4.8 AIR QUALITY

Development of The Village at Loomis (proposed project) is expected to generate air pollutant emissions during construction activities (including the associated infrastructure and roads) and occupancy of the proposed project. Placer County is in a federal nonattainment area for ozone (O_3) and is designated as a nonattainment area for state O_3 and particulate matter (PM_{10}) standards. This section addresses project impacts on air quality by analyzing the type and quantity of emissions that would be generated by development of the proposed project.

During the Notice of Preparation (NOP) comment period, the Town of Loomis (Town) received a comment letter from the Placer County Air Pollution Control District (PCAPCD). The comment letter notes that the PCAPCD's California Environmental Quality Act (CEQA) Handbook should be referenced to prepare the air quality analysis. In addition, the letter notes that impacts from greenhouse gas emissions/climate change should be addressed, and any health risks associated with locating sensitive uses within 500 feet of a major roadway or within 300 feet of a large gas station. In issuing the opinion in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) Cal.4th (Case No. S213478), the California Supreme Court found that CEQA does not require analysis of the effect of the environment on a proposed project, such as the recommended health risk assessment; consideration of this issue is presented in Section 4.8.3, Impacts. The letter also includes current PCAPCD thresholds for pollutants, and provides recommendations for specific models to use to quantify air emissions. The NOP and comments received in response to the NOP are provided in Appendix A.

Air pollutant emissions that would be generated by the proposed project were estimated using the California Emissions Estimator Model (CalEEMod) program. The results of the CalEEMod modeling are provided in Appendix G.

4.8.1 Environmental Setting

Air quality in California is regulated and monitored by the California Air Resources Board (CARB). The state is divided into 15 air basins, within which local authority is given to air pollution control districts and air quality management districts. Air basin boundaries were developed in recognition of geographic features and existing political boundaries, and air district boundaries are typically coterminous with political boundaries (e.g., county limits). Air districts are charged with enforcing the air quality standards established by the state and federal governments while providing local expertise and knowledge of local conditions. In general, local districts are responsible for control of stationary sources of emissions, and state and federal regulations control mobile source emissions.

The project site is located in the Town of Loomis, which lies within the Sacramento Valley Air Basin. The proposed project site encompasses approximately 66 acres and is currently

undeveloped, with the exception of six residences and one commercial building on the site. The existing land uses on site are not a substantial source of air pollutant emissions.

Air quality in the project vicinity is influenced by local and distant emissions sources. Air pollutant sources in the immediate project vicinity include emissions from vehicular traffic on Interstate 80 (I-80), Horseshoe Bar Road, and Taylor Road; area sources such as landscaping maintenance and agricultural activities; and stationary sources such as residential woodstoves and barbeques. Other significant air pollutant sources in the region include vehicular traffic on Sierra College Boulevard, as well as local agricultural, commercial, and industrial land uses. Distant emissions sources include the vehicular traffic, agricultural activities, and various industries in the Sacramento metropolitan area and beyond to the west.

Climate and Topography

Mild, wet winters and hot, dry summers characterize the climate of central and western Placer County. Precipitation generally occurs between November and April. Prevailing winds are from the south and southwest, and local air quality is influenced by the transport of emissions from upwind mobile and stationary pollution sources in south Placer County, the Sacramento metropolitan area, and the San Francisco Bay area.

Air quality in central Placer County is also affected by inversion layers, which occur when a layer of warm air traps a layer of cold air beneath it, preventing vertical dispersion of air contaminants. Calm atmospheric conditions that contribute to the creation of these inversion layers frequently occur in the region during late fall and early spring. The presence of an inversion layer results in higher concentrations of pollutants near ground level.

Air Quality Standards and Existing Concentrations

Ozone (O_3) and PM_{10} are pollutants of particular concern in central Placer County. Under the air quality standards mandated by the California Clean Air Act, the Sacramento Valley Air Basin is currently in nonattainment for PM_{10} and is designated as serious nonattainment for O_3. This air basin is also in a nonattainment area for the Federal Clean Air Act O_3 and $PM_{2.5}$ standards. (See Table 4.8-1 for relevant federal and state air quality standards.) Continued nonattainment status under the Federal Clean Air Act could result in economic penalties and restrictions on development in the region. As shown in Table 4.8-2, violations of O_3 and particulate matter standards have occurred and continue to occur within the region.

Carbon monoxide (CO) is another pollutant of concern in the region because south Placer County is designated as a federal maintenance area for CO standards. This region was in nonattainment for federal CO standards until 1998.

Table 4.8-1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard
	8 hours	0.070 ppm (137 μg/m³)	0.075 ppm (147 μg/m³)	
NO_2	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	Annual arithmetic mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)	—
	Annual arithmetic mean	—	0.030 ppm (for certain areas)	—
PM_{10}	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	Annual arithmetic mean	20 μg/m³	—	
$PM_{2.5}$	24 hours	—	35 μg/m³	Same as Primary Standard
	Annual arithmetic mean[f]	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[g]	30-day average	1.5 μg/m³	—	
	Calendar quarter	—	1.5 μg/m³ (for certain areas)	Same as Primary Standard
	Rolling 3-month average	—	0.15 μg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m³)	—	—
Vinyl chloride[g]	24 hours	0.01 ppm (26 μg/m³)	—	—
Sulfates	24 hours	25 μg/m³	—	—

Table 4.8-1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
Visibility-reducing particles	8-hour (10:00 a.m. to 6:00 p.m. PST)	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: CARB 2013a.

ppm = parts per million by volume; μg/m^3 = micrograms per cubic meter; mg/m3= milligrams per cubic meter; PST = Pacific Standard Time.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For NO_2 and SO_2, the standard is attained when the 3-year average of the 98th and 99th percentiles, respectively, of the daily maximum 1-hour average at each monitor within an area does not exceed the standard (effective April 12, 2010). For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

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

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

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

[f] On December 14, 2012, the Environmental Protection Agency Administrator signed the notice of final rule revising the annual $PM_{2.5}$ standard from 15.0 to 12.0 μg/m^3. The final rule has not been published in the Federal Register as of the date of this report, and an effective date for the ruling has not been set.

[g] CARB has identified lead and vinyl chloride as Toxic Air Contaminants (TACs) with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

The closest air quality monitoring station to the project site is in Roseville. Table 4.8-2 provides a summary of the frequencies of the most current air quality standard violations at that monitoring station.

