8 AIR QUALITY

The Air Quality chapter of the EIR describes the potential impacts of the Timberline at Auburn project (proposed project) on local and regional air quality. The chapter describes existing air quality, construction-related air quality impacts resulting from grading and equipment emissions, direct and indirect emissions associated with the proposed project, the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts. This chapter is based on the *Placer County General Plan* (PCGP),[1] the *PCGP EIR*,[2] the *Auburn/Bowman Community Plan* (ABCP),[3] and URBEMIS-2007 (Version 9.2.4) (See Appendix U for URBEMIS-2007 outputs).

All air quality impacts in the Timberline at Auburn Initial Study were identified as *potentially significant* and are therefore addressed within this chapter (See Appendix C).

8.1 Environmental Setting

The following setting information provides an overview of the existing air quality setting in the proposed project area. In this section, the climate and topography of the region, ambient air quality standards (AAQS), attainment status for Placer County, current air quality, and sensitive receptors in the vicinity of the proposed project are discussed.

Climate & Topography

The proposed project site is located in western Placer County, which falls within the Sacramento Valley Air Basin (SVAB). Air flows into the SVAB through the Carquinez Strait, moves across the Delta and carries pollutants from the heavily populated San Francisco Bay Area into the SVAB. The climate is characterized by hot, dry summers and cool, rainy winters. Characteristic of SVAB winter weather are periods of dense and persistent low-level fog, which are most prevalent between storms. From May to October, the region's intense heat and sunlight lead to high ozone concentrations. Prevailing winds are from the south and southwest, and as a result of prevailing winds coming generally from south to southwest, air quality in the area is heavily influenced by mobile and stationary sources of air pollution located upwind in the Sacramento Metropolitan Area.

Most precipitation in the SVAB results from air masses moving in from the Pacific Ocean during the winter months. Storms usually move through the area from the west or northwest. During the winter rainy season (November through February) over half the total annual precipitation falls while the average winter temperature is a moderate 49 degrees. During the summer, daytime temperatures can exceed 100 degrees Fahrenheit. Dense fog occurs mostly in mid-winter and rarely in the summer. Daytime temperatures from April through October average between 70 and 90 degrees with extremely low humidity. The inland location and surrounding mountains shelter the valley from much of the ocean breeze that keeps the coastal regions moderate in temperature.

The only breech in the mountain barrier is the Carquinez Strait, which exposes the midsection of the valley to the coastal air mass.

Air quality in Placer County is also affected by inversion layers, which occur when a layer of warm air traps a layer of cold air, preventing vertical dispersion of air contaminants. The presence of an inversion layer results in higher concentrations of pollutants near ground level. Summer inversions are strong and frequent, but are less troublesome than those that occur in the fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not provide adequate dispersion of air pollutants.

Air quality in the project vicinity is influenced by both local and distant emission sources. Air pollutant sources in the immediate project vicinity include emissions from vehicle traffic on Richardson Drive, Dry Creek Road, and Bell Road, as well as area sources such as agricultural and landscaping activities. Other, more distant, air pollutant sources in the area include vehicle traffic on Interstate 80 and State Route (SR) 49, as well as local commercial land uses.

Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established AAQS for common pollutants. The AAQS for each contaminant represent safe levels that avoid specific adverse health effects. Pollutants for which air quality standards have been established are called “criteria” pollutants.

Table 8-1 identifies the major pollutants, characteristics, health effects and typical sources. The federal and State ambient air quality standards (AAQS) are summarized in Table 8-2. The federal and State AAQS were developed independently with differing purposes and methods. As a result, the federal and State AAQS differ in some cases. In general, California’s AAQS are more stringent, particularly for ozone and particulate matter (PM_{10} and $PM_{2.5}$), than the federal AAQS.

<u>Ozone</u>

Ozone is the most prevalent of a class of photochemical oxidants formed in the urban atmosphere. The creation of ozone is a result of a complex chemical reaction between reactive organic gases (ROG) and nitrogen oxide (NO_X) gases in the presence of sunshine. Unlike other pollutants, ozone is not released directly into the atmosphere from any sources. Factories, automobiles, and evaporation of solvents and fuels are the major sources of ozone precursors. The health effects of ozone are difficulty breathing, lung tissue damage, and eye irritation.

Table 8-1
Major Criteria Pollutants

Pollutant	Characteristics	Health Effects	Examples of Sources
Ozone	A strong smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. Ozone exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ozone). Ozone in the troposphere causes numerous adverse health effects and is a criteria air pollutant, and is a major component of smog.	• Breathing difficulties • Lung tissue damage • Damage to rubber and some plastics • Eye and skin irritation	Formed when reactive organic gases (ROG) and nitrogen oxides react in the presence of sunlight. ROG and NO_X sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.
Carbon Monoxide	A colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels. Over 80 percent of the carbon monoxide emitted in urban areas is contributed by motor vehicles.	• Chest pain in heart patients • Headaches and nausea • Reduced mental alertness • High concentration can result in death	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.
Nitrogen Dioxide	Nitrogen dioxide is typically created during combustion processes, and is a major contributor to smog formation and acid deposition.	• Lung irritation and damage • Reacts in the atmosphere to form ozone and acid rain	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.
Sulfur Dioxide	A strong smelling, colorless gas that is formed by the combustion of fossil fuels.	• Increased lung disease and breathing problems for asthmatics • Reacts in the atmosphere to form acid rain	Coal or oil burning power plants and industries, refineries, and diesel engines.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Any material, except pure water, that exists in the solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine particle combustion products.	• Increased respiratory disease • Lung damage • Premature death • Reduced visibility	Fuel combustion in motor vehicles, equipment and industrial sources, residential and agricultural burning. Particulate matter is also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).

Source: California Air Resources Board, http://www.arb.ca.gov/html/gloss.htm, accessed January 2010.

