The common indicator for GHG is expressed in terms of metric tons of CO₂ equivalents (MTCO₂e), which is calculated based on the GWP for each pollutant.

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)
Carbon Dioxide (CO ₂)	See footnote ¹	1
Methane (CH ₄)	12	25
Nitrous Oxide (N ₂ O)	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800

¹ For a given amount of CO₂ emitted, some fraction of the atmospheric increase in concentration is quickly absorbed by the oceans and terrestrial vegetation, some fraction of the atmospheric increase will only slowly decrease over a number of years, and a small portion of the increase will remain for many centuries or more.

Source: USEPA. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019 [Table 1-2]. April 14, 2021.

Effects of Global Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The Intergovernmental Panel on Climate Change's (IPCC) *Climate Change 2021: The Physical Science Basis* report indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia.¹¹ Signs that global climate change has occurred include:

- Warming of the atmosphere and ocean;
- Diminished amounts of snow and ice;
- Rising sea levels; and
- Ocean acidification.

¹¹ Intergovernmental Panel on Climate Change. *Climate Change 2021: The Physical Science Basis Summary for Policymakers*. Available at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf. Accessed November 2022.



Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment (OEHHA) identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernable evidence that climate change is occurring in California and is having significant, measurable impacts in the State.

Changes in the State's climate have been observed, including:

- An increase in annual average air temperature with record warmth from 2012 to 2016;
- More frequent extreme heat events;
- More extreme drought;
- A decline in winter chill; and
- An increase in variability of statewide precipitation.

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers and snowpack—upon which the State depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the State's annual water supply. Impacts of climate on physical systems have been observed, such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters. Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems.

In Placer County, specifically, effects of climate change will be more localized. Such hazards include agriculture and forestry pests and diseases, avalanche, drought, extreme heat, flooding, fog, human health hazards, landslides, severe weather, severe winter weather, and wildfire. Some hazards, such as wildfire and drought, relate directly to the occurrence of other hazards, such as agriculture and forestry pests and diseases, landslides, and flooding. Placer County is currently experiencing some of the aforementioned changes, and others may not occur for several decades.¹²

Energy

California is one of the highest energy demanding states within the nation. Activities such as heating and cooling structures, lighting, the movement of goods, agricultural production, and countless other facets of daily life consume a variety of energy sources. Energy within the state is provided primarily by the combustion of fossil fuels such as natural gas, motor gasoline, diesel, jet fuel, and, to a lesser extent, coal. In addition to the fossil fuel-based energy sources, the state is ranked second in the nation in renewable energy generation, which includes solar, geothermal, wind, and biomass resources. In fact, California leads the nation in solar thermal electricity capacity, with 73 percent of the nation's total solar thermal capacity installed within the State.¹³

¹² Placer County Community Development Resource Agency. *Placer County Sustainability Plan: A Greenhouse Gas Emission Reduction Plan and Adaptation Strategy* [pg. 14]. January 28, 2020.

¹³ U.S. Energy Information Administration. *California: State Profile and Energy Estimates*. Available at: <https://www.eia.gov/state/index.php?sid=CA>. Accessed November 2022.



Energy within the State is provided primarily to consumers through a mix of sources including natural gas, hydroelectric, non-hydroelectric renewable sources, nuclear, coal, and petroleum. California is the nation's top producer of electricity from solar, geothermal, and biomass energy. In 2019, the state was also the nation's second-largest producer of electricity from conventional hydroelectric power and the fifth largest from wind energy. Renewable resources, including hydropower and small-scale (less than 1-megawatt), customer-sited solar photovoltaic (PV) systems, supplied more than half of California's in-state electricity generation, and natural gas-fired power plants provided two-fifths.

Figure 5-1 presents energy consumption within California for the most recent year for which data is available, 2019. As shown in the figure, transportation-related activity consumes the largest single share of energy within the State. Within the transportation sector, motor gasoline is the dominant form of energy, with jet fuel, diesel, natural gas, and electricity supplying the remaining portions of California's transportation sector energy demand. However, when considered together, energy demand from the built-environment including the residential, commercial, and industrial sectors, represents the greatest share of total statewide energy demand.

In the year 2020, the entire State consumed approximately 279,510.01 gigawatt hours (GWh) of electricity. Of the total electricity consumed by the State, Placer County consumed approximately 2,996.21 GWh, which constitutes approximately 1.07 percent of the total energy consumed within the State.¹⁴

Energy Use in Placer County

In 2020, the Placer County Board of Supervisors adopted the Placer County Sustainability Plan (PCSP), which establishes goals and policies for energy efficiency.¹⁵ As a result, the PCSP is considered the local plan for renewable energy and efficiency. However, the County first began programs to improve municipal building energy efficiency and resource conservation in 2005. For example, the Placer County Government Center Master Plan represents an effort to update the County's Dewitt Center. The Master Plan includes strategies for significant reductions in energy and water use, and efforts to reduce GHG emissions associated with commuting. The Master Plan also calls for on-site housing and commercial uses, in addition to water efficiency improvements and efforts to reduce employee commute trips and support alternative fuel vehicles.

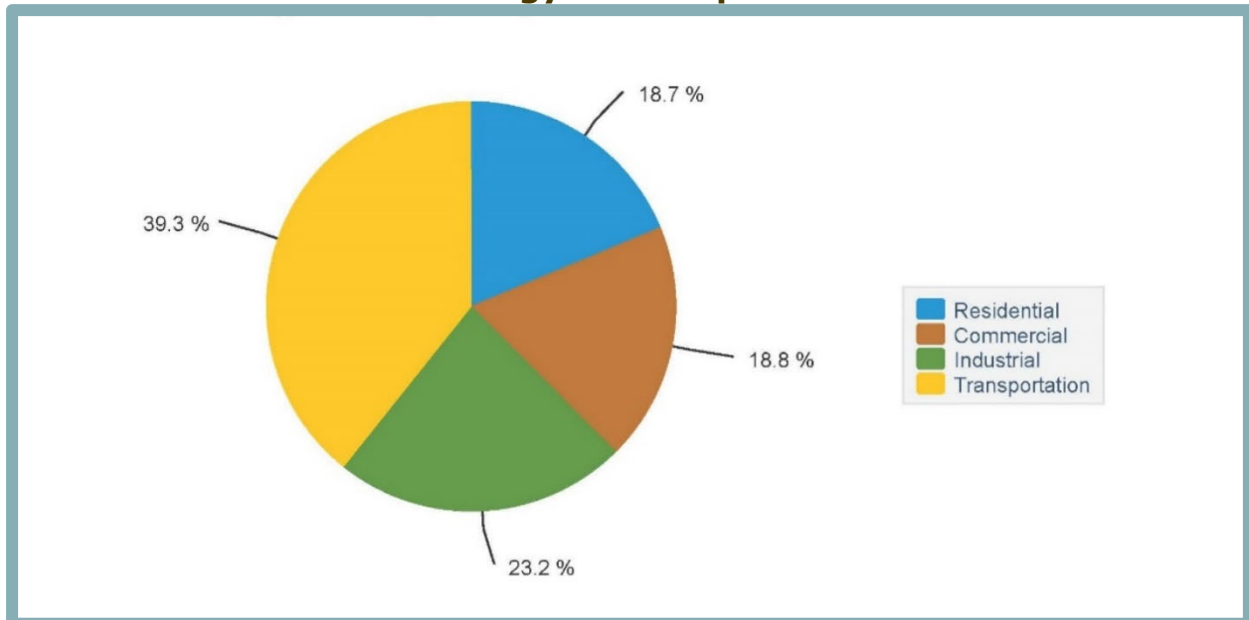
The County has also encouraged increases in electric vehicle infrastructure at four County buildings, supported greater use of battery electric and plug-in hybrid vehicles in the County fleet, and installed solar panels on County buildings in Auburn and Roseville. Placer County is also involved in the Middle Fork Project hydroelectric generations, and the Pioneer Community Energy project, both of which are discussed in further detail below.

¹⁴ California Energy Commission. *Electricity Consumption by County*. Available at: <http://ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed November 2022.

¹⁵ Placer County Community Development Resource Agency. *Placer County Sustainability Plan: A Greenhouse Gas Emission Reduction Plan and Adaptation Strategy*. January 28, 2020.



**Figure 5-1
California Energy Consumption Per Sector**



Source: U.S. Energy Information Administration. California: State Profile and Energy Estimates. Accessible at: <https://www.eia.gov/state/index.php?sid=CA>. Accessed November 2022.

Middle Fork Project

The Placer County Water Agency, with Placer County as a partner, has operated the Middle Fork Project for over 50 years as a multipurpose project to benefit the people of Placer County. The Middle Fork Project is designed to store and release water to meet consumptive demands within western Placer County and to generate hydroelectric power for the California electrical grid. Hydroelectric power from the Middle Fork Project has a combined generating capacity of approximately 224 megawatts, with an average of 1,030,000 MWh/yr.

Pioneer Community Energy

Placer County and the cities of Auburn, Colfax, Lincoln, Loomis and Rocklin have established a joint powers authority called Pioneer Community Energy (Pioneer). Currently, Pioneer provides a Community Choice Aggregation (CCA) program, which acts as an alternative electricity supplier to PG&E. The electric power is transmitted over PG&E transmission and delivery infrastructure. Pioneer's CCA program currently serves ninety percent of customers within its territory.

Pioneer's CCA program provides local control over matters related to electric rate setting, electric energy procurement and incentives program development, as well as the opportunity to promote the use of locally generated power electricity to serve the needs of participating businesses and residents within its service territory, which includes both incorporated and unincorporated areas of Placer County. As a result, Pioneer provides the opportunity for residents or business-owners to opt into more locally- and renewably-sourced electricity as compared to the grid electricity provided by PG&E.



Energy Consumption at the Project Site

The project site is currently developed with the Olympic Valley Park. As a result, energy is consumed through the use of the on-site lighting and bathroom facilities.

5.3 REGULATORY CONTEXT

Air quality, GHG emissions, and energy are monitored and regulated through the efforts of various international, federal, State, and local government agencies. Agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for regulating and improving the air quality within the project area and monitoring or reducing GHG emissions and energy consumption are discussed below.

Federal Regulations Related to Air Quality

The following discussion provides a summary of the federal regulations relevant to air quality, organized by pollutant type.

Criteria Pollutants

The FCAA, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The USEPA is responsible for implementing most aspects of the FCAA, including setting NAAQS for major air pollutants; setting hazardous air pollutant standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric ozone protection measures, and enforcement provisions. Under the FCAA, NAAQS are established for the following criteria pollutants: ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for ozone, NO₂, SO₂, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for ozone, NO₂, SO₂, PM₁₀, PM_{2.5} are based on statistical calculations over one- to three-year periods, depending on the pollutant. The FCAA requires the USEPA to reassess the NAAQS at least every five years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

Hazardous Air Pollutants/Toxic Air Contaminants

The 1977 FCAA amendments required the USEPA to identify national emission standards for hazardous air pollutants to protect public health and welfare. Hazardous air pollutants include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 FCAA Amendments, which expanded the control program for hazardous air pollutants, 189 substances and chemical families were identified as hazardous air pollutants.