Table 4.8-2
Frequency of Air Quality Standard Violations

Monitoring Site	Year	Number of Days Exceeding Standard					
		State 1-Hour O_3	*State 8-Hour O_3*	*Federal 8-Hour O_3*	*State 24-Hour PM_{10}*[a]	*National 24-Hour PM_{10}*	*National $PM_{2.5}$*
Roseville–N Sunrise Boulevard	2010	9	15	21	0	0	0
	2011	11	15	23	6.1	0	6.1
	2012	9	13	28	0	0	0
	2013	2	2	8	0	0	–[b]
	2014	4	10	21	0	0	0

Source: CARB 2014.

[a] Measurements of PM_{10} are usually collected every 6 days. "Number of days exceeding the standard" is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored.

[b] There was insufficient (or no) data available to determine the value.

Ozone

O_3 is a colorless gas that has a pungent odor and causes eye and lung irritation, visibility reduction (O_3 is a primary constituent of smog), and crop damage. O_3 in the upper atmosphere absorbs harmful ultraviolet light, but ground-level ozone is damaging to the tissues of plants, animals, and humans. O_3 reacts chemically with internal body tissues, such as the lungs, and can cause adverse effects on the human respiratory system. Prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections.

O_3 is formed in the atmosphere in the presence of sunlight by a series of chemical reactions involving oxides of nitrogen (NO_x) and reactive organic gases (ROGs). Because these reactions occur on a regional scale, O_3 is considered a regional air pollutant. Industrial fuel combustion and motor vehicles are primary sources of NO_x and ROGs.

As shown in Table 4.8-2, O_3 concentrations have exceeded federal and state ambient air quality standards at the Roseville air quality monitoring station from 2010 to 2014. These violations, together with violations throughout the Sacramento area, have resulted in the region as being in nonattainment of the state O_3 standards and in serious nonattainment of the federal 8-hour O_3 standard. The nonattainment region is called the Sacramento Federal Nonattainment Area, and includes all of Sacramento and Yolo Counties, and portions of El Dorado, Placer (western Placer County), Sutter, and Solano Counties.

Particulate Matter

Particulate matter is generally composed of particles in the air such as dust, soot, aerosols, fumes, and mists. Of particular concern are inhalable particulates that have aerodynamic diameters of 10 micrometers or less (PM_{10}). A subgroup of these particulates is fine particulates (particles with aerodynamic diameters less than 2.5 micrometers, $PM_{2.5}$), which have different characteristics, sources, and potential health effects than coarse particulates (particles with aerodynamic diameter between 2.5 to 10 micrometers). Coarse particulates are generated by sources such as windblown dust, agricultural fields, and dust from vehicular traffic on unpaved roads. $PM_{2.5}$ is generally emitted from activities such as industrial combustion, vehicle exhaust, and residential wood-burning stoves and fireplaces. $PM_{2.5}$ is also formed in the atmosphere when gases such as sulfur dioxide (SO_2), NO_x, and volatile organic compounds emitted by combustion activities are transformed by chemical reactions in the air. Separate standards for $PM_{2.5}$ were established in 1997 because these smaller particles can penetrate deep into the respiratory tract and cause their own unique, adverse health effects. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases; heart and lung disease; and coughing, bronchitis, and respiratory illnesses in children. PM_{10} and $PM_{2.5}$ can aggravate respiratory disease and cause lung damage, cancer, and premature death.

Measured concentrations at the Roseville monitoring station did not exceed federal PM_{10} standards between 2012 and 2014. However, there were 6 days in 2011 when the state PM_{10} standard and national $PM_{2.5}$ standard were exceeded. These measured concentrations have contributed to the region being classified as nonattainment for the state PM_{10} standard and national $PM_{2.5}$ standard.

Carbon Monoxide

CO is an odorless, colorless gas that can impair the transport of oxygen in the bloodstream; aggravate cardiovascular disease; and cause fatigue, headache, confusion, and dizziness. When CO gets into the body, it combines with chemicals in the blood and prevents the blood from providing oxygen to cells, tissues, and organs. Because the body requires oxygen for energy, high-level exposure to CO can cause serious health effects. At high concentrations, CO can cause heart difficulties in people with chronic diseases, and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and death.

CO forms through incomplete combustion of fuels in vehicles, wood stoves, industrial operations, and fireplaces. In Placer County, vehicular exhaust is a major source of CO. CO tends to dissipate rapidly into the atmosphere and, consequently, is generally a concern at the local level, particularly at major road intersections.

No violations of CO standards at the Roseville monitoring station have occurred in the last 5 years. All of Placer County is in attainment of the CO standards.

Nitrogen Dioxide

NO_2 is a brownish, highly reactive gas. It is a respiratory irritant that can cause lung damage and pneumonia, can lower the resistance to respiratory infections, and may affect those with existing respiratory illness, including asthma. Airborne NO_2 can also impair visibility through the formation of smog. NO_x, which includes NO_2, is a key precursor to O_3 and acid rain. NO_x forms when fuel is burned at high temperatures, and principally comes from transportation sources and stationary fuel combustion sources such as electric utility and industrial boilers.

There have been no violations of NO_2 standards at the Roseville monitoring station in the last 5 years. All of Placer County is in attainment of the NO_2 standards.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless acidic gas with a strong odor. High concentrations of SO_2 affect breathing and may aggravate existing respiratory and cardiovascular disease. Current scientific evidence links short-term exposures to SO_2, ranging from 5 minutes to 24 hours, with a adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects can result in particularly adverse consequences for asthmatics at elevated ventilation rates (e.g., while exercising or playing). Studies also show increased visits to emergency departments and hospital admissions for respiratory illnesses associated with short term exposures, particularly in at-risk populations such as children, older adults, and asthmatics (EPA 2016).

SO_2 is also a primary contributor to acid deposition, which causes acidification of lakes and streams and can damage trees, crops, building materials, and statues. In addition, sulfur compounds in the air can contribute to visibility impairment. The major source category for SO_2 is fuel-burning equipment combusting fossil fuels.

SO_2 is not measured at the Roseville station. However, the project area is designated as unclassified for federal and state standards. A summary of the attainment status for Placer County is provided in Table 4.8-3.

Table 4.8-3
Placer County Attainment Status

Criteria Pollutant	2013 State Designation	Federal Designation
CO	Unclassified	Unclassified/Attainment
NO_x	Attainment	Unclassified/Attainment
SO_x	Attainment	Unclassified/Attainment

Table 4.8-3
Placer County Attainment Status

Criteria Pollutant	2013 State Designation	Federal Designation
PM_{10}	Nonattainment	Unclassified
$PM_{2.5}$	Unclassified	Nonattainment (Sacramento Valley) Unclassified/Attainment (Mountain Counties)
O_3 (1-hour)	Nonattainment	—
O_3 (8-hour)	Moderate – Nonattainment	Severe – Nonattainment
Lead	Attainment	Unclassified/Attainment
Sulfates	Attainment	—
Hydrogen sulfide	Unclassified	—
Visibility reducing PM	Unclassified	—

Source: CARB 2014.