Table 8-2
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary	Secondary
Ozone	1 Hour	0.09 ppm	-	Same as primary
	8 Hour	0.07 ppm	0.075 ppm	
Carbon Monoxide	8 Hour	9 ppm	9 ppm	None
	1 Hour	20 ppm	35 ppm	
Nitrogen Dioxide	Annual Mean	0.03 ppm	0.053 ppm	Same as primary
	1 Hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide				
	24 Hour	0.04 ppm	-	-
	3 Hour	-	-	0.50 ppm
	1 Hour	0.25 ppm	0.075 ppm	-
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	15.0 ug/m^3	Same as primary
	24 Hour	-	35 ug/m^3	
Sulfates	24 Hour	25 ug/m^3	N/A	N/A
Lead	30 Day Average	1.5 ug/m^3	-	-
	Calendar Quarter	-	1.5 ug/m^3	Same as primary
Hydrogen Sulfide	1 Hour	0.03 ppm	N/A	N/A
Vinyl Chloride	24 Hour	0.01 ppm	N/A	N/A

ppm = parts per million
ug/m^3 = micrograms per cubic meter

Source: California Air Resources Board, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, September 8, 2010.

Particulate Matter

Suspended particulate matter (airborne dust) consists of solid and liquid particles small enough to remain suspended in the air for long periods. "Respirable" particulate matter (PM) consists of particles less than 10 microns in diameter, and is defined as "suspended particulate matter" or PM_{10}. Particles between 2.5 and 10 microns in diameter arise primarily from natural processes, such as wind-blown dust or soil. Fine particles are less than 2.5 microns in diameter ($PM_{2.5}$). $PM_{2.5}$, by definition, is included in PM_{10}. Fine particles are produced mostly from combustion or burning activities. Fuel burned in cars and trucks, power plants, factories, fireplaces, and wood stoves produce fine particles.

Particulate matter is a complex mixture that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These tiny particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particulate matter is divided into two classes, primary and secondary. Primary particles are released directly into the atmosphere from sources of generation. Secondary particles are formed in the atmosphere as a result of reactions involving gases.

Particles greater than 10 microns in diameter can cause irritation in the nose, throat, and bronchial tubes. Natural mechanisms remove many of these particles, but smaller particles are able to pass through the body's natural defenses, including the mucous membranes of the upper respiratory tract, and enter into the lungs. The particles can damage the alveoli, tiny air sacs responsible for gas exchange in the lungs. The particles may also carry carcinogens and other toxic compounds, which adhere to the particle surfaces and can enter the lungs.

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.

Nitrogen Oxide Gases

NO_X are produced from burning fuels, including gasoline and coal. Nitrogen oxides react with ROG (found in paints and solvents) to form ozone, which can harm 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.

Sulfates

Sulfates (SO_X) are colorless gases and constitute a major element of pollution in the atmosphere. SO_X is commonly produced by fossil fuel combustion. In the atmosphere, SO_X is usually oxidized by ozone and hydrogen peroxide to form sulfur dioxide and trioxide. If SO_X is present during condensation, acid rain may occur. Exposure to high concentrations for short periods of time can constrict the bronchi and increase mucous flow, making breathing difficult. Children, the elderly, those with chronic lung disease, and asthmatics are especially susceptible to these effects.

Toxic Air Contaminants

In addition to criteria pollutants, Toxic Air Contaminants (TACs) are a category of environmental concern. Many types of TACs exist, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate, benzene, formaldehyde, 1,3-butadiene and acetaldehyde.

Public exposure to TACs can result from emissions from normal operations as well as accidental releases. Heath effects of TACs include cancer, birth defects, neurological damage, and death.

Naturally Occurring Asbestos

Naturally Occurring Asbestos (NOA) is found in some areas throughout California, most commonly where ultramafic rock or serpentinite rock is present. Because asbestos is a known carcinogen, naturally-occurring asbestos is considered a TAC. Asbestos includes fibrous minerals found in certain types of rock formations. Natural weathering or human disturbance could generate microscopic NOA fibers which are easily suspended in air. Placer County has been identified by the California Department of Conservation as an area where NOA is located.

The proposed project site is not located near any ultramafic rock formations or fault zone areas. In addition, according to the California Department of Conservation's *Special Report 190: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California*, the proposed project site is within an area classified as least likely to contain naturally occurring asbestos.

Attainment Status

The Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require all areas of California to be classified as attainment, non-attainment, or unclassified as to their status with regard to the federal and/or State AAQS. The CAA 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."

Under the CAA, Placer County has been designated nonattainment for the ozone eight-hour standard and $PM_{2.5}$, and unclassified for other federal AAQS. In addition, Placer County is designated nonattainment for the State AAQS for ozone and PM_{10}, and attainment or unclassified for other pollutants (See Table 8-3). The entire State is currently designated unclassified for $PM_{2.5}$ and will continue to be until sufficient monitoring data has been collected.

Current Air Quality

As stated above, air quality in the SVAB complies with most state and federal air quality standards, but the SVAB is designated a non-attainment area for ozone and PM_{10} standards. Air quality is monitored for the portion of Placer County that is located within the SVAB by two active air pollutant monitoring stations. The air quality monitoring stations measure hourly pollutants and record sufficient data to meet EPA and/or ARB criteria for quality assurance. However, only monitoring data for ozone, PM_{10}, and $PM_{2.5}$ are publicly available via the CARB website.

Table 8-3
Placer County Attainment Status Designations

Pollutant	Federal Designation	State Designation
Ozone	Nonattainment	Nonattainment
Particulate Matter (PM_{10})	Unclassified	Nonattainment
Particulate Matter ($PM_{2.5}$ – 24-Hour Average)	Nonattainment	N/A
Particulate Matter ($PM_{2.5}$ – Annual Average)	Attainment	Attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Lead	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particulates	No Federal Standard	Unclassified

Source: www.arb.ca.gov, accessed January 2010.