Federal Regulations Related to GHG Emissions

The following are the federal regulations relevant to GHG emissions.



Federal Vehicle Standards

In 2007, in response to the *Massachusetts v. EPA* U.S. Supreme Court ruling, the Bush Administration issued Executive Order (EO) 13432 directing the USEPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Transportation Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, USEPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards were projected to achieve emission rates as low as 163 grams of CO₂ per mile by model year 2025 on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if the foregoing emissions level was achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200), and NHTSA intended to set standards for model years 2022 through 2025 in future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors; heavy-duty pickup trucks and vans; and vocational vehicles. According to the USEPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by six to 23 percent over the 2010 baselines (76 FR 57106–57513).

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program would have applied to vehicles with model years 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards were expected to lower CO₂ emissions by approximately 1.1 billion MT, and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.

In August 2018, the USEPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new, less-stringent standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards that were previously in place, the 2018 proposal would increase U.S. fuel consumption by approximately 0.5 million barrels per day, and would impact the global climate by 3/1000th of 1°C by 2100. California and other states stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures, and committed to cooperating with other countries to implement global climate change initiatives.

On September 27, 2019, the USEPA and NHTSA published the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program* (84 FR 51,310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG



emissions standards and set zero-emission-vehicle mandates in California. On March 31, 2020, the USEPA and NHTSA issued the Part Two Rule, which sets CO₂ emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. On January 20, 2021, President Joe Biden issued an EO on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which includes review of the Part One Rule by April 2021 and review of the Part Two Rule by July 2021. In response to the Part One Rule, in December 2021, the U.S. Department of Transportation withdrew its portions of the "SAFE I" rule. As a result, States are now allowed to issue their own GHG emissions standards and zero-emissions vehicle mandates.¹⁶ In addition, the Part Two Rule was adopted to revise the existing national GHG emission standards for passenger cars and light trucks through model year 2026. These standards are the strongest vehicle emissions standards ever established for the light-duty vehicle sector and will result in avoiding more than 3 billion tons of GHG emissions through 2050.¹⁷

Federal Regulations Related to Energy

The following are the federal regulations relevant to energy.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act was originally enacted in 1975 with the intention of ensuring that all vehicles sold in the U.S. meet established fuel economy standards. Following congressional establishment of the original set of fuel economy standards, the U.S. Department of Transportation was tasked with establishing additional on-road vehicle standards and making revisions to standards as necessary. Compliance with established standards is based on manufacturer fleet average fuel economy, which originally applied to both passenger cars and light trucks but did not apply to heavy-duty vehicles exceeding 8,500 pounds in gross vehicle weight. The fuel economy program implemented under the Energy Policy and Conservation Act is known as the Corporate Average Fuel Economy (CAFE) Standards. Updates to the CAFE standards since original implementation have increased fuel economy requirements and begun regulation of medium- and heavy-duty vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 addressed energy production in the U.S. from various sources. In particular, the Energy Policy Act of 2005 included tax credits, loans, and grants for the implementation of energy systems that would reduce GHG emissions related to energy production.

State Regulations Related to Air Quality

The following discussion summarizes applicable State regulations related to air quality, organized by pollutant type. Only the most prominent and applicable California air quality-related legislation is included below; however, an exhaustive list and extensive details of California air quality legislation can be found at the CARB website (<http://www.arb.ca.gov/html/lawsregs.htm>).

¹⁶ National Highway Traffic Safety Administration. *In Removing Major Roadblock to State Action on Emissions Standards, U.S. Department of Transportation Advances Biden-Harris Administration's Climate and Jobs Goals*. Available at: <https://www.nhtsa.gov/press-releases/cale-preemption-final-rule>. Accessed November 2022.

¹⁷ U.S. Environmental Protection Agency. *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026*. Available at: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions>. Accessed November 2022.



Criteria Air Pollutants

The FCAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the CCAA of 1988, responding to the FCAA, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered “in attainment” if pollutant levels are continuously below the CAAQS and do not violate the standards more than once each year. The CAAQS for ozone, CO, SO₂ (one-hour and 24-hour), NO₂, PM₁₀, PM_{2.5}, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 5-2.

Hazardous Air Pollutants/Toxic Air Contaminants

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner), and involved definition of a list of TACs. The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. The State list of TACs includes the federally-designated hazardous air pollutants. In 1987, the Legislature enacted the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hot spots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over five years. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment, and, if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

CARB Air Quality and Land Use Handbook

CARB’s *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB Handbook) addresses the importance of considering health risk issues when siting sensitive land uses, including residential development, in the vicinity of intensive air pollutant emission sources including freeways or high-traffic roads, distribution centers, ports, petroleum refineries, chrome plating operations, dry cleaners, and gasoline dispensing facilities.¹⁸ The CARB Handbook draws upon studies evaluating the health effects of traffic traveling on major interstate highways in metropolitan California centers within Los Angeles (Interstate-405 and Interstate-710), the San Francisco Bay, and San Diego areas. The recommendations identified by CARB, including siting residential uses a minimum distance of 500 feet from freeways or other high-traffic roadways, are consistent with those adopted by the State of California for location of new schools. Specifically, the CARB Handbook recommends, “Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day”.¹⁹

¹⁸ California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

¹⁹ *Ibid.*



Importantly, the Introduction chapter of the CARB Handbook clarifies that the guidelines are strictly advisory, recognizing that: “[I]and use decisions are a local government responsibility. The Air Resources Board Handbook is advisory and these recommendations do not establish regulatory standards of any kind.” CARB recognizes that there may be land use objectives as well as meteorological and other site-specific conditions that need to be considered by a governmental jurisdiction relative to the general recommended setbacks, specifically stating, “[t]hese recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues”.²⁰

Diesel Particulate Matter

In 2000, CARB approved a comprehensive diesel risk reduction plan to reduce diesel emissions, including DPM, from new and existing diesel-fueled vehicles and engines. The regulation was anticipated to result in an 80 percent decrease in statewide diesel health risk by 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. The aforementioned regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. Several Airborne Toxic Control Measures (ATCMs) exist that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 California Code of Regulations [CCR] 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

Heavy-Duty Diesel Truck and Bus Regulation

CARB adopted the final Heavy-Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce DPM and NO_x emissions from heavy-duty diesel vehicles. The rule requires DPM filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule requires nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an ATCM to limit idling of diesel-fueled commercial vehicles on December 12, 2013. The rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than five minutes at any location (13 CCR 2485).

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person must not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. Section 41700 also applies to sources of objectionable odors.

²⁰ California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.



Heavy-Duty Vehicle Idling Emission Reduction Program

On October 20, 2005, CARB approved a regulatory measure to reduce emissions of toxics and criteria pollutants by limiting idling of new and in-use sleeper berth equipped diesel trucks.²¹ The regulation established new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck's main engine. For example, the regulation requires 2008 and newer model year heavy-duty diesel engines to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling, or optionally meet a stringent NO_x emission standard. The regulation also requires operators of both in-state and out-of-state registered sleeper berth equipped trucks to manually shut down their engine when idling more than five minutes at any location within California. Emission producing alternative technologies such as diesel-fueled auxiliary power systems and fuel-fired heaters are also required to meet emission performance requirements that ensure emissions are not exceeding the emissions of a truck engine operating at idle.

In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, CARB adopted a regulation to reduce DPM and NO_x emissions from in-use (existing), off-road, heavy-duty diesel vehicles in California.²² Such vehicles are used in construction, mining, and industrial operations. The regulation is designed to reduce harmful emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements, imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The idling limits require operators of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to less than five minutes. The idling requirements are specified in Title 13 of the CCR.

State Regulations Related to GHG Emissions

The statewide GHG emissions regulatory framework is summarized below. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues. The following discussion does not include an exhaustive list of applicable regulations; rather, only the most prominent and applicable California legislation related to GHG emissions and climate change is included below.

State Climate Change Targets

California has taken a number of actions to address climate change, including EOs, legislation, and CARB plans and requirements, which are summarized below.

EO S-3-05

EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the State agencies for implementing the EO and for reporting on progress toward the targets. The EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

²¹ California Air Resources Board. *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*. October 24, 2013. Available at: <http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm>. Accessed November 2022.

²² California Air Resources Board. *In-Use Off-Road Diesel Vehicle Regulation*. December 10, 2014. Available at: <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>. Accessed November 2022.



EO S-3-05 also directed the California Environmental Protection Agency (CalEPA) to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued reports from 2006 to 2010.

AB 32

In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive, multi-year program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the State's long-range climate objectives. AB 32 also required that the CARB prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020. The CARB's Scoping Plan is described in further detail below.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achieving this goal, EO B-30-15 called for an update to the CARB's Climate Change Scoping Plan: A Framework for Change (Scoping Plan) to express the 2030 target in terms of million metric tons of CO₂ equivalents (MMT CO₂e). The CARB's Scoping Plan is discussed in further detail below. The EO also called for State agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

Senate Bill (SB) 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the State's climate policies. AB 197 also added two members of the Legislature to the Board as non-voting members; requires CARB to make available and update (at least annually via the CARB's website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

CARB's Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a scoping plan for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health and Safety Code Section 38561[a]), and to update the Scoping Plan at least once every five years. In 2008, CARB approved the first Scoping Plan. The Scoping Plan included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives. The key elements of the Scoping Plan include the following:



1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33 percent;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS) (17 CCR, Section 95480 et seq.); and
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15 percent from 2008 levels by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the State's GHG emission reduction priorities for the next five years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B-16-2012. The First Update concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuation of action to reduce emissions. The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050, including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the State's 1990 emissions level using more recent GWPs identified by the IPCC, from 427 MMT CO₂e to 431 MMT CO₂e.

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40 percent below 1990 levels by 2030 to keep California on a trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050, as set forth in EO S-3-05. In summer 2016, the Legislature affirmed the importance of addressing climate change through passage of SB 32 (Pavley, Chapter 249, Statutes of 2016).

In December 2017, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Scoping Plan) for public review and comment. The 2017 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target as established by SB 32 and define the State's climate change priorities to 2030 and beyond. Strategies within the 2017 Scoping Plan include implementing renewable



energy and energy efficiency measures, increased stringency of the LCFS, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant (SLCP) Plan, and increased stringency of SB 375 targets (discussed in further detail below). To fill the gap in additional reductions needed to achieve the 2030 target, the 2017 Scoping Plan recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20 percent.