Existing Emissions Sources

Air pollutant concentrations in a region are usually the result of emissions from human-caused and natural sources. Human-caused sources of emissions are generally divided into three types: stationary, area-wide, and mobile sources. The contributions of these source categories vary from region to region. CARB maintains an emissions inventory to determine the sources and quantities of air pollution generated within the state's counties and air basins. Table 4.8-4 presents a summary of the estimated 2012 pollutant emissions data for the Sacramento Valley portion of Placer County and general source categories. Emissions from mobile sources constitute the majority of ROG, CO, NO_x, and sulfur oxides (SO_x) emissions in the area. Area-wide emissions contribute more than 75% of the PM_{10} emissions in the County.

Table 4.8-4
Summary of 2012 Estimated Annual
Average Emissions in Placer County (tons per day)

Source	TOG	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Stationary Sources							
Fuel combustion	0.9	0.4	3.0	3.4	0.1	0.3	0.3
Waste disposal	14.4	0.1	-	-	-	-	-
Cleaning and surface coatings	2.2	1.8	-	-	-	0	0
Petroleum production and marketing	13.4	0.7	-	-	-	-	-
Industrial processes	2.3	1.6	0.2	0.1	0.0	1.0	0.5
Total Stationary Sources	*33.3*	*4.6*	*3.2*	*3.4*	*0.1*	*1.3*	*0.8*
Area Sources							
Solvent evaporation	3.0	2.6	-	-	-	-	-

Table 4.8-4
Summary of 2012 Estimated Annual
Average Emissions in Placer County (tons per day)

Source	TOG	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Miscellaneous processes	4.5	1.5	8.1	0.7	0.1	7.1	1.8
Total Area Sources	*7.5*	*4.1*	*8.1*	*0.7*	*0.1*	*7.1*	*1.8*
Mobile Sources							
On-road motor vehicles	3.9	3.6	30.7	7.2	0.0	0.6	0.3
Other mobile sources	4.5	3.9	18.5	4.1	0.0	0.3	0.3
Total Mobile Sources	*8.4*	*7.6*	*49.2*	*11.3*	*0.1*	*1.0*	*0.6*
Total All Sources	**49.2**	**16.2**	**60.4**	**15.4**	**0.2**	**9.3**	**3.2**

Source: CARB 2013b.
TOG = total organic gases

Asbestos

Asbestos is a known carcinogen and therefore considered a Toxic Air Contaminant (TAC). Health effects of exposure to asbestos can include lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs) (CARB 2010). Naturally occurring asbestos is found in some areas throughout California, most commonly where ultramafic rock or serpentinite rock is present. Another form of asbestos, known as tremolite, can be found associated with ultramafic rock, particularly near faults. When construction activities occur in areas with naturally occurring asbestos in the soils or rock, the asbestos can become airborne and may be inhaled.

The California Department of Conservation's California Geological Survey prepared a map and accompanying report on the relative likelihood for the presence of naturally occurring asbestos in Placer County. Areas that were determined "most likely" and "moderately likely" to contain naturally occurring asbestos are areas with soil types and geologic units where chemical and physical conditions may have supported formation of asbestos. The project site is in an area where soil is from weathered granitic rocks. This soil type and geologic unit does not typically support formation of naturally occurring asbestos. The project site is in an area considered "least likely" to contain naturally occurring asbestos (USGS 2011).

4.8.2 Regulatory Setting

The federal Clean Air Act Amendments of 1977 required that each state adopt a State Implementation Plan (SIP) outlining pollution control measures to attain the federal standards in nonattainment areas of the state. CARB coordinates and oversees both state and federal air pollution control programs in California. CARB oversees activities of local air quality

management agencies, and is responsible for incorporating Air Quality Management Plans (AQMPs) from local air basins into a SIP for federal Environmental Protection Agency (EPA) approval. CARB also maintains air quality monitoring stations throughout the state in conjunction with local air districts. Data collected at these stations are used by CARB to classify air basins as "attainment" or "nonattainment" with respect to each pollutant and to monitor progress in attaining air quality standards.

The 1976 Lewis Air Quality Management Act established the air districts throughout California, including the PCAPCD. Significant authority for air quality control has been given to local APCDs or AQMDs, which regulate stationary source emissions and develop local attainment plans. PCAPCD has the authority to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution (e.g., motor vehicles at an intersection, a mall, or highway). CARB regulates motor vehicles and fuels.

Federal and State Regulations

The federal government, through the EPA, has established primary and secondary national ambient air quality standards (NAAQS) for criteria pollutants under the provisions of the Clean Air Act (CAA), including replacing the 1-hour O_3 standard with an 8-hour O_3 standard and adopting a $PM_{2.5}$ standard. A large region consisting of Sacramento and parts of Yolo, Placer (including this project area), and Solano Counties has received a serious nonattainment designation for the 8-hour average O_3 NAAQS. This nonattainment area is called the Sacramento Federal Nonattainment Area. The EPA, under the provisions of the CAA, requires each state with regions that have not attained the NAAQS to prepare a SIP, detailing how these standards are to be met in each local area. The SIP is not a single document, but a compilation of new and previously submitted plans, programs, district rules, state regulations, and federal controls. In California, CARB is the lead agency for developing this SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards the SIP revisions to EPA for approval and publication in the Federal Register.

The APCDs within the Sacramento Federal Nonattainment Area had developed the 1994 Sacramento Area Regional Ozone Attainment Plan to satisfy the SIP requirement for the 1-hour O_3 standard. The project area is located in the Sacramento Valley Air Basin, which is in severe nonattainment for federal ozone standards. The region was initially designated as "serious" nonattainment in 2004 based on the 8-hour ozone standard. The region was given a target attainment date of 2013. As a part of the SVAB federal ozone nonattainment area, the PCAPCD worked with the other local air districts within the Sacramento area to develop a regional air quality management plan to describe and demonstrate how Placer County and the Sacramento nonattainment area would attain the required federal 8-hour ozone standard by the proposed

attainment deadline. However, because the region must rely on longer-term emissions reduction strategies from state and federal programs, the 2013 date could not be met. In 2008, CARB submitted a letter to the EPA requesting a voluntary reclassification of the area from "serious" to "severe" nonattainment and an extension of the target attainment date to 2019. In accordance with the requirements of the CAA, 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) in December 2008. The PCAPCD adopted the Ozone Attainment Plan on February 19, 2009, and CARB determined that the plan meets CAA requirements and approved it, on March 26, 2009, as a revision to the SIP. Accordingly, the Ozone Attainment Plan is the applicable air quality plan for the region.