One air quality monitoring station is located at the DeWitt Center and only monitors ozone concentrations; the other is located in Roseville on North Sunrise Boulevard, and monitors ozone, PM_{10}, $PM_{2.5}$, CO, and nitrogen dioxide. A summary of the annual air quality measurements from the monitoring sites are shown in Tables 8-4 and 8-5, respectively.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Residential areas are considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Although exposure periods are generally short, exercising places a high demand on respiratory functions, which can be impaired by air pollution.

The project site is located in an area characterized by existing residential land uses, and residences are located to the north, east, and west of the project site. In addition, an Auburn Recreation District park is located to the north of the project site and a school site and a hospital are both located approximately one-third mile from the site. Furthermore, because the proposed project includes residential development, the project site itself would be considered a sensitive receptor. Development activities associated with implementation could expose existing residents to increased air pollutant levels. It should be noted that, although fueling stations exist within the vicinity of the project site, the fueling stations are not located close enough to affect the sensitive receptors on the project site, as the closest station is located approximately one mile from the site.

Table 8-4
Air Quality Data Summary for the Auburn-Dewitt Center Air Quality Monitoring Site (2006-2008)

Pollutant	Standard	Days Standard Was Exceeded		
		2006	2007	2008
Ozone	State 1-Hour	25	1	14
Ozone	State 8-hour	67	21	36
Ozone	Federal 8-Hour	56	9	21

Source: California Air Resources Board, Aerometric Data Analysis and Management (ADAM) System, accessed January 2010.

Table 8-5
Air Quality Data Summary for the Roseville-North Sunrise Boulevard Air Quality Monitoring Site (2006-2008)

Pollutant	Standard	Days Standard Was Exceeded		
		2006	2007	2008
Ozone	State 1-Hour	16	4	20
Ozone	State 8-hour	38	20	38
Ozone	Federal 8-Hour	25	8	22
PM_{10}	State 24-Hour	5.8	0	6.1
PM_{10}	Federal 24-Hour	0	0	0
$PM_{2.5}$	24-Hour	11.5	0	6.5

Source: California Air Resources Board, ADAM System, accessed January 2010.

8.2 REGULATORY SETTING

Air quality is monitored through the efforts of various federal, State, and local government agencies. These agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. In addition to federal, State, and local air quality standards, the proposed project will be evaluated in the context of policies related to air quality contained in the Auburn/Bowman Community Plan.

Federal

United States Environmental Protection Agency

The U.S. EPA is responsible for enforcement of the federal AAQS. The U.S. EPA has adopted policies requiring states to prepare State Implementation Plans (SIP) that demonstrate attainment and maintenance of the federal AAQS. After a review of the SIP, the U.S. EPA will further classify non-attainment areas according to an air district's projected date of attainment. Districts that project attainment of standards in three to five years would be classified as near-term non-attainment, whereas districts that cannot meet standards within five years would be classified as long-term non-attainment. For an area to be classified as near-term non-attainment, the district

would be required to demonstrate that pollutant reductions of three-percent-per-year are obtainable and that maintenance of standards could occur for ten years.

In 1997, the U.S. EPA adopted new national air quality standards for ground-level ozone and for fine particulate matter ($PM_{2.5}$). These standards determined that the existing 1-hour ozone standard of 0.12 parts-per-million (ppm) would be phased out and replaced by an 8-hour standard of 0.08 ppm. New national standards for fine particulate matter (diameter 2.5 microns or less) were established for 24-hour and annual averaging periods.

The established PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised. Implementation of the new ozone and Particulate Matter standards was delayed by a lawsuit. On May 14, 1999 the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the Clean Air Act as applied in setting the new public health standards for ozone and particulate matter was unconstitutional and an improper delegation of legislative authority to the Environmental Protection Agency. The United States Supreme Court revised the District of Columbia Circuit's decision in 2001, clearing the way for implementation of the new standards. During the interim period, the California Clean Air Resources Board developed recommended designations for California air basins, proposing that Placer County be designated as non-attainment for the new 8-hour ozone standard. Designations for $PM_{2.5}$ have not been made; however, a minimum three-year monitoring period is required.

State

California Air Resources Board (CARB)

The CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing California's own air quality legislation, the CCAA, which was adopted in 1988. The CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the U.S. EPA.

California Clean Air Act

The CCAA requires that air quality plans be prepared for areas of the State that have not met State air quality standards for ozone, CO, nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). Areas that met standards by 1994 were classified as moderate, those that attained standards between 1994 and 1997 were classified as serious, and those that could not attain standards until after 1997 were classified as severe. In order to implement the transportation-related provisions of the CCAA, local air pollution control districts have been granted explicit authority to adopt and implement transportation controls.

Senate Bill 656

In 2003, the Legislature passed Senate Bill 656 to reduce public exposure to PM_{10} and $PM_{2.5}$. The legislation requires the ARB, in consultation with local air pollution control and air quality

management districts, to adopt a list of the most readily available, feasible, and cost-effective control measures that could be implemented by air districts to reduce PM_{10} and $PM_{2.5}$. The legislation establishes a process for achieving near-term reductions in PM throughout California ahead of federally required deadlines for $PM_{2.5}$, and provides new direction on PM reductions in those areas not subject to federal requirements for PM. Sources categories addressed by SB 656 include measures to address residential wood combustion and outdoor greenwaste burning, fugitive dust sources such as paved and unpaved roads and construction, combustion sources such as boilers, heaters, and charbroiling, solvents and coatings, and product manufacturing.

Sacramento Area Regional Ozone Attainment Plan

Because the SVAB has been designated non-attainment with respect to federal ozone standards, the Sacramento Area Regional Ozone Attainment Plan, or the State Implementation Plan (SIP), was prepared by Air Quality Management Districts and Air Pollution Control Districts in the Sacramento region. Compliance with the SIP is intended to reduce ozone levels, particularly levels of ROG and NO_X. In order to reduce ROG and NO_X emissions, the SIP includes land use and transportation control measures for development projects.