For local governments, the 2017 Scoping Plan replaced the initial Scoping Plan's 15 percent reduction goal with a recommendation to aim for a community-wide goal of no more than six MTCO_{2e} per capita by 2030, and no more than two MTCO_{2e} per capita by 2050, which are consistent with the State's long-term goals. Such goals are also consistent with the Under 2 Memorandum of Understanding (Under 2 Coalition 2019) and the Paris Agreement, which were developed around the scientifically based levels necessary to limit global warming to below an increase of 2°C. The 2017 Scoping Plan recognized the benefits of local government GHG planning (e.g., through Climate Action Plans [CAPs]) and provide more information regarding tools CARB is working on to support those efforts. The 2017 Scoping Plan also recognizes the CEQA streamlining provisions for project-level review where a legally adequate CAP exists.

When discussing project-level GHG emissions reduction actions and thresholds in the context of CEQA, the 2017 Scoping Plan states that “achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development” for project-level CEQA analysis, but also recognizes that such a standard may not be appropriate or feasible for every development project. The 2017 Scoping Plan further provides that “the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA.”

The update to the 2017 Scoping Plan, the Draft 2022 Scoping Plan Update, has been released for public review, but has not yet been adopted by the CARB.²³

CARB's Regulations for the Mandatory Reporting of GHG Emissions

CARB's Regulation for the Mandatory Reporting of GHG Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that the USEPA promulgated in its Final Rule on Mandatory Reporting of GHGs (40 Code of Federal Regulations [CFR] Part 98). In general, entities subject to the Mandatory Reporting Regulation that emit more than 10,000 MTCO_{2e} per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 MTCO_{2e} per year threshold are required to have their GHG emission report verified by a CARB-accredited third party.

SB 1383

SB 1383 establishes specific targets for the reduction of SLCPs (40 percent below 2013 levels by 2030 for CH₄ and HFCs, and 50 percent below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, CARB adopted its SLCP Reduction Strategy in March 2017. The SLCP Reduction

²³ California Air Resources Board. *2022 Scoping Plan Documents*. Available at: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>. Accessed July 2022.



Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH₄, and fluorinated gases.

EO B-55-18/AB 1279

EO B-55-18 (September 2018) establishes a statewide policy for California to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net-negative emissions thereafter. The goal is an addition to the existing statewide targets of reducing the State's GHG emissions. CARB intends to work with relevant State agencies to ensure that future scoping plan updates identify and recommend measures to achieve the carbon neutrality goal. On September 16, 2022, AB 1279, also known as the California Climate Crisis Act, codified the carbon neutrality goal established by EO B-55-18.

Mobile Sources

The following regulations relate to the control of GHG emissions from mobile sources. Mobile sources include both on-road vehicles and off-road equipment.

AB 1493

AB 1493 (Pavley) (July 2002) was enacted in response to the transportation sector accounting for more than half of California's CO₂ emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the State board to be vehicles that are primarily used for non-commercial personal transportation in the State. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards would result in a reduction of approximately 22 percent of GHG emissions compared to the emissions from the 2002 fleet, and the mid-term (2013–2016) standards would result in a reduction of approximately 30 percent.

SB 375

SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, and to update those targets every eight years. SB 375 requires the State's 18 regional metropolitan planning organizations to prepare a sustainable communities strategy as part of their Regional Transportation Plans that will achieve the GHG reduction targets set by CARB. If a metropolitan planning organization is unable to devise a sustainable communities strategy to achieve the GHG reduction target, the metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to California Government Code Section 65080(b)(2)(K), a sustainable communities strategy does not (1) regulate the use of land, (2) supersede the land use authority of cities and counties, or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with the sustainable community strategy. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the State-mandated housing element process.



Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. By 2025, implementation of the rule is anticipated to reduce emissions of smog-forming pollution from cars by 75 percent compared to the average new car sold in 2015. To reduce GHG emissions, CARB, in conjunction with the USEPA and NHTSA, adopted GHG standards for model year 2017 to 2025 vehicles; the standards were estimated to reduce GHG emissions by 34 percent by 2025. The zero-emissions vehicle program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of zero-emissions vehicles and plug-in hybrid electric vehicles in the 2018 to 2025 model years.

EO B-16-12

EO B-16-12 (March 2012) required that State entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. The order directed CARB, California Energy Commission (CEC), California Public Utilities Commission (CPUC), and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. EO B-16-12 did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

AB 1236

AB 1236 (October 2015) (Chiu) required a city, county, or city and county to approve an application for the installation of electric-vehicle charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based on substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and a feasible method to satisfactorily mitigate or avoid the specific, adverse impact does not exist. The bill provided for appeal of that decision to the planning commission, as specified. AB 1236 required electric vehicle charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for electric vehicle charging stations. The bill also required a city, county, or city and county with a population of less than 200,000 residents to adopt the ordinance by September 30, 2017.

EO N-79-20

EO N-79-20 (September 2020) establishes a Statewide goal that 100 percent of in-state vehicle sales of new passenger cars and trucks shall be zero-emission by the year 2035. The order directed the CARB to develop and propose passenger vehicle and truck regulations requiring increasing volumes of new zero-emission vehicles sold in the State in order to achieve the goal by 2035. In addition, the order required that a Zero-Emissions Vehicle Market Development Strategy be created and updated every three years to ensure coordinated and expeditious implementation of the EO.



Water

The following regulations relate to the conservation of water, which reduces GHG emissions related to electricity demands from the treatment and transportation of water.

EO B-29-15

In response to a drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives subsequently became permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the State. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance (MWELO) that, among other changes, significantly increases the requirements for landscape water use efficiency, and broadens the applicability of the ordinance to include new development projects with smaller landscape areas.

Solid Waste

The following regulations relate to the generation of solid waste and means to reduce GHG emissions from solid waste produced within the State.

AB 939 and AB 341

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code [PRC] Sections 40000 et seq.), was passed because of the observed increase in waste stream and the decrease in landfill capacity.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that the policy goal of the State is that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery to develop strategies to achieve the State's policy goal.

Other State Actions

The following State regulations are broadly related to GHG emissions.

SB 97

SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities. The advisory further recommended that the lead agency determine the significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The California Natural Resource Agency (CNRA) adopted the CEQA Guidelines amendments in December 2009, and the amended CEQA Guidelines became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis, or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which the project complies with



regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply the lead agency's own thresholds of significance or those developed by other agencies or experts. CNRA acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions.

With respect to GHG emissions, the CEQA Guidelines state that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions (14 CCR 15064.4[a]). The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs State agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009, and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the State's vulnerability, the report summarizes key climate change impacts to the State for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016. In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that the State government should take to build climate change resiliency.

State Regulations Related to Energy

The State has adopted various regulations aimed at reducing energy consumption, increasing energy efficiency, and mandating sourcing requirements for electricity production.

Building Energy

The following regulations relate to energy efficiency and energy use reductions in the built environment.

Title 24, Part 6

Title 24 of the CCR was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor



environmental quality. These energy efficiency standards are reviewed periodically, and revised if necessary, by the California Building Standards Commission and CEC (PRC Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of “reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy” (PRC Section 25402). The regulations are scrutinized and analyzed for technological and economic feasibility (PRC Section 25402[d]) and cost effectiveness (PRC Sections 25402[b][2] and [b][3]). As a result, the standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards reduced energy used and associated GHG emissions compared to the previous 2016 Title 24 standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately seven percent less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards use approximately 53 percent less energy than those under the 2016 standards.²⁴ Nonresidential buildings built to the 2019 standards use an estimated 30 percent less energy than those built to the 2016 standards.

It should be noted that the 2022 Building Energy Efficiency Standards will become effective on January 1, 2023. The 2022 Building Energy Efficiency Standards will include requirements that encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, and strengthen ventilation standards. Therefore, projects built under the 2022 Building Energy Efficiency Standards are expected to be more energy efficient than those built under the 2019 standards.

Title 24, Part 11

In addition to the CEC’s efforts, in 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen, and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and State-owned buildings and schools and hospitals. The original CALGreen standards have been updated several times. The CALGreen 2019 standards, which are the current standards, improved upon the 2016 CALGreen standards, and went into effect on January 1, 2020. The mandatory standards require the following:

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings;
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources’ MWEL0;
- 65 percent of construction and demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;

²⁴ California Energy Commission. *2019 Building Energy Efficiency Standards – Frequently Asked Questions*. March 2018.



- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations; and
- Low-pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

The CALGreen standards also include voluntary efficiency measures that are provided at two tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15 percent improvement in energy requirements, stricter water conservation, 65 percent diversion of construction and demolition waste, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter water conservation, 80 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

Title 20

Title 20 of the CCR requires manufacturers of appliances to meet State and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and State standards for federally regulated appliances, State standards for federally regulated appliances, and State standards for non-federally regulated appliances.

SB 1

SB 1 (Murray) (August 2006) established a \$3 billion rebate program to support the goal of the State to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the PRC, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the State to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for homes and businesses within 10 years of adoption, and placing solar energy systems on 50 percent of new homes within 13 years of adoption. SB 1, also termed "Go Solar California," was previously titled "Million Solar Roofs."

AB 1470

AB 1470 established the Solar Water Heating and Efficiency Act of 2007. The bill made findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. AB 1470 required the CEC to evaluate the data available from a specified pilot program, and, if the CEC made a specified determination, to



design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the State by 2017.

AB 1109

Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting to reduce electricity consumption by 50 percent for indoor residential lighting and by 25 percent for indoor commercial lighting.

Renewable Energy and Energy Procurement

The following regulations relate to the source of electricity provided to consumers within the State, as well as standards related to the generation of electricity within the State.

Renewable Portfolio Standard (RPS) and SB 100

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's RPS is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

Since the inception of the RPS program, the program has been extended and enhanced multiple times. In 2015, SB 350 extended the State's RPS program by requiring that publicly owned utilities procure 50 percent of their electricity from renewable energy sources by 2030. The requirements of SB 350 were expanded and intensified in 2018 through the adoption of SB 100, which mandated that all electricity generated within the State by publicly owned utilities be generated through carbon-free sources by 2045. In addition, SB 100 increased the previous renewable energy requirement for the year 2030 by 10 percent; thus, requiring that 60 percent of electricity generated by publicly owned utilities originate from renewable sources by the year 2030.

Local Regulations

The most prominent local regulations related to air quality, GHG emissions, and energy are established by the PCAPCD and the Placer County General Plan and are discussed in further detail below.

Placer County Air Pollution Control District

The PCAPCD regulates many sources of pollutants in the ambient air as well as GHG emissions, and is responsible for implementing certain programs and regulations for controlling air pollutant and GHG emissions to improve air quality in order to attain federal and State AAQS and reduce GHG emissions in compliance with State goals.