The state has established its own ambient air quality standards for criteria air pollutants, which are, in general, more stringent than the federal standards. CARB, the state's air quality management agency, enforces these standards by regulating mobile emissions sources and overseeing activities of the county APCDs and regional AQMDs. The proposed project is located in a nonattainment area for state O_3 and PM_{10} standards.

The California CAA requires that each area exceeding the state ambient air quality standards for O_3, CO, SO_2, and NO_2 develop a plan aimed at achieving those standards (California Health and Safety Code 40911). The California Health and Safety Code, Section 40914, requires air districts to design a plan that achieves an annual reduction in district-wide emissions of 5% or more, averaged every consecutive 3-year period. To satisfy this requirement, the PCAPCD has developed an Air Quality Attainment Plan (AQAP) outlining strategies for achieving the state ambient air quality standard for O_3. The AQAP outlines both stationary and mobile emission source control measures and emphasizes Transportation Control Measures and Indirect Source Control Measures to reduce mobile source emissions. These measures are also incorporated into the SIP to satisfy federal requirements.

Local Regulations

At the local level, the PCAPCD regulates air quality by establishing local air quality regulations, permitting stationary sources, and planning activities related to air quality. The PCAPCD is also responsible for enforcing and implementing federal and state standards. Through its enhanced CEQA review process, the PCAPCD has developed significance thresholds for land use projects that generate air pollutants. These thresholds apply to both short- and long-term air pollutant emissions. Projects with the potential to generate emissions exceeding the thresholds would have a significant impact on air quality. If the project's impact exceeds any of the significance criteria, various mitigation measures are available depending on the nature of the air quality impact. Table 4.8-5 presents the significance thresholds for criteria pollutants.

Table 4.8-5
Placer County Air Pollution Control District Significance Thresholds

Pollutant	Project Significance Thresholds (pounds per day)	Cumulative Significance Thresholds (pounds per day)
ROG	82	10
NO_x	82	10
Sulfur oxides	136	10
PM_{10}	82	none
CO	550	none

Source: Placer County APCD 2012.

Town of Loomis General Plan

The Town's General Plan includes goals and policies related to the reduction of air pollutants. An analysis of the project's consistency with General Plan policies that support the goals listed in the following text, as well as other goals related to resource protection, is provided in Appendix B to this draft EIR. Applicable goals and policies include the following (Town of Loomis 2001):

Natural Resources and Open Space Goals

1. To help protect groundwater and air quality within the Sacramento region.

Natural Resources and Open Space Policies

1. **Air quality.** Loomis will contribute toward the attainment of State and Federal air quality standards in the Sacramento Valley Air Basin through the following, and other feasible measures.
    a. Site preparation and development activities shall incorporate effective measures to minimize dust emissions and the emissions of pollutants by motorized construction equipment and vehicles.
    b. During the review of development plans, the Town should require that project proponents conduct their own air quality analysis to determine air quality impacts and potential mitigation measures.
    c. Recognizing that trees and other vegetation can provide a biological means of reducing air contaminants, existing trees should be retained and incorporated into project design wherever feasible. The additional planting of a large number of trees along roadways and in parking areas shall be encouraged.

d. The Town shall require carbon monoxide modeling for development projects that, in combination with regionally cumulative traffic increases, would result in a total of 800 or more trips at an affected intersection or cause the level of service to drop to D or lower at the intersection.

e. The Town shall encourage that large residential projects be phased or timed to be coordinated with development that provides primary wage-earner jobs.

f. If an initial air quality screening indicates that emissions of any pollutant could exceed 10 pounds per day, the Town shall require such development projects to submit an air quality analysis to Placer County APCD for review. Based on the analysis, the Town may require appropriate mitigation measures consistent with the latest version of the AQAP or other regional thresholds of significance adopted for the air basin.

g. New development shall pay its fair share of the cost to provide alternative transportation systems, including bikeways, pedestrian paths, and bus stop facilities.

h. The Town shall require that new developments dedicate land sufficient for park-and-ride lots, when the location is appropriate for such facilities.

4.8.3 Impacts

Methods of Analysis

This section identifies and discusses the environmental impacts resulting from the proposed project and suggests mitigation measures to reduce the level of impact. A detailed discussion of mitigation measures is also included in this section.

Development of the proposed project could potentially be detrimental to air quality during the construction and operation phases. Construction activities would result in criteria pollutant emissions from site grading activities, construction of infrastructure, application of architectural coatings, and vehicle and construction equipment exhaust. Proposed project operation would result in criteria pollutant emissions primarily from vehicular sources; however, landscape maintenance equipment, heating sources (e.g., natural gas heaters) and other miscellaneous activities would also generate pollutant emissions. The CalEEMod land use and emissions modeling program was used to estimate air pollutant emissions that would be generated during construction and operation of the proposed project. These are compared to the applicable PCAPCD criteria pollutant thresholds to determine whether there would be significant air quality impacts.

Based on the results of the traffic study, which found that the project would not degrade an intersection to a level of service E or F as a result of this project under existing or cumulative conditions, a CO hotspot analysis was not conducted and CO hotspots are not evaluated in this EIR.

The project site is located within 500 feet of I-80, which is a source of TACs such as diesel particulate matter. The CARB Land Use and Transportation Handbook recommends that new sensitive receptors should be located at least 500 feet from a major transportation facility, which is defined as a roadway carrying at least 100,000 vehicles per day. As documented in the project's Traffic Impacts Analysis (KD Anderson & Associates 2015, provided in Appendix E), I-80 in the area of the project carries approximately 84,000 vehicles per day currently. With the addition of the proposed project, I-80 is expected to carry 84,220 vehicles per day. As the traffic volumes are below 100,000 vehicles per day, the project site is not expected to be exposed to substantial concentrations of TACs associated with I-80. There are no other substantial sources of TACs in the vicinity. Therefore, the potential for project site residents to be exposed to TACs is not evaluated further in this EIR.

None of the proposed land uses typically generate objectionable odors that could adversely affect existing or planned residences. Therefore, potential odor impacts are not evaluated in this EIR.