Local

Placer County Air Pollution Control District

The PCAPCD adopts and enforces regulations to control emissions from stationary sources of air pollutants, while the CARB has the authority to regulate emissions from motor vehicles. Stationary sources include non-specific sources associated with typical operation of a land use (e.g., gasoline-powered lawn mowers or woodburning fireplaces), as well as individual pieces of equipment (e.g., power generators). Emissions from individual stationary sources are regulated through a permit process, while emissions from non-specific sources are regulated during Placer County's development approval process.

In order to evaluate stationary and area source emissions, the PCAPCD has established significance thresholds for emissions of ROG, NO_X, SO_X, PM_{10}, and CO. Should emissions from area or stationary sources exceed the thresholds, the PCAPCD requires application of Best Available Control Technology on both new and modified emissions sources. The significance thresholds, listed in Table 8-6, serve as air quality standards in the evaluation of air quality impacts associated with proposed development projects.

Table 8-6
Placer County Air Pollution Control District Standards

Pollutant	Operational Threshold (lbs/day)	Cumulative Threshold (lbs/day)
ROG	82	10
NO_X	82	10
SO_X	82	N/A
PM_{10}	82	N/A
CO	550	N/A

Source: Placer County Air Pollution Control District, 2010.

The significance thresholds are expressed in "pounds per day," which allows for comparison between the thresholds and URBEMIS-2007 modeling results. Emissions attributable to the proposed project, as calculated by URBEMIS-2007, which exceed the significance thresholds could have a significant effect on regional air quality and the attainment of the federal and State AAQS. The significance thresholds apply to both short-term and long-term air pollutant emissions. Pursuant to the standards of significance, any project that is determined to have the potential to generate emissions exceeding the thresholds would have a significant impact on air quality.

Auburn/Bowman Community Plan

The following are applicable Auburn/Bowman Community Plan goals and policies related to air quality:

Environmental Resources Management Element

Air Quality

Goal 1 Protect and improve air quality in the Auburn area.

Goal 2 Assure Placer County's compliance with State and federal air quality standards.

Policy 1 Consider only area plan alternatives and later amendments that reduce emissions to their lowest practical levels.

Policy 2 Plans under consideration shall contemplate smooth flowing traffic systems for major arteries. This includes traffic signal coordination, parallel roadways and intra-neighborhood connectors where significant reductions in overall emissions can be achieved.

Policy 3 Continue the use of the Traffic Management Combining Zone (-TM) and expand it to include synchronization of traffic signals on Highway 49 and similar arteries susceptible to emissions improvement through approach/control.

Policy 4 Implement precise zoning which provides the opportunity for an improved jobs-housing balance.

Policy 6 Use Direct Source Review as outlined in the EIR for the Plan to reduce emissions from existing land uses.

Policy 7	Produce mitigations for air quality impacts associated with adoption of the Community Plan and include them in the monitoring plan.
Policy 8	Utilize zoning regulations to provide a buffer between industrial and residential land uses.
Policy 9	Projects which result in 200 or more trip-ends may require an air quality analysis to be submitted for review and approval.
Policy 10	Actively participate in the Air Pollution Control District's Transportation Control Measures (TCM) program to reduce vehicle trips and miles travelled within the Plan area.

8.3 IMPACTS AND MITIGATION MEASURES

Standards of Significance

For the purposes of this EIR, the following standards of significance were adapted from Appendix G of the CEQA Guidelines. Impacts are considered significant if implementation of the proposed project would do one or more of the following:

- Exceed the following PCAPCD thresholds for regional emissions:
  - Reactive Organic Gases (ROG) – 82 lbs/day;
  - Nitrogen Oxides (NO_X) – 82 lbs/day;
  - Particulate Matter (PM_{10}) – 82 lbs/day;
  - Carbon Monoxide (CO) – 550 lbs/day;
- Generate localized concentrations of CO that exceed the 1-hour 20 ppm or the 8-hour 9 ppm air quality standards;
- Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Method of Analysis

The following section discusses the methods utilized to determine the project's impacts.

<u>Short-Term Impacts</u>

Short-term construction emissions of ROG and NO_X were estimated using the URBEMIS-2007 (Version 9.2.4) computer program. The URBEMIS-2007 program is designed to model

construction emissions for land use development projects and allows for the input of project-specific information. For development sites greater than 10 acres, URBEMIS modeling default parameters assume that one-quarter of the project area could be constructed on any given day. To ensure a conservative analysis, modeling was based on the maximum estimated area of daily disturbance, based on a comparison of data provided by the project applicant and the default parameters contained in the URBEMIS-2007 model.

Construction Activities

In an effort to reduce construction waste, minimize truck trips and encourage reuse of on-site timber, oak trees removed to accommodate the proposed project would be milled on site and the resultant lumber utilized in project construction. In addition, the need may exist for separation and crushing of on-site rock found during the grading phase. If enough rock of a certain type is found, crushing and separating the rock for on-site use will be performed. On-site lumber milling and rock separation and crushing activities were included in the URBEMIS-2007 modeling parameters. All other modeling parameters, including equipment usage requirements, were based on URBEMIS-2007 model defaults.

Construction schedules were based on estimated construction schedules provided by the project applicant. Building construction is anticipated to occur in four phases, over 10 to 15 years. The first phase is expected to last approximately two years and would include mass grading of the entire project site over the first six months. In addition, lumber milling would be performed for one month and rock crushing would be performed for two months, two days a week. Asphalt paving on approximately 12 acres of the site would be performed for 14 days. The second phase is expected to last approximately two years and would include fine grading of the site for the duration of four months. This phase would also include asphalt paving on approximately two acres for three days. The third phase is expected to last approximately two years and would include fine grading of the site for the duration of four months, and asphalt paving on approximately six acres for eight days. The final phase is expected to last approximately two years and would include fine grading of the site for the duration of three months, and asphalt paving on approximately two acres for three days. URBEMIS-2007 modeling was conducted for the construction of each of the four phases of the project.