Air Quality Attainment Plan

As a part of the MCAB federal ozone nonattainment area, the PCAPCD works with the other local air districts within the Sacramento area to develop a regional air quality management plan under the FCAA requirement. The regional air quality management plan is called the State Implementation Plan (SIP) which describes and demonstrates how Placer County, as well as the Sacramento nonattainment area, would attain the required federal ozone standard by the proposed attainment deadline. In accordance with the requirements of the FCAA, the PCAPCD, along with the other air districts in the region, prepared the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (Ozone Attainment Plan), adopted by the



PCAPCD on February 19, 2009. The CARB determined that the Ozone Attainment Plan met federal Clean Air Act requirements and approved the Plan on March 26, 2009 as a revision to the SIP. Revisions to the Placer County portion of the SIP or Ozone Attainment Plan were made and adopted on August 11, 2011. An update to the plan, *2013 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 Ozone Attainment Plan)*, was adopted on September 26, 2013, and approved by CARB as a revision to the SIP on November 21, 2013. The 2013 Ozone Attainment Plan was approved by the USEPA on January 9, 2015. In addition, another update was prepared in 2017. The *2017 Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2017 Ozone Attainment Plan)* demonstrates how the region will attain the 2008 ozone NAAQS, and includes an updated emissions inventory, sets motor vehicle emissions budgets, and documents the modeling used to support the attainment demonstration.

It should be noted that in addition to strengthening the 8-hour ozone NAAQS, the USEPA also strengthened the secondary 8-hour ozone NAAQS, making the secondary standard identical to the primary standard. The MCAB remains classified as a severe nonattainment area for ozone with an attainment deadline of 2027. On October 26, 2015, the USEPA released a final implementation rule for the revised NAAQS for ozone to address the requirements for reasonable further progress, modeling and attainment demonstrations, and reasonably available control measures (RACM) and reasonably available control technology (RACT). On April 30, 2018, the USEPA published designations for areas in attainment/unclassifiable for the 2015 ozone standards. The USEPA identified the portions of Placer County within the MCAB as nonattainment for the 2015 ozone standards.²⁵

PCAPCD Rules and Regulations

All projects under the jurisdiction of the PCAPCD are required to comply with all applicable PCAPCD rules and regulations. In addition, PCAPCD permit requirements apply to many commercial activities (e.g., print shops, drycleaners, gasoline stations), and other miscellaneous activities (e.g., demolition of buildings containing asbestos). The proposed project is required to comply with all applicable PCAPCD rules and regulations, which shall be noted on County-approved construction plans. The PCAPCD regulations and rules include, but are not limited to, the following:

Regulation 2 – Prohibitions

Regulation 2 is comprised of prohibitory rules that are written to achieve emission reductions from specific source categories. The rules are applicable to existing sources as well as new sources. Examples of prohibitory rules include Visible Emissions (Rule 202), Nuisance (Rule 205), Cutback and Emulsified Asphalt Paving Materials (Rule 217), Architectural Coatings (Rule 218), Wood Burning Appliances (Rule 225), and Fugitive Dust (Rule 228).

Regulation 5 – Permits

Regulation 5 is intended to provide an orderly procedure for the review of new sources, and modification and operation of existing sources, of air pollution through the issuance of permits. Regulation 5 primarily deals with permitting major emission sources and includes, but is not limited to, rules such as General Permit Requirements (Rule 501), New Source Review (Rule

²⁵ U.S. Environmental Protection Agency. *Nonattainment and Unclassifiable Area Designations for the 2015 Ozone Standards*. April 30, 2018.



502), Emission Statement (Rule 503), Emission Reduction Credits (Rule 504), and Toxics New Source Review (Rule 513).

Placer County General Plan

The following goals and policies related to air quality are from the Placer County General Plan:

Air Quality – General

- Goal 6.F To protect and improve air quality in Placer County.
- Policy 6.F.2 The County shall develop mitigation measures to minimize stationary source and area source emissions.
- Policy 6.F.3 The County shall support the Placer County Air Pollution Control District (PCAPCD) in its development of improved ambient air quality monitoring capabilities and the establishment of standards, thresholds, and rules to more adequately address the air quality impacts of new development.
- Policy 6.F.4 The County shall solicit and consider comments from local and regional agencies on proposed projects that may affect regional air quality.
- Policy 6.F.5 The County shall encourage project proponents to consult early in the planning process with the County regarding the applicability of Countywide indirect and areawide source programs and transportation control measures (TCM) programs. Project review shall also address energy-efficient building and site designs and proper storage, use, and disposal of hazardous materials.
- Policy 6.F.6 The County shall require project-level environmental review to include identification of potential air quality impacts and designation of design and other appropriate mitigation measures or offset fees to reduce impacts. The County shall dedicate staff to work with project proponents and other agencies in identifying, ensuring the implementation of, and monitoring the success of mitigation measures.
- Policy 6.F.7 The County shall encourage development to be located and designed to minimize direct and indirect air pollutants.
- Policy 6.F.8 The County shall submit development proposals to the PCAPCD for review and comment in compliance with CEQA prior to consideration by the appropriate decision-making body.
- Policy 6.F.9 In reviewing project applications, the County shall consider alternatives or amendments that reduce emissions of air pollutants.
- Policy 6.F.10 The County may require new development projects to submit an air quality analysis for review and approval. Based on this analysis, the



County shall require appropriate mitigation measures consistent with the PCAPCD's 1991 Air Quality Attainment Plan (or updated edition).

Air Quality – Transportation/Circulation

Goal 6.G To integrate air quality planning with the land use and transportation planning process.

Policy 6.G.1 The County shall require new development to be planned to result in smooth flowing traffic conditions for major roadways. This includes traffic signals and traffic signal coordination, parallel roadways, and intra- and inter-neighborhood connections where significant reductions in overall emissions can be achieved.

Policy 6.G.2 The County shall continue and, where appropriate, expand the use of synchronized traffic signals on roadways susceptible to emissions improvement through approach control.

Policy 6.G.3 The County shall encourage the use of alternative modes of transportation by incorporating public transit, bicycle, and pedestrian modes in County transportation planning and by requiring new development to provide adequate pedestrian and bikeway facilities.

Policy 6.G.5 The County shall endeavor to secure adequate funding for transit services so that transit is a viable transportation alternative. New development shall pay its fair share of the cost of transit equipment and facilities required to serve new projects.

Transportation – Non-Motorized Transportation

Goal 3.D To provide a safe, comprehensive, and integrated system of facilities for non-motorized transportation.

Policy 3.D.5 The County shall continue to require developers to finance and install pedestrian walkways, equestrian trails, and multi-purpose paths in new development, as appropriate.

Policy 3.D.7 The County shall, where appropriate, require new development to provide sheltered public transit stops, with turnouts.

Policy 3.D.9 Consider Complete Streets infrastructure and design features in street design and construction to create safe and inviting environments for all users consistent with the land uses to be served.



Placer County Sustainability Plan

The PCSP, adopted by the Placer County Board of Supervisors on January 28, 2020, includes goals and policies for energy efficiency and the reduction of GHGs.²⁶ The PCSP is a planning document that outlines the programs and policies that are recommended for implementation by the community and the County to achieve the most significant GHG emission reductions in unincorporated County. In addition to reducing GHG emissions, implementation of the PCSP is intended to help achieve multiple community-wide goals, such as lowering energy costs, reducing air and water pollution, supporting local economic development, and improving public health and quality of life within Placer County.

5.4 IMPACTS AND MITIGATION MEASURES

The standards of significance and methodology used to analyze and determine the proposed project's potential project-specific impacts related to air quality, GHG emissions, and energy are described below. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Based on the recommendations of PCAPCD and in coordination with the County, consistent with Appendix G of the CEQA Guidelines, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of this EIR, an impact related to air quality, GHG emissions, or energy is considered significant if the proposed project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations (including localized CO concentrations and TAC emissions);
- Result in other emissions (such as those leading to odors) affecting a substantial number of people;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs;
- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Issues Not Discussed Further

The Initial Study prepared for the proposed project (see Appendix A) determined that development of the proposed project would result in a less-than-significant impact related to the following:

²⁶ Placer County Community Development Resource Agency. *Placer County Sustainability Plan: A Greenhouse Gas Emission Reduction Plan and Adaptation Strategy*. January 28, 2020.



- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

For the reasons cited in the Initial Study (Section VI, Energy), the potential impacts associated with the above are not analyzed further in this EIR.

Criteria Pollutant Emissions and Toxic Air Contaminant Emissions

In order to evaluate criteria air pollutant emissions from development projects, the PCAPCD has established significance thresholds for emissions of ROG, NO_x, and PM₁₀. The significance thresholds, expressed in pounds per day (lbs/day), serve as air quality standards in the evaluation of air quality impacts associated with proposed development projects. The PCAPCD's recommended thresholds of significance are listed in Table 5-6.

Pollutant	Construction Threshold (lbs/day)	Operational/Cumulative Threshold (lbs/day)
ROG	82	55
NO _x	82	55
PM ₁₀	82	82

Source: Placer County Air Pollution Control District. Placer County Air Pollution Control District Policy. Review of Land Use Projects Under CEQA. October 13, 2016.

Therefore, if the proposed project's emissions exceed the PCAPCD's pollutant thresholds presented in Table 5-6, the project could have a significant effect on air quality, the attainment of federal and State AAQS, and could conflict with or obstruct implementation of the applicable air quality plan or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment.

Additionally, the PCAPCD has developed screening criteria for determining whether a project would cause substantial localized CO emissions at a given intersection. If the project would result in CO emissions from vehicle operations in excess of 550 lbs/day and either of the following conditions are met, the project could potentially result in substantial concentrations of localized CO and further analysis would be required:

- Degrade the peak hour level of service (LOS) on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity from an acceptable LOS (i.e., LOS A, B, C, or D) to an unacceptable LOS (i.e., LOS E or F); or
- Substantially worsen (i.e., increase delay by 10 seconds or more when project-generated traffic is included) an already existing unacceptable peak hour LOS on one or more streets or at one or more intersections in the project vicinity.²⁷

However, considering that the law has changed with respect to how transportation-related impacts must be addressed under CEQA such that unacceptable LOS is no longer considered a significant impact on the environment under CEQA, this analysis relies on the 550 lbs/day of CO emissions screening criterion only.

²⁷ Placer County Air Pollution Control District. *CEQA Air Quality Handbook* [pg. 38]. November 21, 2017.



For evaluating TAC emissions, if a project would introduce a new source of TAC or a new sensitive receptor near an existing source of TAC that would not meet the CARB's minimum recommended setback, a detailed health risk assessment may be required. The PCAPCD considers an increase in cancer risk levels of more than 10 in one million persons or a non-cancer hazard index greater than 1.0 to be a significant impact related to TACs. The foregoing cancer risk level and non-cancer hazard index are typically applied to individual stationary sources of TACs; however, the PCAPCD does note that the cancer risk and hazard index thresholds may also be applied to activities that are non-stationary, such as diesel delivery trucks and off-road construction equipment.