Significance Criteria

Based on the guidance in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), the project would have a significant impact on air quality if:

- Air pollutants emitted from the proposed project would cause or contribute to a localized exceedance of any ambient air quality standard (Table 4.8-1 provides a summary of ambient air quality standards).
- The amount of air pollutants emitted from the implementation of the proposed project would exceed the significance emission thresholds set forth by the PCAPCD.
- Implementation of the proposed project would conflict with the policies identified in the Air Quality Element of the Town of Loomis General Plan or the goals of the PCAPCD.

Impact Discussion

IMPACT 4.8-1:	Generate air pollutant emissions that would cause or contribute to a localized exceedance of any ambient air quality standard or exceed PCAPCD's emission thresholds.
SIGNIFICANCE:	Significant
MITIGATION:	Mitigation Measures 4.8a and 4.8b
RESIDUAL SIGNIFICANCE:	Significant and Unavoidable for construction emissions, Less Than Significant for operational emissions

Construction Emissions

Emissions modeling was prepared for the proposed project using the CalEEMod land use and emissions modeling program (version 2013.2.2). Modeling inputs were based on the proposed project as presented in Chapter 3, Project Description, the project-specific construction timeline (which anticipates construction occurring each year from 2016 through 2019) and equipment usage information provided by the project applicant.

The construction phases, maximum daily emissions for each phase, and total maximum daily emissions from all simultaneous phases are shown in Table 4.8-6. The emissions shown in Table 4.8-6 are classified by the year in which the emissions would occur, the individual construction phase within each year and the specific months of that year during which that phase would occur.

Nine CalEEMod modeling runs were completed to estimate emissions from construction based on the proposed project phasing. Appendix G includes results for annual and summer emissions for each construction phase, and annual, summer, and winter emissions for overall project operation. The construction schedule is approximate, and actual dates may vary from those modeled. However, the modeling provides a reasonable estimate of the likely impacts of the project construction. The nine CalEEMod runs are as follows:

1. Site Preparation and Overall Project Operation: This modeling run includes the following construction phases:
    a. Demolition from May 1, 2016, to May 20, 2016
    b. Site Preparation from May 10, 2016, to May 21, 2016
    c. Grading from May 15, 2016, to July 15, 2016
    d. Utilities/Trenching from June 15, 2016, to August 15, 2016
    e. Backbone Roadway Paving from August 15, 2016, to August 30, 2016
    f. Doc Barnes Drive Extension Paving from September 1, 2016, to September 6, 2016
2. Phase A Single Family (143 homes), including:
    a. Building Construction from September 1, 2016, to August 1, 2019
    b. Architectural coatings from December 1, 2016, to September 1, 2019
3. Phase A Multi-Family (modeling was completed 125 units, 117 units are proposed):
    a. Additional site preparation, grading, utilities, and paving from April 1, 2017, to May 15, 2017
    b. Building Construction from May 1, 2017, to December 1, 2017
    c. Architectural coatings from November 1, 2017, to January 31, 2018

4. Phase A Commercial (42,000 square feet of commercial space and 166 parking spaces):
    a. Grading from April 1, 2017, to April 27, 2017
    b. Paving from April 28, 2017, to May 17, 2017
    c. Building Construction from May 18, 2017, to December 1, 2017
    d. Architectural coatings from December 1, 2017, to December 31, 2017
5. Phase B (60 homes), including:
    a. Building Construction from September 1, 2016, to January 1, 2018
    b. Architectural coatings from December 1, 2016, to February 1, 2018
6. Phase C (71 homes):
    a. Building Construction from September 1, 2016, to January 1, 2018
    b. Architectural coatings from December 1, 2016, to February 1, 2018
7. Phase D (29 homes):
    a. Building Construction from December 1, 2017, to August 1, 2018
    b. Architectural coatings from March 1, 2018, to September 1, 2018
8. Phase E (25,000 square feet of office space and 100 parking spaces):
    a. Grading from April 1, 2017, to April 17, 2017
    b. Paving from April 18, 2017, to May 2017
    c. Building Construction from May 1, 2017, to December 1, 2017
    d. Architectural coatings from December 1, 2017, to December 15, 2017
9. Phase F – Mixed Use (12,000 square feet commercial space, 8 dwelling units, and 50 parking spaces):
    a. Additional site preparation, grading, utilities, and paving from April 1, 2018, to April 30, 2018
    b. Building Construction from May 2, 2018, to December 1, 2018
    c. Architectural coatings from December 1, 2018, to December 15, 2018.

As reflected in the CalEEMod results and summarized in Table 4.8-6, project construction would generate more than 82 pounds per day of NO_x emissions during the initial grading phase between May 15 and July 15, 2016. When combined with other concurrent phases, NO_x emissions during construction would result in a **significant** impact because the emissions would exceed the PCAPCD thresholds. Specifically, NO_x emissions would total 162.51 pounds per day between

May 15 and May 20, 104.24 pounds per day between May 21 and June 14, and 137.83 pounds per day between June 15 and July 15.

In compliance with PCAPCD rules, **Mitigation Measure 4.8a** requires that the project implement the standard emissions reduction measures recommended by PCAPCD to ensure that construction emissions are reduced to the extent feasible. In addition, **Mitigation Measure 4.8b** requires use of a construction equipment fleet that achieves a 20% reduction in NO_x emissions compared to the statewide fleet average used in grading to further reduce NO_x emissions. As reflected in the CalEEMod modeling, use of oxidation filtration that can remove 25% of the NO_x emissions for grading equipment would reduce emissions by 22.78 pounds per day. This would result in the following construction NO_x emissions during 2016: 139.73 pounds per day between May 15 and May 20, 81.46 pounds per day between May 21 and June 14, and 115.05 pounds per day between June 15 and July 15. Additional reduction would be anticipated from implementation of **Mitigation Measure 4.8b**; however, between May 15 and May 20 and June 15 and July 15, construction NO_x emissions could still exceed the PCACPD threshold; therefore, construction emissions during these periods would be **significant and unavoidable.**

During 2017, construction emissions from each individual phase would remain below the applicable thresholds. However, many of the 2017 phases substantially overlap each other, resulting in emissions of both NO_x and ROG that would exceed the PCAPCD thresholds, representing a **significant** impact. Specifically, NO_x emissions between April 1 and December 15 would range between 82.10 and 144.43 pounds per day, and ROG emissions between November 1 and December 31 would range between 83.52 and 137.73 pounds per day. Implementation of **Mitigation Measure 4.8b** would reduce emissions from each individual phase but combined emissions are expected to continue to exceed the PCAPCD thresholds; therefore, construction emissions during these periods would be **significant and unavoidable.**

The NO_x emissions would temporarily exceed the PCAPCD thresholds, which could make it more difficult to obtain attainment with state and federal air quality standards. As the state and federal air quality standards were adopted to protect public health and welfare, nonattainment with those standards would lead to increases in respiratory and cardiovascular diseases.