<u>Long-Term Impacts</u>

Regional area- and mobile-source emissions associated with the proposed project were estimated using the URBEMIS-2007 computer program, which includes options for the estimation of operational emissions for land use development projects. Emissions were calculated for both summer and winter conditions based on the default parameters contained in the model. Default trip generation rates contained in the model were revised to correspond with predicted trip generation rates identified in the traffic analysis prepared for this project.

As discussed above, the proposed project is expected to be built out in four phases over 10 to 15 years. Because not all of the project would be operational at the same time (until full buildout in 2024), URBEMIS-2007 modeling was conducted for operational impacts during each of the four phases of the project (i.e., the second phase includes the emissions associated with the units built

out in both the first phase and the second phase, the third phase includes the emissions associated with the units built out in the first, second, and third phases, and the fourth phase includes the emissions associated with the units built out in all four phases). The emission reductions associated with the inclusion of Neighborhood Electric Vehicles (NEVs) were calculated by running the URBEMIS-2007 model with trip rate per day reductions incorporated to account for the following NEV trip reduction assumptions:

- The project includes 14 NEV charging locations within the shopping center use and 256 NEV charging locations within the retirement community use, for a total of 270 NEV charging locations, or 270 NEV trips per day;
- Each NEV would travel approximately six miles per day (e.g., trips to on-site commercial uses and/or shopping areas within 1.5 miles of the project site);
- A mile-per-day reduction of 84 miles per day (shopping center)[1] and 1,536 miles per day (retirement community)[2] would occur associated with the NEV use; and
- A trip generation rate per day reduction for shopping center and retirement community of 0.4[3] and 0.27,[4] respectively, would occur.

In addition to the emission reductions from the required mitigation measures presented in this chapter, which were calculated by use of the URBEMIS-2007 model, the Sacramento Metropolitan Air Quality Management District Recommended Guidance for Land Use Emission Reduction were used where appropriate.

It should be noted that the potential user(s) associated with the proposed project could include a professional office or a medical office. URBEMIS-2007 modeling was conducted for both the professional office scenario and the medical office scenario (See Appendix U); however, the impact discussions in this chapter are based on the medical office scenario, which would be the worst-case scenario and presents a conservative analysis.

As stated earlier, all impacts in the Timberline at Auburn Initial Study were identified as *potentially significant* and are therefore addressed within this chapter.

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[1] 14 NEV trips per day x 6 miles/trip = 84 miles per day

[2] 256 NEV trips per day x 6 miles/trip = 1,536 miles per day

[3] Commercial-based Customer trip length of 7.3 miles and Regional Shopping Center primary trip distribution of 55% (URBEMIS model). Regional Shopping Center total project trips of 1223.79 x 55% = 673.1 x 7.3 = 4,913.5 miles. 4,913.5 commercial-based customer primary miles – 84 NEV commercial primary trip mile reduction = 4,829.5 miles. 4,829.5 / 7.3 = 661.6 trips after NEV trip reduction. 673.1 – 661.6 = 11.5 total NEV trip reduction. 11.5 / 28.5 ksf = 0.4 trip rate per day reduction for Regional Shopping Center.

[4] Home-based shopping trips = 18% of total trips at 7.3 miles per trip (URBEMIS model). Retirement Community total project trips of 2,191.8 x 18% = 374.5 x 7.3 = 2,880 miles. 2,880 home-based Retirement Community miles – 1,536 NEV Retirement Community mile reduction = 1,344 miles. 1,344 / 7.3 = 184.1 trips after NEV trip reduction. 394.5 – 184.1 = 210.4 total NEV trip reduction. 210.4 / 780 dwelling units = 0.27 trip rate per day reduction for Retirement Community.

Project-Specific Impacts and Mitigation Measures

8-1 Impacts related to fugitive particulate matter emissions and the release of NOA associated with project construction activities.

Fugitive Particulate Matter

Maximum construction emissions would occur during the first stages of construction when clearing, earthmoving, and grading occur. It should be noted that rock crushing activities were included in the URBEMIS-2007 inputs. The rock crushing activities were assumed to occur over the duration of two months during construction of Phase I of the project, and would include use of a portable self-contained crushing plant, separators, and field conveyors. Table 8-7 shows the expected maximum daily construction emissions by phase. It should be noted that project construction phases would be exclusive of one another; therefore, APCD has confirmed that evaluating each phase individually is appropriate.

Table 8-7
Construction-Related Daily Emissions of PM_{10}

	PM_{10}
Proposed Project (Phase I – 2012-2014)	332.93 lbs/day
Proposed Project (Phase II – 2015-2017)	41.61 lbs/day
Proposed Project (Phase III – 2017-2019)	42.50 lbs/day
Proposed Project (Phase IV – 2022-2024)	41.22 lbs/day
PCAPCD Significance Threshold	**82.0 lbs/day**

Source: Raney Planning & Management, Inc., April 2010.

As shown in Table 8-7, PM_{10} emissions generated during the first phase of project construction would exceed the PCAPCD significance threshold. PM_{10} emissions generated during the second, third and fourth phases of construction would not exceed the PCAPCD significance threshold of 82 pounds per day.

The majority of the PM_{10} from construction would be soil particles (grading and earthmoving on-site causes soil particles to become airborne), while a small fraction (approximately one percent) of the PM_{10} would be from diesel exhaust (during construction, various diesel-powered vehicles and equipment would be used on the site). Diesel exhaust particulate is a pollutant that has come under increased scrutiny in recent years. The CARB has identified PM from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic were identified as having the highest associated health risks. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. The emissions resulting from construction are temporary, affecting a specific receptor for a period of days or perhaps weeks. Emissions from diesel powered equipment on the site would be spread over the site and would not affect any specific receptor for an extended period of time.