With regard to other cumulative emissions, such as the cumulative emissions of criteria air pollutants, the PCAPCD directs lead agencies to use the region's existing attainment plans as a basis for analysis of cumulative emissions. If a project would interfere with an adopted attainment plan, the project would inhibit the future attainment of AAQS, and thus result in a significant incremental contribution to cumulative emissions. As discussed throughout this Chapter, the PCAPCD's recommended thresholds of significance for ozone precursors and PM₁₀ are based on attainment plans for the region. Thus, the PCAPCD concluded that if a project's ozone precursor and PM₁₀ emissions would be less than PCAPCD project-level thresholds, the project would not be expected to conflict with any relevant attainment plans, and would not result in a cumulatively considerable contribution to a significant cumulative impact. As a result, the operational phase cumulative-level emissions thresholds established by PCAPCD are identical to the project-level operational emissions thresholds; the operational/cumulative thresholds are presented in Table 5-6.²⁸

GHG Emissions

Nearly all development projects in the region have the potential to generate air pollutants that may increase global climate change. On October 13, 2016, the PCAPCD adopted GHG emissions thresholds. The thresholds were designed to analyze a project's compliance with applicable State laws including AB 32 and SB 32.²⁹ As discussed in the PCAPCD's Justification Report for the thresholds, the PCAPCD relied on a review of historical CEQA projects within the County during the 13-year period from 2003 to 2015. The PCAPCD modeled emissions from 688 approved projects for the model year 2020, and used the modeled emissions to determine a reasonable level to establish emissions thresholds. The PCAPCD found that with a threshold of 10,000 MT CO₂e/yr, 11 percent of projects would exceed the threshold, and those projects contribute approximately 82 percent of total GHG emissions of the 688 projects built-out. In addition to modeling past projects within Placer County, the PCAPCD modeled a range of potential future residential and commercial projects to provide additional County-specific evidence in developing the PCAPCD's thresholds.³⁰

The GHG thresholds include a bright-line threshold for the construction and operational phases of land use projects and stationary source projects, a screening level threshold for the operational phase of land use projects, and efficiency thresholds for the operational phase of land use projects that result in GHG emissions that fall between the bright-line threshold and the screening level threshold.

²⁸ Placer County Air Pollution Control District. *CEQA Air Quality Handbook* [pg. 40]. November 21, 2017.

²⁹ Placer County Air Pollution Control District. *California Environmental Quality Act Thresholds of Significance: Justification Report*. October 2016.

³⁰ *Ibid.*



The bright-line threshold of 10,000 MTCO₂e/yr represents the level at which a project’s GHG emissions would be substantially large enough to contribute to cumulative impacts and mitigation to lessen the emissions would be mandatory. The PCAPCD further recommends use of the 10,000 MTCO₂e/yr for analysis of construction-related GHG emissions for land use projects. Any project with GHG emissions below the screening level threshold of 1,100 MTCO₂e/yr is considered by the PCAPCD as having a less-than-significant impact related to GHG emissions, and would not conflict with any State or regional GHG emissions reduction goals. Projects that would result in GHG emissions above the 1,100 MTCO₂e/yr screening level threshold, but below the bright-line threshold of 10,000 MTCO₂e/yr, must result in GHG emissions below the efficiency thresholds in order to be considered to result in a less-than-significant impact related to GHG emissions and not conflict with any State or regional GHG emission reduction goals. The GHG efficiency thresholds, which are in units of MTCO₂e/yr per capita or per square-foot, are presented in Table 5-7.

Table 5-7			
PCAPCD Operational GHG Efficiency Thresholds of Significance			
Residential (MTCO₂e/capita)		Non-Residential (MTCO₂e/1,000 sf)	
Urban	Rural	Urban	Rural
4.5	5.5	26.5	27.3
<i>Source: Placer County Air Pollution Control District. Placer County Air Pollution Control District Policy. Review of Land Use Projects Under CEQA. October 13, 2016.</i>			

In accordance with CARB and PCAPCD recommendations, the County, as lead agency, uses the currently adopted PCAPCD GHG thresholds of significance as presented above. Therefore, if the proposed project results in construction GHG emissions in excess of 10,000 MTCO₂e/yr, and/or operational GHG emissions in excess of 1,100 MTCO₂e/yr and is unable to show that emissions would achieve the efficiency thresholds presented in Table 5-7, the project would be considered to result in a cumulatively considerable contribution to global climate change.

Method of Analysis

The analysis protocol and guidance provided by the PCAPCD’s *CEQA Air Quality Handbook*, including screening criteria and pollutant thresholds of significance, was used to analyze the proposed project’s air quality impacts.

Construction Emissions

The proposed project’s short-term construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0 software, which is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data was available, such data was input into the model. CalEEMod was used to estimate emissions associated with construction of all on-site structures, as well as on-site demolition, site preparation, and grading. Based on applicant-provided information, construction was assumed to commence in May of 2023 and occur over an approximately one-year period. The grading phase of construction would involve the export of approximately 1,200 cubic yards of soil.



In addition, the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) RoadMod, Version 9.0.0 was used to calculate the emissions associated with the construction of a sanitary sewer force main along Olympic Valley Road. While the project site is not located within the jurisdiction of SMAQMD, RoadMod is an industry standard tool for evaluating emissions associated with linear construction projects (i.e., new roadway construction, road widening, utility installations, etc.) throughout the State. RoadMod requires the user to input information related to the area of disturbance, the length of time a project would occur, and, for linear non-roadway projects, a list of equipment that would be used during project construction. Based on applicant-provided information, modeling of the proposed sanitary sewer force main included the following assumptions:

- Construction start year – 2023;
- Project construction time – five days;
- Project length – 0.14 mile;
- Total project area – 0.10 acre;
- Maximum area disturbed per day – 0.10 acre;
- No water trucks used; and
- Haul trip length – 15 miles.

The results of construction emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. All modeling results are included in Appendix C to this EIR.

Operational Emissions

The proposed project's operational emissions were estimated using CalEEMod. For this analysis, the proposed project was assumed to be fully operational by 2024. The modeling performed for the proposed project included compliance with PCAPCD rules and regulations (i.e., low-VOC [volatile organic compounds] paints and low-VOC cleaning supplies), as well as with the 2019 California Building Energy Efficiency Standards Code, and the MWELO. The proposed project's compliance with such would be verified as part of the County's building permit application review process. LSC Transportation Consultants provided project-specific trip generation rates and VMT, which were applied to the project modeling.³¹ In addition, the proposed project would include the use of propane, rather than natural gas. CalEEMod does not include the ability to model propane emissions. As such, an off-model analysis of propane emissions generated by the proposed project was conducted and included in the emissions presented below. The non-electrical energy demand in British thermal units (BTUs) was derived from the CalEEMod defaults for the proposed land use, and the emission factors for the combustion of propane were provided in the USEPA's Emission Factor Documentation for AP-42 Section 1.5 Liquefied Petroleum Gas Combustion.³²

The results of operational emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. All CalEEMod modeling results and off-model calculations are included in Appendix C to this EIR.

³¹ LSC Transportation Consultants, Inc. *SNOW Sports Museum – Trip Generation at Site Driveway; SNOW Sports Museum – VMT Impacts*. 2022.

³² U.S. Environmental Protection Agency. *Emission Factor Documentation for AP-42 Section 1.5 Liquefied Petroleum Gas Combustion*. April 1993 [updated July 2008].



Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above. It should be noted that GHG emissions are inherently cumulative; thus, the discussion of associated GHG impacts is included under the Cumulative Impacts and Mitigation Measures section below.

5-1 Conflict with or obstruct implementation of the applicable air quality plan during project construction. Based on the analysis below, the impact is less than significant.

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction-related emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers’ commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate emissions of criteria air pollutants, including ROG, NO_x, and PM₁₀, intermittently within the site and in the vicinity of the site, until all construction has been completed, construction is a potential concern, as the proposed project is located in a nonattainment area for ozone and PM.

Estimated unmitigated construction-related emissions associated with the proposed project are presented in Table 5-8.

Table 5-8			
Maximum Unmitigated Construction Emissions (lbs/day)			
	ROG	NO_x	PM₁₀
CalEEMod Project Emissions	37.81	12.28	6.09
RoadMod Project Emissions	2.42	16.61	3.08
<i>Total Project Emissions</i>	<i>40.23</i>	<i>28.89</i>	<i>9.17</i>
PCAPCD Significance Threshold	82.0	82.0	82.0
Exceeds Threshold?	NO	NO	NO
<i>Sources: CalEEMod, April 2022; RoadMod, January 2022 (see Appendix C).</i>			

As shown in the table above, the project’s maximum construction-related emissions would be below the applicable PCAPCD thresholds of significance for ROG, NO_x, and PM₁₀.

It should be noted that construction activity related to implementation of the proposed project would be subject to PCAPCD Rule 228. Rule 228 requires projects involving earth-disturbing activities to implement various dust control measures, such as minimizing track-out on to paved public roadways, limiting vehicle travel on unpaved surfaces to 15 miles per hour, and stabilization of storage piles and disturbed areas. Furthermore, standard Placer County conditions of approval for proposed projects within the County include various requirements that would result in additional reductions of emissions related to implementation of the proposed project from what has been estimated and presented above in Table 5-8. The County’s standard conditions of approval are listed below:



- The applicant shall submit a Dust Control Plan to the Placer County Air Pollution Control District (APCD) when the project area to be disturbed is greater than one acre. The Dust Control Plan shall be submitted to the APCD a minimum of 21 days before construction activity is scheduled to commence. The Dust Control Plan can be submitted online via a fill-in form:
<http://www.placerair.org/dustcontrolrequirements/dustcontrolform>.
- With submittal of the Dust Control Plan, the contractor shall submit to the APCD a comprehensive equipment inventory (e.g., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used in aggregate of 40 or more hours. If any new equipment is added after submission of the inventory, the contractor shall notify the APCD prior to the new equipment being utilized. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the APCD with the anticipated construction timeline including start date, name, and phone number of the property owner, project manager, and on-site foreman.
- With submittal of the equipment inventory, the contractor shall provide a written calculation to the APCD for approval demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet-average of 20 percent NO_x reduction and 45 percent particulate reduction comparing with the statewide fleet averages. Acceptable options for reducing emissions may include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. The following link shall be used to calculate compliance with this condition and shall be submitted to the APCD as described above: <http://www.airquality.org/businesses/ceqa-land-use-planning/mitigation> (click on the current “Construction Mitigation Tool” spreadsheet under Step 1).