Table 4.8-6
Construction Air Pollutant Emissions (pounds per day)

Construction Year	Construction Phase	Timing	Emissions					
			ROG	*NO_x*	*CO*	*SO_2*	*PM_{10}*	*$PM_{2.5}$*
2016	Demolition	May 1 – May 20	2.38	23.90	18.75	0.21	1.73 *(1.72)*	1.25
	Site Preparation	May 10 – May 21	3.20	34.37	26.32	0.02	19.58 *(9.84)*	8.91 *4.93)*
	Grading	May 15 – July 15	9.02	***104.24 (81.46)***	64.65	0.08	6.34 *(5.17)*	4.78 *(4.71)*
	Utilities/Trenching	June 15 – August 15	3.28	33.59 *(30.99)*	23.32	0.03	2.15 *(2.13)*	1.87 *(1.87)*
	Paving Backbone Roadways	August 15 – August 30	2.51	17.46	11.99	0.02	1.20 *(1.19)*	1.03
	Paving Doc Barnes Drive Extension	September 1 – September 6	2.51	17.46	11.99	0.02	1.20 *(1.19)*	1.03
	Phase A Single-Family Construction	September 1 – December 31	2.95	19.04	18.15	0.03	2.33 *(2.24)*	1.42 *(1.30)*
	Phase A Single-Family Architectural Coatings	December 1 – December 31	7.10	4.08	4.23	—	0.54 *(0.52)*	0.39 *(0.38)*
	Phase B Construction	September 1 – December 31	2.4	17.26	12.15	0.02	1.35 *(1.33)*	1.14
	Phase B Architectural Coatings	December 1 – December 31	9.10	4.01	3.34	—	0.36	0.33
	Phase C Construction	September 1 – December 31	2.44	17.45	12.52	0.02	1.40 *(1.38)*	1.16 *(1.15)*
	Phase C Architectural Coatings	December 1 – December 31	9.35	4.01	3.38	—	0.37 *(0.36)*	0.34
	Combined Demolition and Grading Phases May 15 – May 20		*14.85*	***162.51 (107.14)***	*109.72*	*0.31*	*27.65*	*14.94*
	Combined Grading and Utilities/Trenching Phases June 15 – July 15		*12.30*	***137.83***	*87.97*	*0.11*	*8.49*	*6.65*
	Combined Paving and Phase 1 Phases September 1 – September 6		*10.30*	*71.21*	*54.81*	*0.09*	*6.28*	*4.75*
	Combined Phases September 7 – November 30		*7.79*	*3.75*	*42.82*	*0.07*	*5.08*	*3.72*
	Combined Phases A, B, and C December 1 – December 31		*33.34*	*65.85*	*53.77*	*0.07*	*6.35*	*4.78*

Table 4.8-6
Construction Air Pollutant Emissions (pounds per day)

Construction Year	Construction Phase	Timing	Emissions					
			ROG	*NO_x*	*CO*	*SO_2*	*PM_{10}*	*$PM_{2.5}$*
2017	Phase A Single-Family Construction	January 1 – December 31	2.66	17.44	17.10	0.03	2.21 *(2.11)*	1.30 *(1.28)*
	Phase A Single-Family Architectural Coatings	January 1 – December 31	7.03	3.75	4.09	—	0.50 *(0.48)*	0.35 *(0.34)*
	Phase A Multi-Family Grading	April 1 – April 27	2.85	29.99	21.22 (20.88)	0.02	7.93 *(4.46)*	4.81 *(2.97)*
	Phase A Multi-Family Paving	April 28 – May 15	1.99	14.93	11.13	0.02	0.89	0.78
	Phase A Multi-Family Construction	May 1 – December 1	4.33	28.71	26.97	0.05	3.16 *(3.05)*	2.11 *(2.09)*
	Phase A Multi-Family Architectural Coatings	November 1 – December 31	40.24	2.34	2.95	—	0.40 *(0.38)*	0.24 *(0.23)*
	Phase A Commercial Grading	April 1 – April 27	2.49	25.97	17.45	0.02	7.61 *(4.21)*	4.61 *(2.78)*
	Phase A Commercial Paving	April 28 – May 17	2.08	17.21	12.98	0.02	1.15 *(1.14)*	1.02
	Phase A Commercial Construction	May 18 – December 1	3.23	23.03 *(22.93)*	18.43	0.02	1.92 *(1.86)*	1.51
	Phase A Commercial Architectural Coatings	December 1 – December 31	29.83	4.48	4.10	—	0.42 *(0.41)*	0.37
	Phase B Construction	January 1 – December 31	2.17	15.87	11.71	0.02	1.23 *(1.20)*	1.03 *(1.02)*
	Phase B Architectural Coatings	January 1 – December 31	9.04	3.69	3.30	—	0.32	0.29
	Phase C Construction	January 1 – December 31	2.20	16.04	12.05	0.02	1.28 *(1.26)*	1.04
	Phase C Architectural Coatings	January 1 – December 31	9.29	3.70	3.33	—	0.33	0.30
	Phase D Construction	December 1 – December 31	1.45	11.24	7.43	0.01	0.80 *(0.79)*	0.65
	Phase E Grading	April1 – April 17	2.16	22.58	14.69	0.02	6.14	3.66
	Phase E Paving	April 18 – May 1	1.88	15.03	11.71	0.02	1.01 *(1.00)*	0.92

Table 4.8-6
Construction Air Pollutant Emissions (pounds per day)