Naturally Occurring Asbestos

If on-site rocks contain asbestos, grading and construction activities could release asbestos fibers into the environment, if not properly controlled. The "Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations" was developed to prevent hazardous situations resulting from earth disturbance in areas containing NOA. For projects that could create a hazardous situation through disturbance of asbestos-containing rocks, the ATCM requires an Asbestos Dust Mitigation Plan, which is subject to the reviewed and approval of the PCAPCD. The Asbestos ATCM requires dust control practices in areas where asbestos is found or likely to be found. Rule 228, Fugitive Dust, enforced by the PCAPCD, also contains measures to protect against exposure to airborne NOA.

The geotechnical engineering report prepared for the project site in 2008 indicates that ultramafic rock, serpentinite, or NOA-containing minerals were not encountered during the site reconnaissance. However, the Geologic Map of the Sacramento Quadrangle indicates that the project site is located near an area underlain by ultramafic rock often associated with NOA. The geotechnical engineering report indicates that NOA-containing minerals are not anticipated to be encountered on-site. However, if ultramafic rock, serpentinite or NOA-containing minerals are encountered at the site, site grading would be regulated under Cal/EPA Air Resources Board Regulation 93105, *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations* (ATCM) and Placer County Rule 228, *Fugitive Dust.*

Conclusion

During the first phase of project construction, construction activities associated with the proposed project would generate 332.93 pounds per day of PM_{10} emissions, which would exceed the PCAPCD's significance threshold. In addition, the project could result in the release of NOA into the air. Therefore, ***potentially significant*** short-term impacts would occur.

Mitigation Measure(s)

The PCAPCD provides recommended mitigation measures to reduce impacts related to short-term emissions of pollutants that would be associated with construction of a project. Implementation of the following mitigation measures would reduce emissions of PM_{10} to 40.01 pounds per day for the first phase of project construction, which would result in a *less-than-significant* impact from construction-related fugitive dust emissions and NOA. Impacts associated with NOA would be reduced to a *less-than-significant* level because the abovementioned Asbestos Dust Mitigation Plan would be required as part of Mitigation Measure 8-1(a).

8-1(a) *Prior to Grading Plan approval for each phase of project construction, the project applicant shall submit a Construction Emission / Dust Control Plan to the PCAPCD for approval. This plan must address the minimum*

Administrative Requirements found in section 300 and 400 of PCAPCD Rule 228, Fugitive Dust.

8-1(b) *The project applicant shall include the following standard note on the Grading Plans: The prime contractor shall submit to the PCAPCD a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. The inventory shall be updated, beginning 30 days after any initial work on site has begun, and shall be submitted on a monthly basis throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the PCAPCD with the anticipated construction time line including start date, and name and phone number of the property owner, project manager, and on-site foreman.*

8-1(c) *The project applicant shall include the following standard note on the Grading Plans: Construction equipment exhaust emissions shall not exceed PCAPCD Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified to cease operations and the equipment must be repaired within 72 hours. Additional information regarding Rule 202 can be found at: http://www.placer.ca.gov/Departments/Air/Rules.aspx.*

8-1(d) *The project applicant shall include the following standard note on the Grading Plans: The contractor shall suspend all grading operations when fugitive dust exceeds PCAPCD Rule 228 (Fugitive Dust) limitations. The prime contractor shall be responsible for having an individual who is CARB-certified to perform Visible Emissions Evaluations (VEE). This individual shall evaluate compliance with Rule 228 on a weekly basis. It is to be noted that fugitive dust is not to exceed 40 percent opacity and not go beyond property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas they shall be controlled as to not to exceed PCAPCD Rule 228 Fugitive Dust limitations.*

8-1(e) *Prior to the approval of Grading Plans, an enforcement plan shall be established, and submitted to the PCAPCD for review, in order to weekly evaluate project-related on-and-off- road heavy-duty vehicle engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180-2194. An Environmental Coordinator, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy duty on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified and the equipment must be repaired within 72 hours.*

8-1(f) *The project applicant shall include the following standard note on the Grading Plans: During construction, no open burning of removed vegetation shall be allowed. All removed vegetative material shall be either chipped on site or taken to an appropriate disposal site.*

8-1(g) *The project applicant shall include the following standard note on the Grading Plans: The prime contractor shall be responsible for keeping adjacent public thoroughfares clean of silt, dirt, mud, and debris, and shall "wet broom" if silt, dirt, mud or debris is carried over to adjacent public thoroughfares. Dry mechanical sweeping is prohibited.*

8-1(h) *The project applicant shall include the following standard note on the Grading Plans: During construction, traffic speeds on all unpaved surfaces shall be limited to 15 miles per hour or less.*

8-1(i) *The project applicant shall include the following standard note on the Grading Plans: The prime contractor shall suspend all grading operations when wind speeds (including instantaneous gusts) exceed 25 miles per hour and dust is impacting adjacent properties.*

8-1(j) *The project applicant shall include the following standard note on the Grading Plans: The contractor shall apply water twice daily to control dust, as required by Rule 228, Fugitive Dust, to prevent dust impacts off-site. Operational water truck(s) shall be on-site, at all times, to control fugitive dust. Construction vehicles leaving the site shall be clean or cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.*

8-1(k) *The project applicant shall include the following standard note on the Grading Plans: During construction, the contractor shall minimize idling time to a maximum of five minutes for all diesel powered equipment.*

8-1(l) *The project applicant shall include the following standard note on the Grading Plans: The contractor shall use CARB ultra low diesel fuel for all diesel-powered equipment. In addition, low sulfur fuel shall be utilized for all stationary equipment. The requirement may be reconsidered if the equipment manufacturer states that said use will void equipment warranties.*

8-1(m) *The project applicant shall include the following standard note on the Grading Plans: The contractor shall utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.*

8-1(n) *The project applicant shall include the following standard note on the Grading Plans: All on-site stationary equipment that is classified as 50 hp*

or greater shall either obtain a State-issued portable equipment permit or a PCAPCD-issued portable equipment permit.

8-1(o) *Prior to the approval of Grading Plans, the project applicant shall provide a plan to the PCAPCD for approval by the District 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 percent NO_X reduction compared to the most recent CARB 2005 fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, aftertreatment products, and/or other options as they become available.*

8-2 Impacts related to a temporary increase in ROG and NO_X emissions.