Moreover, the County’s standard conditions of approval require Grading Plans for the proposed project to include the following notes:

- Prior to construction activity, a Dust Control Plan or Asbestos Dust Mitigation Plan shall be submitted to the Placer County Air Pollution Control District (APCD) when the project area to be disturbed is greater than one acre. The Dust Control Plan shall be submitted to the APCD a minimum of 21 days before construction activity is scheduled to commence. The Dust Control Plan can be submitted online via the fill-in form: <http://www.placerair.org/dustcontrolrequirements/dustcontrolform>.
- Construction equipment exhaust emissions shall not exceed the APCD Rule 202 Visible Emissions limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified by the APCD to cease operations, and the equipment must be repaired within 72 hours.
- Dry mechanical sweeping is prohibited. Watering of a construction site shall be carried out to mitigate visible emissions. (Based on APCD Rule 228 / Section 301).
- The contractor shall not discharge into the atmosphere volatile organic compounds caused by the use or manufacture of Cutback or Emulsified asphalts for paving, road construction or road maintenance unless such manufacture or use complies with the provisions of Rule 217 Cutback and Emulsified Asphalt Paving Materials.



- The contractor shall utilize existing power sources (e.g., power poles) or clean fuel (e.g., gasoline, biodiesel, natural gas) generators rather than temporary diesel power generators.
- The contractor shall minimize idling time to a maximum of five minutes for all diesel-powered equipment. (Placer County Code Chapter 10, Article 10.14).
- Idling of construction-related equipment and construction-related vehicles shall be minimized within 1,000 feet of any sensitive receptor (i.e., house, hospital, or school).
- The contractor shall suspend all grading operations when fugitive dust exceeds the APCD Rule 228 (Fugitive Dust) limitations. Fugitive dust is not to exceed 40 percent opacity, nor go beyond the property boundary at any time. Lime or other drying agents utilized to dry out wet grading areas shall not exceed APCD Rule 228 limitations. (Based on APCD Rule 228 / section 302 & 401.4)
- The prime contractor shall be responsible for keeping adjacent public thoroughfares clean by keeping dust, silt, mud, dirt and debris from being released or tracked offsite. Wet broom or other methods can be deployed as control and as approved by the individual jurisdiction. (Based on APCD Rule 228 / section 401.5)
- During construction activity, traffic speeds on all unpaved surfaces shall be limited to 15 miles per hour or less unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust or visible emissions from crossing the project boundary line. (Based on APCD Rule 228 / section 401.2)
- The contractor shall apply methods such as surface stabilization, the establishment of a vegetative cover, paving, (or use another method to control dust as approved by the individual jurisdiction) to minimize wind-driven dust.
- The contractor shall apply water or use methods to control dust impacts offsite. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site. (Based on APCD Rule 228 / section 304)
- The contractor shall suspend all grading operations when wind speeds (including instantaneous gusts) are high enough to result in dust emissions crossing the boundary line, despite the application of dust mitigation measures. (Based on APCD Rule 228 / section 401.6)
- In order to minimize wind driven dust during construction, the prime contractor shall apply methods such as surface stabilization, establishment of a vegetative cover, paving (or use of another method to control dust as approved by Placer County). (Based on APCD Rule 228 / section 402)
- Any device or process that discharges 2 pounds per day or more of air contaminants into the atmosphere, as defined by Health and Safety Code Section 39013, may require an APCD permit. Developers/contractors should contact the APCD prior to construction and obtain any necessary permits prior to the issuance of a Building Permit. (APCD Rule 501)

Conclusion

Because the proposed project's estimated unmitigated construction emissions would be below the applicable PCAPCD thresholds of significance, construction activities associated with development of the proposed project would not substantially contribute to the PCAPCD's nonattainment status for ozone or PM. Accordingly, construction of the



proposed project would not conflict with or obstruct implementation of the applicable air quality plan, and a **less-than-significant** impact would occur.

Mitigation Measure(s)

None required.

5-2 Conflict with or obstruct implementation of the applicable air quality plan during project operation. Based on the analysis below, the impact is less than significant.

As discussed above, due to the nonattainment designations of the area, the PCAPCD has developed plans to attain the State and federal standards for ozone and particulate matter. The currently applicable air quality plan is the 2013 Ozone Attainment Plan. Adopted PCAPCD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with the applicable air quality plan. Thus, if a project’s operational emissions exceed the PCAPCD’s mass emission thresholds, a project would be considered to conflict with or obstruct implementation of the PCAPCD’s air quality planning efforts.

Emissions of ROG, NO_x, and PM₁₀ would be generated during operations of the proposed project from both mobile and stationary sources. Emissions related to operation of the proposed project would include sources such as architectural coatings, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, detergents, cleaning products, spray paint, insecticides, floor finishes, polishes, etc.). However, the most significant source of emissions related to the proposed project would be from mobile sources. As discussed in the Method of Analysis section above, to capture the potential emissions related to mobile sources from the proposed project, the project-specific trip generation rates prepared by LSC Transportation Consultants were applied to the project modeling.

The maximum unmitigated operational emissions for the proposed project are presented in Table 5-9 below.

Table 5-9 Maximum Unmitigated Operational Emissions (lbs/day)			
	ROG	NO_x	PM₁₀
Project Emissions	1.41	1.57	1.93
PCAPCD Significance Threshold	55	55	82
Exceeds Threshold?	NO	NO	NO
Note: Project emissions include emissions estimated using CalEEMod, as well as emissions from the combustion of propane calculated off-model.			
Source: CalEEMod, April 2022 (see Appendix C).			

As shown in the table, unmitigated operational emissions would be below the PCAPCD’s thresholds of significance for ROG, NO_x, and PM₁₀. Accordingly, operations of the proposed project would not violate any AAQS or contribute substantially to an existing or projected air quality violation. Therefore, operations of the proposed project would not



conflict with or obstruct implementation of the applicable air quality plan, and a **less-than-significant** impact would occur.

Mitigation Measure(s)

None required.

5-3 Expose sensitive receptors to substantial pollutant concentrations. Based on the analysis below, the impact is less than significant.

The major pollutant concentrations of concern are localized CO emissions, TAC emissions, and criteria pollutant emissions, which are addressed below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations. Concentrations of CO approaching the AAQS are only expected where background levels are high, and traffic volumes and congestion levels are high.³³ As noted previously, the PCAPCD has established screening methodology for localized CO emissions. According to the PCAPCD's screening methodology, if the project would result in vehicle operations producing more than 550 lbs/day of CO emissions, then a potentially significant adverse health impact related to localized CO emissions could occur.

According to the air quality analysis performed for the proposed project, operation of the project would result in maximum mobile source CO emissions of 8.98 lbs/day (see Appendix C). Consequently, CO emissions related to operation of the proposed project would be far below the 550 lbs/day screening threshold used by PCAPCD. Therefore, according to the PCAPCD's screening methodology for localized CO emissions, the proposed project would not be expected to generate localized CO emissions that would contribute to an exceedance of AAQS, and the proposed project would not expose sensitive receptors to substantial concentrations of localized CO.

TAC Emissions

As stated above, if a project would introduce a new source of TACs, a detailed health risk assessment may be required. The PCAPCD considers an increase in cancer risk levels of more than 10 in one million persons or a non-cancer hazard index greater than 1.0 to be a significant impact related to TACs. Activities related to the construction and operation of the proposed project are considered herein to determine whether the proposed project would expose nearby sensitive receptors to substantial TAC emissions. The closest sensitive receptors to the project site are the single-family residences located approximately 550 feet to the southeast of the project site.

Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy truck traffic or idling. The proposed museum would not involve long-term or frequent operations of any stationary diesel engines and, as a

³³ University of California, Davis. *Transportation Project-Level Carbon Monoxide Protocol*. December 1997.



result, operations of the proposed project are not anticipated to result in substantial emissions of TACs.

It is noted that, following implementation of the proposed project, an increased number of buses may operate in the project vicinity as compared to existing conditions. Buses generally result in greater emissions of TACs compared to single-passenger motor vehicles. However, Sections 2449 and 2485 of Title 13 of the CCR limit idling of buses to five minutes. All buses associated with operations of the proposed project would be subject to such idling limitations. In addition, the vehicle fleet mix that is used within CalEEMod for estimating mobile-sourced emissions considers a wide range of vehicle types. As such, emissions from bus exhaust were already accounted for in the modeling presented above. Furthermore, the use of buses typically results in a decrease in regional VMT as each bus trip effectively replaces multiple single-passenger vehicle trips. By reducing VMT, mobile-sourced emissions of TACs would be correspondingly reduced. Overall, emissions of TACs associated with buses would not cause a substantial adverse impact on sensitive receptors in the project vicinity.

Construction-related activities have the potential to generate concentrations of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. The construction period would be temporary and would occur over a relatively short duration in comparison to the operational lifetime of the proposed project. While methodologies for conducting health risk assessments are associated with long-term exposure periods (e.g., over a 30-year period or longer), construction activities associated with the proposed project were estimated to occur over an approximately five-month period. Only portions of the site would be disturbed at any given time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location on the project site. In addition, all construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation includes emissions reducing requirements such as limitations on vehicle idling, disclosure, reporting, and labeling requirements for existing vehicles, as well as standards relating to fleet average emissions and the use of Best Available Control Technologies. As discussed above, through standard conditions of approval, Placer County requires off-road equipment used within the County to achieve lower than State-average emissions of NO_x and PM. Thus, on-site emissions of PM would be reduced, which would result in a proportional reduction in DPM emissions and exposure of nearby residences to DPM. Project construction would also be required to comply with all applicable PCAPCD rules and regulations, including Rule 501 related to General Permit Requirements.

Considering the intermittent nature of construction equipment operating within an influential distance to the nearest sensitive receptors, the duration of construction activities in comparison to the operational lifetime of the project, the typical long-term exposure periods associated with conducting health risk assessments, and compliance with regulations, the likelihood that any one nearby sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low.

As discussed above, the proposed project's construction-related emissions would be below the applicable mass emissions thresholds of significance for PM₁₀, which includes DPM and fugitive dust related to construction. The PCAPCD's Handbook advises that if construction-related emissions have been quantified and are below the thresholds of



significance, the project would result in a less-than-significant impact regarding PM emissions.³⁴ Considering that PM₁₀ emissions, which include emissions of DPM, would be below the PCAPCD's thresholds of significance, construction of the proposed project would not be expected to generate substantial DPM emissions such that an increase in cancer risk levels of more than 10 in one million persons or a non-cancer hazard index greater than 1.0 would occur.

Naturally Occurring Asbestos

According to the *Special Report 190: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California*, prepared by the Department of Conservation, the project site is located within an area categorized as least likely to contain NOA, because faults and serpentinite outcroppings are not known to be in the project area.³⁵ Consequently, NOA is not anticipated to be present on the project site.