Construction Year	Construction Phase	Timing	Emissions					
			ROG	*NO_x*	*CO*	*SO_2*	*PM_{10}*	*$PM_{2.5}$*
	Phase E Construction	May 2 – November 30	3.33	23.09	18.64	0.03	1.75 *(1.73)*	1.50
	Phase E Architectural Coatings	December 1 – December 15	33.82	4.55	4.05	—	0.40 *(0.39)*	0.37
	Combined Phases January 1 – March 31		*32.39*	*60.49*	*51.58*	*0.07*	*5.87*	*4.31*
	Combined Phases April 1 – April 17		*39.91*	***139.04***	*105.13*	*0.12*	*27.6*	*17.1*
	Combined Phases April 18 – April 27		*36.76*	***101.49***	*80.74*	*0.11*	*14.49*	*9.84*
	Combined Phases April 28 – April 30		*38.34*	***107.66***	*87.4*	*0.13*	*9.92*	*7.03*
	Combined Phases May 1		*42.67*	***136.37***	*114.37*	*0.18*	*12.08*	*9.14*
	Combined Phases May 2 – May 17		*44.12*	***144.43***	*121.30*	*0.19*	*12.82*	*9.72*
	Combined Phases May 18 – October 31		*43.28*	***135.32***	*115.62*	*0.17*	*12.70*	*9.43*
	Combined Phases November 1 – November 30		***83.52***	***137.66***	*118.57*	*0.17*	*13.10*	*9.67*
	Combined Phases December 1 – December 15		***137.73***	***82.10***	*70.11*	*0.11*	*7.97*	*5.94*
	Combined Phases December 16 – December 31		***103.91***	*77.55*	*66.06*	*0.08*	*7.49*	*5.57*
2018	Phase A Single-Family Construction	January 1 – December 31	2.34	15.61	16.05	0.03	2.06 *(1.97)*	1.16 *(1.14)*
	Phase A Single-Family Architectural Coatings	January 1 – December 31	6.97	3.45	3.98	—	0.46 *(0.44)*	0.31 *(0.30)*
	Phase A Multi-Family Architectural Coatings	January 1 – January 31	40.19	2.16	2.84	—	0.38 *(0.36)*	0.22 *(0.21)*
	Phase B Architectural Coatings	January 1 – February 1	8.98	3.39	3.26	—	0.29 *(0.28)*	0.25
	Phase C Architectural Coatings	January 1 – February 1	9.23	3.40	3.29	—	0.29	0.26
	Phase D Construction	January 1 – August 1	1.26	9.95	7.01	0.01	0.70 *(0.69)*	0.56
	Phase D Architectural Coatings	March 1 – September 1	9.99	3.38	3.19	—	0.27	0.25
	Phase F Grading	April 1 – April 18	1.77	16.33	12.02	0.02	1.82 *(1.38)*	1.36 *(1.13)*

Table 4.8-6
Construction Air Pollutant Emissions (pounds per day)

Construction Year	Construction Phase	Timing	Emissions					
			ROG	*NO_x*	*CO*	*SO_2*	*PM_{10}*	*$PM_{2.5}$*
	Phase F Paving	April 19 – April 30	1.70	13.93	12.27	0.02	0.88 *(0.87)*	0.80
	Phase F Construction	May 1 – November 30	2.69	19.65	16.50	0.02	1.42 *(1.40)*	1.22
	Phase F Architectural Coatings	December 1 – December 15	33.17	4.18	3.97	—	0.34	0.31
	Combined Phases January 1 – January 31		*68.97*	*37.96*	*36.43*	*0.04*	*4.18*	*2.76*
	Combined Phases February 1 – February 28		*10.57*	*29.01*	*27.04*	*0.04*	*3.22*	*2.03*
	Combined Phases March 1 – March 30		*20.56*	*32.39*	*30.23*	*0.04*	*3.49*	*2.28*
	Combined Phases April 1 – April 18		*22.33*	*48.72*	*42.25*	*0.06*	*5.31*	*3.64*
	Combined Phases April 19 – April 30		*22.26*	*46.32*	*42.50*	*0.06*	*4.37*	*3.08*
	Combined Phases May 1 – August 1		*23.25*	*52.04*	*46.73*	*0.06*	*4.91*	*3.50*
	Combined Phases August 2 – August 31		*21.99*	*42.09*	*39.72*	*0.05*	*4.21*	*2.94*
	Combined Phases September 1 – September 30		*12.00*	*38.71*	*36.53*	*0.05*	*3.94*	*2.69*
	Combined Phases December 1 – December 15		*42.48*	*23.24*	*24.00*	*0.03*	*2.86*	*1.78*
	Combined Phases December 16 – December 31		*9.31*	*19.06*	*20.03*	*0.03*	*2.52*	*1.47*
2019	Phase A Single-Family Construction	January 1 – August 1	2.09	14.14	29.55	0.03	1.94 *(1.85)*	1.05 *(1.03)*
	Phase A Single-Family Architectural Coatings	January 1 – September 1	6.91	3.16	3.89	—	0.42 *(0.41)*	0.27
	Combined Phases January 1 – August 1		*9.00*	*17.3*	*33.44*	*0.03*	*2.36*	*1.32*

Source: Appendix G.
Bold text indicates a significant impact.

Operational Emissions

CalEEMod was also used to model air pollutant emissions from project operations. Air pollutant emissions would occur during project operation (occupation of the residences) through the consumption of electricity and use of motor vehicles, landscaping equipment, natural gas for heating devices (natural gas fireplaces and water heaters), individual barbeques, and consumer products (e.g., cleaning supplies and personal products such as hair spray). The CalEEMod estimates of pollutant emissions during operation of the proposed project are shown in Table 4.8-7.

Table 4.8-7
Unmitigated Operational Air Pollutant Emissions (pounds per day)

Source	Air Contaminant					
	ROG	*NO_x*	*CO*	*SO_2*	*PM_{10}*	*$PM_{2.5}$*
Summer						
Area sources	27.63	0.412	36.18	0.0002	0.20	0.20
Energy	0.38	3.25	1.51	0.02	0.26	0.26
Mobile	25.95	43.66	215.91	0.63	42.98	11.91
Combined	**53.96**	**47.34**	**253.60**	**0.66**	**43.44**	**12.37**
Winter						
Area sources	27.63	0.42	36.18	0.0002	0.20	0.20
Energy	0.38	3.25	1.51	0.02	0.26	0.26
Mobile	23.27	49.34	223.02	0.57	42.98	11.91
Combined	**51.29**	**53.01**	**260.71**	**0.59**	**43.44**	**12.37**

All of the air pollutant emissions from project operation would remain below the APCD thresholds, and the project is not expected to violate air quality standards. This impact would be **less than significant**.

IMPACT 4.8-2:	Implementation of the proposed project would conflict with the policies identified in the Air Quality Element of the Town of Loomis General Plan or the goals of the PCAPCD.
SIGNIFICANCE:	Potentially Significant
MITIGATION:	Mitigation Measure 4.8a
RESIDUAL SIGNIFICANCE:	Less Than Significant

The Town's General Plan requires that site preparation and development activities incorporate effective measures to minimize dust emissions and the emissions of pollutants by motorized

construction equipment and vehicles. The project would comply with this policy in implementing best management practices (BMPs) to control dust emission during project construction, as required by **Mitigation Measure 4.8a**. In addition, the project would comply with the Town's policy on using landscaping to reduce air contaminants, as trees would be planted throughout the project site, and the majority of the existing trees in the central riparian corridor would be retained. With implementation of **Mitigation Measure 4.8a** and the proposed landscaping plan, the project would have a **less-than-significant** impact related to conflicts with the Town of Loomis General Plan.