ROG and NO_X are ozone precursors and, as such, could contribute to the creation of smog within the SVAB. Construction-generated emissions of ROG and NO_X are short-term and of temporary duration, lasting only as long as construction activities occur, but possess the potential to represent a significant air quality impact. The development of the proposed land uses would result in the temporary generation of emissions resulting from vehicles associated with site grading and excavation, road paving, building construction, worker trips, and the movement of construction equipment.

The PCAPCD's significance threshold for ROG and NO_X emissions is 82 pounds per day. As shown in Table 8-8, during the first phase of project construction, the project would be expected to generate 61.37 pounds per day of ROG emissions and 81.77 pounds per day of NO_X emissions.

Table 8-8
Phase I – Construction-Related Daily Emissions of ROG and NO_X

	ROG	NO_X
Proposed Project (Phase I – 2012-2014)	61.37	81.77
Proposed Project (Phase II – 2015-2017)	6.22	29.87
Proposed Project (Phase III – 2017-2019)	22.49	40.12
Proposed Project (Phase IV – 2022-2024)	35.60	20.97
PCAPCD Significance Threshold	**82.0 lbs/day**	**82.0 lbs/day**

Source: Raney Planning & Management, Inc., April 2010.

During the second, third, and fourth phases of construction, emissions of ROG and NO_X would be lower. Therefore, the impact related to a temporary increase in emissions of ROG and NO_X would be ***less-than-significant***.

Mitigation Measure(s)
None required.

8-3 Contribution to CO concentrations at local "hotspot" intersections.

The primary mobile-source criteria pollutant of local concern is carbon monoxide. Placer County is currently designated unclassified for both state and national CO ambient air quality standards. Placer County currently has a significance threshold of 550 pounds per day of CO.

Concentrations of CO are a direct function of the number of vehicles, length of delay and traffic flow conditions. Transport of this criteria pollutant is extremely limited; CO disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors (e.g., residents, school children, hospital patients, the elderly, etc.). Given the high traffic-volume potential, areas of high CO concentrations, or "hot spots", are typically associated with intersections that are projected to operate at unacceptable levels of service (LOS E or worse) during the peak commute hours. Modeling is, therefore, typically conducted for intersections that are projected to operate at unacceptable levels of service during peak commute hours. Future concentrations of CO are determined by two opposing factors. The overall rate of emission of CO for the vehicle fleet has been, and is expected to continue, decreasing as older, more polluting vehicles are retired and replaced with newer, cleaner vehicles. At the same time increased traffic volumes, deterioration in average speed and increased delay (and resulting idling emissions) all act to increase emissions within and near intersections.

The PCAPCD requires a CALINE4 CO "hotspot" computer analysis for any project that would result in the degradation of LOS at a signalized intersection from LOS D to LOS E or worse. Because implementation of the project would not result in degradation of LOS at any signalized intersections in the vicinity of the project site to LOS E or worse, a CALINE4 analysis is not required to be performed for the proposed project. Therefore, the proposed project's impact would be ***less-than-significant***.

Mitigation Measure(s)
None required.

8-4 Impacts related to long-term increases of criteria air pollutants.

The proposed project would result in the development of commercial land uses that would generate emissions of ROG and NO_X, which are ozone-precursor pollutants, as well as CO and PM_{10}. The predicted operational emissions for the project, at full buildout, are summarized below in Table 8-9. It should be noted that URBEMIS-2007 modeling was conducted to estimate the operational emissions for all four phases of the project; however, Table 8-9 only includes the emissions estimates for the fourth phase (full buildout – year 2024) of the project, which would be the maximum emissions generated by the project. The remaining modeling runs can be found in Appendix U of this EIR.

Table 8-9
Estimated New Regional Emissions (Pounds/Day) (Unmitigated) for Phase IV (Full Buildout – Year 2024) of the Proposed Project

Phase IV (2022-2024)				
	ROG	**NO_X**	**PM_{10}**	**CO**
Area Source Emissions	62.51	12.23	0.70	49.63
Vehicle Emissions	30.32	21.50	86.08	245.70
Total	**92.83**	**33.73**	**86.78**	**295.33**
PCAPCD Significance Threshold	**82.0**	**82.0**	**82.0**	**550.0**

Source: Raney Planning & Management, Inc., September 2010.

Pursuant to the PCAPCD's air quality significance thresholds, the project would result in a significant impact if operation of the project would result in emissions of ROG, NO_X, or PM_{10} that would exceed 82 pounds per day. At full buildout of the proposed project, operation of the project would create emissions of ROG and PM_{10} that would exceed the PCAPCD significance thresholds. Emissions of NO_X would be under the significance threshold.

In addition, pursuant to the PCAPCD's air quality significance thresholds, the project would result in a significant impact if operation of the project would result in CO concentrations that exceed 550 pounds per day. According to the URBEMIS-2007 modeling for the proposed project (See Appendix U), as shown in the tables above, operation of the project at full buildout would result in the generation of 295.33 pounds per day of CO; therefore, the PCAPCD significance threshold would not be exceeded.

It should be noted that the project applicant intends to include Neighborhood Electric Vehicle (NEV) parking facilities within the project site. NEVs are one- to four-passenger, three- or four-wheeled vehicles that are powered via electricity supplied by a rechargeable battery. They are designed for low-speed use in neighborhoods and urban areas to run errands, to commute to and from work or school, and to make small local deliveries. NEVs are equipped with three-point seat belts, windshields and windshield wipers, running lights, headlights, brake lights, reflectors, rear view mirrors, and turn signals. NEV travel is permitted on roads with speed limits in excess of 35 mph where there is a designated Class II NEV lane on the right shoulder.