Criteria Pollutants

As noted in Table 5-1, exposure to criteria air pollutants can result in adverse health effects. The AAQS presented in Table 5-2 are health-based standards designed to ensure safe levels of criteria pollutants that avoid specific adverse health effects. Because the MCAB is designated as nonattainment for State and federal eight-hour ozone and State PM₁₀ standards, the PCAPCD, along with other air districts in the MCAB region, has adopted federal and State attainment plans to demonstrate progress towards attainment of the AAQS. Full implementation of the attainment plans would ensure that the AAQS are attained and sensitive receptors within the MCAB are not exposed to excess concentrations of criteria pollutants. The PCAPCD's thresholds of significance were established with consideration given to the health-based air quality standards established by the AAQS, and are designed to aid the district in implementing the applicable attainment plans to achieve attainment of the AAQS.³⁶ Thus, if a project's criteria pollutant emissions exceed the PCAPCD's mass emission thresholds of significance, a project would be considered to conflict with or obstruct implementation of the PCAPCD's air quality planning efforts, thereby delaying attainment of the AAQS. Because the AAQSs are representative of safe levels that avoid specific adverse health effects, a project's hinderance of attainment of the AAQS could be considered to contribute towards regional health effects associated with the existing nonattainment status of ozone and PM₁₀ standards.

However, as discussed in Impacts 5-1 and 5-2, the proposed project would not result in emissions that exceed the PCAPCD's thresholds of significance. Consequently, implementation of the proposed project would not conflict with the PCAPCD's adopted attainment plans nor would the proposed project inhibit attainment of regional AAQS. Therefore, implementation of the proposed project would not contribute towards regional health effects associated with the existing nonattainment status of ozone and PM₁₀ standards.

³⁴ Placer County Air Pollution Control District. *CEQA Air Quality Handbook* [pg. 31 and 32]. November 21, 2017.

³⁵ California Department of Conservation, California Geological Survey. *Special Report 190: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California*. Published 2006.

³⁶ Placer County Air Pollution Control District. *CEQA Air Quality Handbook* [pg. 20]. November 21, 2017.



Conclusion

Based on the above analysis, the proposed land uses would not be anticipated to result in the production of substantial concentrations of pollutants such as TACs (including DPM), localized CO, or criteria pollutants. In addition, the likelihood of NOA being present on the project site is low. Therefore, the proposed project would not result in the exposure of sensitive receptors to substantial pollutant concentrations, and a **less-than-significant** impact would occur.

Mitigation Measure(s)

None required.

5-4 Result in other emissions (such as those leading to odors) affecting a substantial number of people. Based on the analysis below, the impact is less than significant.

Emissions of pollutants have the potential to adversely affect sensitive receptors within the project area. Pollutants of principal concern include emissions leading to odors, visible emission (including dust), or emissions considered to constitute air pollutants. Air pollutants have been discussed in Impacts 5-1 through 5-3 above. Therefore, the following discussion focuses on emissions of odors, visible emissions, and emissions that have the potential to affect the clarity of Lake Tahoe.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact are difficult. Certain land uses such as wastewater treatment and conveyance facilities, landfills, confined animal facilities, composting operations, food manufacturing plants, refineries, and chemical plants have the potential to generate considerable odors. The proposed project would include the construction and operation of a sewer lift station, which would be located north of the project site, near the project driveway, within the Olympic Valley Road right-of-way. The proposed sewer lift station would have the potential to result in odors within the project area. Apart from the proposed sewer lift station, operations of the proposed project would not be anticipated to result in the creation of substantial odors.

This analysis is appropriately limited to the potential effects that the proposed project, specifically the sewer lift station, may have on the surrounding environment, and not future on-site visitors, pursuant to California Building Industry Association case law.³⁷ The nearest outdoor activity area associated with the existing park would be the pickleball courts located approximately 215 feet southeast of the lift station.

³⁷ Pursuant to the *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, the California Supreme Court held that “agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project’s future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project’s impact on the environment – and not the environment’s impact on the project – that compels an evaluation of how future residents or users could be affected by exacerbated conditions.” (Id. at pp. 377-378.).



Placer County maintains a Pump Station Design Manual, which provides design and engineering criteria that must be met for approval of proposed sewer lift stations.³⁸ The County, through the Design Manual, reserves the right to require that odor control facilities be included in sewer lift station design. In order to determine whether a proposed sewer lift station would require the inclusion of odor control facilities, County staff reviews project Improvement Plans for several factors. In particular, the potential for sewer lift stations to result in odors is largely dependent upon the size of the area serviced by the proposed lift station and if the lift station receives sewerage flows from other lift stations. Sewer lift stations that service large sewer shed areas or receive flows from other lift stations can have a heightened potential for creating odors, because sewage collected over large areas or transported over large distances is exposed to anaerobic conditions where odors can be generated. In addition to the consideration of the potential for a proposed lift station to result in the generation of odors, County staff considers the distance between the proposed lift station and the nearest receptors, as well as the site conditions surrounding the lift station.

In the case of the proposed lift station, the sewer shed serviced by the station would be limited to that of the project site, as well as an existing vault toilet located within the Olympic Valley Park. Therefore, the proposed lift station would not service a large sewer shed area and sewage directed to the proposed lift station would not be conducive to anaerobic conditions over large distances. Furthermore, the proposed lift station would not receive flows from other upstream lift stations, and, thus, the proposed lift station would not handle sewage from off-site areas that had been transported over long distances. Due to the small sewer shed area and lack of connections to other upstream sewer lift stations, operations of the on-site sewer lift station are not anticipated to result in substantial odors. Moreover, the nearest off-site receptor to the proposed sewer lift station would be approximately 215 feet away from the lift station, which would provide ample distance for the minimal odors to dissipate. For the purposes of avoiding impacts related to operations of sewer lift stations, the County considers a setback distance of 50 feet or more to be sufficient to avoid impacts. The nearest off-site receptors would be well outside of the 50-foot setback.

Considering the above, odor control facilities are not anticipated to be required, as minimal odors would result from operation of the lift station and all off-site receptors would be sufficiently separated from the proposed lift station. Consequently, operation of the proposed lift station would not result in the exposure of sensitive receptors to substantial odors. Nevertheless, the County maintains the discretion to require the inclusion of odor control facilities, such as air filters/scrubbers, in the design of the sewer lift station. The final determination with regard to the inclusion of odor control facilities would occur prior to approval of Improvement Plans for the project. Because odor control facilities would be considered primarily for the benefit of future on-site receptors, any potential need for inclusion of odor control facilities would not be within the purview of CEQA and would not be considered mitigation for the purpose of avoiding a significant environmental impact.

Diesel fumes from construction equipment are often found to be objectionable; however, construction is temporary, and operation of equipment is regulated by federal, State, and local standards, including PCAPCD rules and regulations. Buildout of the proposed project would involve construction activity in different areas of the site and within off-site

³⁸ Placer County Environmental Engineering. *Pump Station Design Manual*. June 30, 2016.



improvement areas throughout the construction period. Therefore, construction equipment would operate at varying distances from existing sensitive receptors, and potential odors from such equipment would not expose any single receptor to odors for a substantial period of time. Furthermore, construction activity would be restricted to certain hours of the day per the Placer County Code, Section 9.36.030(A)(7), which would limit the times of day during which construction related odors would potentially be emitted. Development of the proposed project would be required to comply with all applicable PCAPCD rules and regulations, which would help to control construction-related odorous emissions. Due to the temporary duration of construction and the regulated nature of construction equipment, project-related construction activity would not be anticipated to result in the creation of substantial odors.

In addition to the regulations discussed above, PCAPCD Rule 205, Nuisance, addresses the exposure of “nuisance or annoyance” air contaminant discharges, which would include odors, and provides enforcement of nuisance control. Rule 205 is complaint-based, where if public complaints are sufficient to cause the emission source to be considered a public nuisance, then the PCAPCD is required to investigate the identified source, as well as determine and ensure a solution for the source of the complaint, which could include operational modifications to correct the nuisance condition. Thus, although not anticipated, if odor complaints are made during project construction or operations, the PCAPCD would be required (per PCAPCD Rule 205) to ensure that such complaints are addressed and mitigated, as necessary.

Considering the above, construction equipment and the proposed sewer lift station would be unlikely to result in the creation of substantial odors. Consequently, implementation of the proposed project would not be anticipated to result in a significant impact related to the emission of compounds, such as those leading to odors.

Visible Emissions

As defined in PCAPCD Rule 202, visible emissions may be smoke, dust, or any other substance that obscures an observer’s view based on standardized scales of opacity. Visible emissions may result from the use of internal combustion engines, such as smoke from diesel fueled equipment, the burning of vegetation, or the upset and release of soil as dust.

PCAPCD Rule 202 specifically prohibits any person from discharging visible emissions of any air contaminant for a period or periods aggregating to more than three minutes in any one-hour time. Operation of the proposed land uses would not be anticipated to result in any visible emissions that would have the potential of violating Rule 202. Construction equipment on-site would be required to meet the visible emissions standards of Rule 202, and, considering the regulated nature of construction equipment, as well as the temporary use of such equipment on-site, would not be anticipated to result in substantial visible emissions. Additionally, PCAPCD Rule 228 requires implementation of dust control measures, such as minimizing track-out on paved public roadways, limiting vehicle travel on unpaved surfaces to 15 miles per hour, and stabilization of storage piles and disturbed areas. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, which would not have the potential to create substantial dust emissions.



Considering the above, implementation of the proposed project would not be anticipated to result in substantial visible emissions during project construction or operations.

Particle Deposition on Lake Tahoe

In the recent court case *Sierra Watch v. Placer County*, 69 Cal.App.5th 86 and 69 Cal.App.5th 1 (2021), the court determined that CEQA evaluations for projects near Lake Tahoe must address the project's potential environmental effects on the lake, including the potential for emissions to influence water clarity. As discussed above, Lake Tahoe is located approximately four miles southeast of the project site. Due to the regional significance of the lake, a discussion of the proposed project's potential effects on lake clarity is presented below.

As described above, current evidence indicates that (a) atmospheric nitrogen deposition resulting from vehicle exhaust is not a substantial contributor to losses in lake clarity, and (b) the implementation of stricter vehicle emissions standards at the State and federal levels are sufficient on their own to exceed TRPA's atmospheric nitrogen deposition objectives. In addition, as will be demonstrated below, emissions of PM₁₀, ROG, and NO_x attributable to project-generated VMT in the Lake Tahoe Basin would be well below the PCACPD's threshold of 55 lbs/day for ROG and NO_x and 82 lbs/day for PM₁₀.

Based on a VMT analysis prepared for the proposed project by LSC Transportation Consultants, Inc., the project would generate approximately 175 annual average daily trips (AADT).³⁹ Approximately 62 percent of trips generated by the proposed project would originate from the Sacramento/Roseville area, Olympic Valley, or Truckee, and would travel eastward to the project site, which, as noted previously, is located approximately four miles from the western shoreline of Lake Tahoe. Furthermore, the prevailing wind direction in the project area is most often from the east.⁴⁰ Therefore, any particulate emissions generated by visitors of the proposed project would primarily be carried towards the west, away from the lake.