Project emissions would remain below the PCAPCD thresholds. Therefore, the project would not conflict with the goals of the APCD, and this impact would be **less than significant**.

IMPACT 4.8-3:	The proposed project could result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in nonattainment under an applicable federal or state ambient air quality standard (including the release of emissions that exceed quantitative thresholds for ozone precursors).
SIGNIFICANCE:	Significant
MITIGATION:	Mitigation Measure 4.8c
RESIDUAL SIGNIFICANCE:	Less Than Significant

Due to its nonattainment status for the federal and state ozone standards, the geographic scope of the area for the proposed project cumulative analysis includes the areas within the Sacramento Federal Nonattainment Area (SFNA) for ozone. The SFNA includes the Counties of Sacramento, Yolo, Solano (partial), Sutter (partial), Placer (except the Lake Tahoe Air Basin), and El Dorado (except the Lake Tahoe Air Basin).

The SFNA is in nonattainment for O_3 and particulate matter. Ongoing development and operation of new land uses would generate additional emissions of O_3 precursors (ROG and NO_x) and particulate matter, which may adversely affect the ability of the region to achieve attainment with the applicable air quality standards. This would be a **significant cumulative** impact.

As discussed in Section 4.8.2, Regulatory Setting, regional air quality plans have been prepared to identify strategies to achieve attainment of the ambient air quality standards. New development in the SFNA that results in greater air pollutant emissions than was assumed in regional air quality plans could contribute to cumulative air quality impacts. Development of the site with primarily commercial uses was assumed in regional air quality planning, but the project

proposes to develop residential and commercial land uses, which would generate more air pollutant emissions than were assumed for the site.

In accordance with PCAPCD guidance, a project with ROG and NO_x emissions in excess of 10 pounds per day would be considered cumulatively considerable. As shown in Table 4.8-7, the project's ROG emissions would be 53.96 pounds per day in the summer and 51.29 pounds per day in the winter, and NO_x emissions would be 47.34 pounds per day in the summer and 53.01 pounds per day in the winter. These emissions exceed the PCACPD cumulative threshold and would make a **cumulatively considerable** contribution to the significant cumulative impact. Therefore the project would have a **significant** impact in the cumulative scenario. **Mitigation Measure 4.8c** requires the project applicant to contribute to the PCAPCD emissions offset program or implement a site-specific mitigation program to reduce the project's contribution to the cumulative impact. With implementation of **Mitigation Measure 4.8c**, the project's impact in the cumulative scenario would be **less than significant**.

4.8.4 Mitigation Measures

4.8a For each construction phase, the project applicant shall implement the following standard construction emissions reduction measures:

a. Prior to issuance of grading or building permits (as applicable), the applicant shall submit a Construction Emission/Dust Control Plan to the Placer County Air Pollution Control District (PCAPCD). If the PCAPCD does not respond within 20 days of the plan being accepted as complete, the plan shall be considered approved. The applicant shall provide written evidence, provided by the PCAPCD, to the Town of Loomis (Town) that the plan has been submitted to the PCAPCD. It is the responsibility of the applicant to deliver the approved plan to the Town. The applicant shall not break ground prior to receiving PCAPCD approval of the Construction Emissions/Dust Control Plan, and delivering that approval to the Town.

b. Include the following standard note on the Grading Plan and/or Building Plan, or as an attached form: The prime contractor shall submit to PCAPCD a comprehensive inventory (e.g., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used in aggregate of 40 or more hours for the construction project. If any new equipment is added after submission of the inventory, the prime contractor shall contact PCAPCD prior to the new equipment being used. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide PCAPCD with the anticipated

construction timeline, including start date and the name and phone number of the property owner, project manager, and on-site foreman.

c. Include the following standard note on the Grading Plan and/or Building Plan, or as an attached form: During construction the contractor shall use existing power sources (e.g., power poles) or clean fuel (e.g., gasoline, biodiesel, natural gas) generators rather than temporary diesel power generators.

d. Include the following standard note on the Grading Plan and/or Building Plan, or as an attached form: During construction, the contractor shall minimize idling time to a maximum of 5 minutes for all diesel-powered equipment.

e. Signs shall be posted in the designated queuing areas of the construction site to remind off-road equipment operators that idling is limited to a maximum of 5 minutes.

f. Idling of construction-related equipment and construction-related vehicles is not recommended within 1,000 feet of any sensitive receptor. Material and equipment storage areas shall be located as far from sensitive receptors as feasible.

4.8b Prior to issuance of Grading or Building permits, the applicant shall provide a written calculation to PCAPCD 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 20% oxides of nitrogen (NO_x) reduction and 45% diesel particulate matter reduction as compared to the California Air Resources Board statewide fleet average emissions. Acceptable options for reducing emissions may include use of late model engines, low-emissions diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. The Construction Mitigation Calculator available at the following link shall be used to calculate compliance with this condition: http://www.airquality.org/ceqa/mitigation.shtml. The completed calculator worksheet shall be submitted to PCAPCD prior to the start of construction.

4.8c Prior to issuance of building permits, the project applicant shall pay its fair-share of the off-site mitigation fee through the PCAPCD Offsite Mitigation Program. The fee payment shall be sufficient to offset the project's reactive organic gas (ROG) and NO_x operational emissions in excess of 10 pounds per day. Using PCAPCD's fee calculation spreadsheet and the current fee rate of $18,030 per ton, the fee is estimated to be approximately $133,422. PCACPD shall use the fee for projects such as providing incentives to retrofit, repower, or replace heavy-duty diesel vehicles and construction equipment; lawn mower swap-outs; wood stove

replacements; re-powering heavy-duty diesel with alternative fueled vehicles; and removing, replacing, retiring, or rebuilding older, heavy-duty diesel engines with newer, lower emitting engines

Or

Prior to issuance of building permits, the project applicant shall develop an off-site mitigation project (equivalent to the emissions reductions required for the proposed project to meet PCAPCD thresholds of significance), subject to review and approval by the Town of Loomis after consultation with PCAPCD. Examples include participation in a "biomass" program that provides emissions benefits; retrofitting, repowering, or replacing heavy-duty engines from mobile sources (e.g., buses, construction equipment, on-road haulers); and other programs that the project proponent may propose to reduce emissions. The applicant must provide proof that the off-site mitigation project would reduce emissions at an equivalent amount as would be required of the proposed project under the PCAPCD fee program, which is estimated based on the CalEEMod modeling completed for this environmental impact report to be 7.40 tons.