The use of NEVs within the proposed project site would be expected to decrease the estimated ROG, NO_X, PM_{10}, and CO emissions associated with vehicles by 0.76, 0.67, 2.8, and 8.0 pounds per day, respectively. With these reductions in emissions, ROG (92.07) and PM_{10} (83.86) would still exceed the PCAPCD thresholds of 82.0 pounds per day.

Conclusion

Based on the modeling conducted using URBEMIS-2007 (Version 9.2.4), operation of the proposed project would result in total predicted emissions of ROG and PM_{10} that

would exceed the PCAPCD significance thresholds. Therefore, the project's impact would be ***significant***.

Mitigation Measure(s)

The following mitigation measures would reduce the ROG and PM_{10} emissions associated with operation of the proposed project to 88.60 and 81.29 pounds per day, respectively (See Table 8-10). However, although the PM_{10} emissions would be below the PCAPCD threshold of significance, implementation of feasible mitigation would not reduce the project's ROG emissions below the PCAPCD's significance threshold; therefore, the project would result in a *significant and unavoidable* impact.

Table 8-10
Estimated New Regional Emissions (Pounds/Day) (mitigated) for Phase IV (Full Buildout – Year 2024) of the Proposed Project

	ROG	NO_X	PM_{10}	CO
Unmitigated Project Emissions				
Area Source Emissions	62.51	12.23	0.70	49.63
Vehicle Emissions	30.32	21.50	86.08	245.70
Total	**92.83**	**33.73**	**86.78**	**295.33**
Project Emissions Reduction with NEV				
Area Source Emissions Reduction	0	0	0	0
Vehicle Emissions Reduction	-0.76	-0.67	-2.8	-8.00
Total Emission (with NEV)	**92.07**	**33.06**	**83.98**	**287.33**
Project Emissions Reduction with Mitigation				
Area Source Emissions Reduction	-2.67	-0.11	0	-8.82
Vehicle Emissions Reduction	-0.80	-0.66	-2.69	-7.63
Total	**88.60**	**32.29**	**81.29**	**270.88**
Total Mitigated Project Emissions (including NEV)				
Area Source Emissions	59.84	12.12	0.70	40.81
Vehicle Emissions	28.76	20.17	80.59	230.07
Total	**88.60**	**32.29**	**81.29**	**270.88**
PCAPCD Significance Threshold	**82.0**	**82.0**	**82.0**	**550.0**

Source: Raney Planning & Management, Inc., September 2010.

8-4 *Prior to Improvement Plan approval, the applicant shall show on the plans incorporation of mitigation measures to reduce the impact to the highest degree feasible. The plans shall be reviewed and approved by the Placer County Air Pollution Control District to ensure proper incorporation of mitigation measures. The mitigation measures shall be the following:*

- *Provide bicycle lanes, sidewalks and/or paths, connecting project residences to adjacent schools, parks, the nearest transit stop and nearby commercial areas.*
- *Provide secure and conveniently placed bicycle parking at parks and other facilities.*

- *Implement feasible travel demand management (TDM) measures for a project of this type. This would include coordination with regional ride-sharing organization and, provision of transit information.*
- *Woodburning or pellet appliances shall not be permitted for the entire planning area with the single exception of only one wood burning appliance which meets the APCD Rule 225 in the common building "A". Only natural gas or propane-fired fireplace appliances are permitted. These appliances shall be clearly delineated on the floor plans submitted in conjunction with the building permit application.*
- *Install exterior outlets in the front and rear of each home to promote use of electric lawn and garden equipment for landscaping.*
- *Construct transit amenities such as bus turnouts/bus bulbs, benches, shelters, etc. in coordination with Placer County Transit.*
- *Provide direct, safe, attractive pedestrian access from project land uses to transit stops and adjacent development.*
- *Include shade trees near buildings to shield them from the sun's rays and reduce local air temperature and cooling energy demand.*
- *Electrify service equipment where feasible.*
- *Install energy-efficient appliances, such as water heaters, refrigerators, furnaces and boiler units that meet or exceed Title 24 requirements.*
- *Install automatic lighting on/off controls and energy-efficient lighting.*
- *Landscape trees should have low ozone-forming potential.*
- *Landscape with drought-resistant species, using groundcover rather than pavement where feasible.*
- *Provide information to homebuyers about available local electric lawn and garden equipment exchange program.*

The commercial portion of the project shall be required to apply Transportation Systems Management (TSM) measures to reduce trips. Appropriate strategies would be:

- *Provide physical improvements, such as sidewalk improvements, landscaping and bicycle parking that would act as incentives for pedestrian and bicycle modes of travel.*
- *Connect site with a regional bikeway/pedestrian trail system.*
- *Implement feasible travel demand management (TDM) measures for a project of this type. This would include coordination with regional ridesharing organizations and transit incentives program.*
- *Provide secure and conveniently located bicycle parking for workers and patrons.*

8-5 Impacts to nearby sensitive receptors from odors associated with the project.

Major stationary sources of odors have not been identified within the vicinity of the project site. At full buildout, the proposed project would include residential, office (professional or medical), retail, and restaurant uses on approximately 119 acres. Odors are not typical of residential, office, or retail uses. In addition, the proposed project would not include industrial or intensive agricultural uses. However, commercial uses may include sources of odorous emissions (e.g., charbroiling restaurants, dry cleaners). The operation of such sources could result in the frequent exposure of onsite receptors to substantial objectionable odorous emissions. In addition, the potential exists that odors could carry to adjacent residential areas. As a result, the potential that the proposed project could result in the emission of objectionable odors is considered to be a ***potentially significant*** impact.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

8-5 *If an odor-emitting facility is to occupy space in the retail and restaurant portions of the project site, odor control devices shall be installed for the review and approval of the Planning Department prior to the issuance of occupancy permits to reduce the exposure of receptors to objectionable odorous emissions.*

Endnotes

[1] Placer County. *Placer County General Plan*. August 1994.
[2] Placer County. *Placer County General Plan EIR*. October 1993.
[3] Placer County. *Auburn/Bowman Community Plan*. June 1994.