Based on trip distribution data provided by LSC Transportation Consultants, approximately 639 daily VMT would originate within the areas located near the lake's shore.⁴¹ According to Caltrans, the roads within the California area of the Tahoe Regional Planning Agency (TRPA) boundaries, which includes the portions of Placer and El Dorado counties near Lake Tahoe, had an estimated daily VMT of 937,268 in 2019.⁴² The project's generation of approximately 639 daily VMT within the areas located near the lake's shore would represent a small fraction of VMT estimated to occur within the California area of the TRPA boundaries. In addition, monthly VMT in the Tahoe region can fluctuate by almost 1,000,000 between the peak summer months and the winter months, as more visitors travel to the region in the summer.⁴³ The additional 639 daily VMT (19,170 monthly VMT)

³⁹ LSC Transportation Consultants, Inc. *Squaw Valley Olympic Museum Transportation Impact Analysis*. February 21, 2020.

⁴⁰ Weather Spark. *Average Weather in Squaw Valley California, United States*. Available at: <https://weatherspark.com/y/1503/Average-Weather-in-Squaw-Valley-California-United-States-Year-Round>. Accessed November 2022.

⁴¹ LSC Transportation Consultants, Inc. *Squaw Valley Olympic Museum Transportation Impact Analysis*. February 21, 2020.

⁴² California Department of Transportation. *California Public Road Data 2019* [Table 9]. December 2020.

⁴³ Tahoe Regional Planning Agency. *VMT Threshold Update: Standard Recommendation and Implementation* [Figure 3]. April 18, 2021.



resulting from trips generated by the proposed project are expected to be within the normal seasonal fluctuations in the context of the seasonal VMT that is typically generated by the Lake Tahoe region. Thus, the VMT generated by the proposed project would not represent a notable change as compared to existing conditions. Furthermore, as shown in Table 5-10, unmitigated criteria pollutant emissions in the Lake Tahoe Basin from an increase in VMT associated with the proposed project are considerably below the applicable PCAPCD thresholds of significance. Because vehicle emissions within the Lake Tahoe Basin attributable to VMT associated with the proposed project would be well below the applicable PCAPCD thresholds, such emissions would not have a significant adverse effect on air quality within the Lake Tahoe Basin, and, as a result, are not anticipated to result in impacts to the lake's clarity.

Table 5-10 Maximum Unmitigated Vehicle Trip Emissions within the Lake Tahoe Region (lbs/day)			
	ROG	NO_x	PM₁₀
Project Vehicle Trip Emissions	0.61	0.59	0.61
PCAPCD Significance Threshold	55	55	82
Exceeds Threshold?	NO	NO	NO
<i>Source: CalEEMod, April 2023 (see Appendix C).</i>			

Conclusion

For the aforementioned reasons, project construction and operations would not result in substantial emissions of visible pollutants or other emissions, such as those leading to odors or substantial particle deposition on Lake Tahoe. Accordingly, implementation of the proposed project would not result in emissions that could adversely affect a substantial number of people, and a **less-than-significant** impact would occur.

Mitigation Measure(s)

None required.

5-5 Conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Based on the analysis below, the impact is less than significant.

The PCSP, adopted by the Placer County Board of Supervisors on January 28, 2020, includes goals and policies for energy efficiency.⁴⁴ As a result, the PCSP is considered the local plan for renewable energy and efficiency. The PCSP contains community-wide and municipal energy efficiency and GHG mitigation strategies that can be applied to discretionary projects, as feasible, when the applicable project-level thresholds are exceeded. For example, the following strategies from the PCSP represent measures that could be applicable to the proposed project.

- **Strategy E-1:** Facilitate a transition to electricity as the primary energy source for residential, mixed-use, commercial, and office buildings;

⁴⁴ Placer County Community Development Resource Agency. *Placer County Sustainability Plan: A Greenhouse Gas Emission Reduction Plan and Adaptation Strategy*. January 28, 2020.



- **Strategy E-4:** Encourage new residential, office, and commercial development, as mitigation for discretionary projects exceeding applicable CEQA GHG thresholds, to implement CALGreen Tier 1 standards and accelerate Zero Net Energy (ZNE) in new construction;
- **Strategy E-7:** Create incentives to construct new nonresidential buildings to ZNE energy efficiency standards in advance of the 2030 mandate, and a second class of incentives to support new nonresidential construction that does not achieve ZNE but exceeds minimum standards.
- **Strategy E-17:** Promote onsite renewable energy generation and energy storage for new small- and medium-sized nonresidential structures.
- **Strategy WW-2:** Encourage new development projects, as mitigation for discretionary projects exceeding applicable GHG thresholds, to exceed minimum State water efficiency requirements for new water fixtures.

Under the PCSP, the County uses the PCAPCD-recommended GHG threshold of 1,100 MTCO_{2e} per year to determine whether PCSP emission reduction measures are required. Because the proposed project's operational GHG emissions would be below the applicable GHG thresholds (see Table 5-12), implementation of the GHG reduction measures included in the PCSP is not required. As a result, the project would not conflict with or obstruct a local plan for renewable energy or energy efficiency, and the impact would be **less than significant**.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The geographic context for the cumulative air quality analysis includes Placer County and surrounding areas within the portion of the MCAB that is designated nonattainment for ozone and PM₁₀.

As mentioned above, global climate change is, by nature, a cumulative impact. Emissions of GHG contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). A single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. However, the combination of GHG emissions from a project in combination with other past, present, and future projects could contribute substantially to the world-wide phenomenon of global climate change and the associated environmental impacts. Although the geographical context for global climate change is the Earth, for analysis purposes under CEQA, and due to the regulatory context pertaining to GHG emissions and global climate



change applicable to the proposed project, the geographical context for global climate change in this EIR is limited to the State of California.

5-6 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than cumulatively considerable*.

The proposed project is within a nonattainment area for ozone and PM₁₀. By nature, air pollution is largely a cumulative impact. The population growth and vehicle usage within the nonattainment area from the proposed project, in combination with other past, present, and reasonably foreseeable projects within Placer County and surrounding areas, contributes to the region's adverse air quality impacts on a cumulative basis, and could either delay attainment of AAQS or require the adoption of additional controls on existing and future air pollution sources to offset emission increases. Thus, the project's emissions of criteria air pollutants would contribute to cumulative regional air quality effects.

As noted in the Standards of Significance section above, the PCAPCD directs lead agencies to use the region's existing attainment plans as a basis for analysis of cumulative emissions. A project's interference with such plans may be determined through the use of the PCAPCD's recommended thresholds of significance for ozone precursors and PM₁₀. The PCAPCD's recommended cumulative thresholds are identical to the operational thresholds, both of which are presented in Table 5-6. Accordingly, if the proposed project would result in an increase of ROG, NO_x or PM₁₀ in excess of PCAPCD's operational phase cumulative-level emissions thresholds, which are identical to PCAPCD's project-level operational emissions thresholds, the project could potentially result in a significant incremental contribution towards cumulative air quality impacts.

As discussed under Impact 5-2, and demonstrated in Table 5-9, operational criteria pollutant emissions associated with the proposed project would be below the applicable PCAPCD thresholds of significance.

Therefore, implementation of the proposed project would not result in a significant incremental contribution to a cumulative violation of any air quality standards, contribute substantially to an existing or projected air quality violation, or conflict with and/or obstruct implementation of the PCAPCD's air quality planning efforts. As such, the proposed project's incremental contribution to regional air quality impacts would be ***less than cumulatively considerable***.

Mitigation Measure(s)

None required.



5-7 Generation of GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Based on the analysis below, the project’s incremental contribution to this significant cumulative impact is less than cumulatively considerable.

Buildout of the proposed project would contribute to increases of GHG emissions that are associated with global climate change during construction and operation.

Construction GHG Emissions

The estimated unmitigated maximum construction-related GHG emissions from the proposed project are presented in Table 5-11. As shown in the table, the maximum construction-related GHG emissions would be well below the PCAPCD’s bright-line threshold of 10,000 MTCO_{2e}/yr.

Table 5-11 Unmitigated On-site Construction GHG Emissions		
Model	GHG Emissions (MTCO_{2e}/yr)	Threshold of Significance (MTCO_{2e}/yr)
On-site Construction Emissions	76.33	10,000
Off-site Sewer Pipeline Emissions	624.26	
<i>Project Total Construction Emissions</i>	700.59	
Exceeds Threshold?		NO
<i>Source: CalEEMod, April 2022; RoadMod, January 2022 (see Appendix C).</i>		

Long-Term Operational GHG Emissions

The modeling assumptions for the GHG emissions related to operations of the proposed project are discussed in the Method of Analysis section above. The estimated unmitigated operational GHG emissions at full buildout (2024) are presented in Table 5-12.

Table 5-12 Unmitigated Project Operational GHG Emissions (MTCO_{2e}/yr)	
Emission Source	GHG Emissions
Area	0.00
Energy ¹	157.33
Mobile	256.56
Solid Waste	9.35
Water	20.13
TOTAL ANNUAL GHG EMISSIONS	443.38²
PCAPCD Screening Level Threshold	1,100
Exceeds Thresholds?	NO
¹ Energy emissions represent the sum of electricity-related emissions estimated using CalEEMod and propane-related emissions calculated off-model. ² Rounding may result in small differences in summation.	
<i>Source: CalEEMod, April 2022 (see Appendix C).</i>	



As shown in the table, the proposed project would result in operational GHG emissions below the 1,100 MTCO₂e/yr operational threshold of significance. Accordingly, further evaluation in comparison with the efficiency thresholds presented in Table 5-7 is not required.

Consistency with Placer County Sustainability Plan

The CARB encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State's commitment to reducing GHG emissions. As noted previously, Placer County adopted the PCSP in January, 2020.⁴⁵ The PCSP includes an inventory of baseline emissions from the year 2005 and forecasted emissions in 2020, 2030, and 2050. In addition, the PCSP establishes a target of reducing the County's GHG emissions to 15 percent below 2005 levels by 2020 and achieving the State-wide per capita efficiency target of six MTCO₂e per person by 2030. The GHG reductions presented within the PCSP are designed to achieve the State's adopted AB 32 and SB 32 reduction targets. The PCSP would not be applicable to projects that have been previously analyzed under a certified EIR, which are consistent with such analysis, and addresses the most recent GHG regulatory requirements.

As noted above, because the proposed project's operational GHG emissions would be below the applicable thresholds (see Table 5-12), implementation of the GHG reduction measures included in the PCSP is not required. Therefore, the proposed project would not conflict with implementation of the PCSP.

Conclusion

Based on the above, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Consequently, the project would not result in a cumulatively considerable incremental contribution to impacts related to GHG emissions or climate change and the project's impact would be ***less than cumulatively considerable***.

Mitigation Measure(s)

None required.

⁴⁵ Placer County Community Development Resource Agency. *Placer County Sustainability Plan: A Greenhouse Gas Emission Reduction Plan and Adaptation Strategy*. January 28, 2020.

