

4.4 AIR QUALITY

4.4.1 INTRODUCTION

This section includes a description of existing air quality conditions, a summary of applicable regulations, and analyses of potential short-term and long-term air quality impacts of the proposed project. Referenced materials include:

- City of Roseville *General Plan*, 2010 as amended
- *Creekview Specific Plan*, 2010
- *Sacramento Area Regional Ozone Attainment Plan*
- *Rimpo Associates Air Quality/Greenhouse Gas Emission Technical Report*, July 2010
- *West Roseville Specific Plan*, February 2004

The documents listed above are available for review during normal business hours at:

City of Roseville Permit Center
311 Vernon Street
Roseville, CA 95678

One comment was received from the Placer County Air Pollution Control District in response to the Notice of Preparation. The NOP comments may be found in Appendix B of this EIR.

4.4.2 ENVIRONMENTAL SETTING

The Project area is located in the western portion of Placer County, California (western Placer County), which is located within the Sacramento Valley Air Basin (SVAB). The SVAB comprises all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo and Yuba counties along with the eastern portion of Solano County. Western Placer County is also part of the Sacramento Federal Ozone Non-attainment Area, which consists of Sacramento and Yolo Counties and parts of El Dorado, Solano, and Sutter Counties, all of which affect each other's air quality. The Placer County Air Pollution Control District (PCAPCD) works in conjunction with the other Air Pollution Control Districts and Air Quality Management Districts of these contiguous jurisdictions, to develop plans to bring the entire ozone non-attainment area into compliance. Ambient concentrations of air pollutants are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport

and dilution of air pollutants include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology and climate, in addition to the amount of and concentrations of emissions released by existing air pollutant sources, each of which is discussed separately below.

Topography, Climate, and Meteorology

The City of Roseville is located in southern Placer County within the Sacramento Valley Air Basin (SVAB). The SVAB contains the southern portion of Placer County and ten other counties including Shasta, Tehama, Colusa, Yolo, East Solano, Butte, Yuba, Sutter, Glenn and Sacramento County. The SVAB is surrounded by the Coast Range to the west, the Cascade Range to the north, and Sierra Nevada mountains to the east. The winters are wet and cool and the summers are hot and dry. The high average summer temperature, combined with very low relative humidity, produces hot, dry summers that contribute to ozone buildup. Prevailing winds are from the southwest, with secondary winds from the northwest.

Surface or elevated temperature inversions are common in late summer and fall. Surface inversions are formed when the air close to the surface cools more rapidly than the warm layer of air above it. Elevated inversions occur when a layer of cool air is suspended between warm air layers above and below it. Both situations result in air stagnation. Air pollutants accumulate under and within inversions, subjecting people in the region to elevated pollution levels and health concerns.

Air pollution can be transported into the basin, but on smoggy days, air pollution emissions from within the basin are the most significant sources of pollution. The Project area receives air pollution inflow, transported from the Bay Area or San Joaquin Valley air basins. On many summer days, a "delta breeze" blows toward Sacramento from the ocean through the Carquinez Strait. The delta breeze moves Sacramento's air pollution up toward the north end of the Sacramento Valley and East into the Sierra Nevada foothills. On days when wind blows from the North, Sacramento air pollution can be transported to the south into the San Joaquin Air Basin.

Air Pollutants and Ambient Air Quality Standards

Ambient air quality is affected by pollutants emitted from stationary and mobile sources.

Stationary sources are divided into point sources and area sources. Point sources consist of one or more emission sources at a facility from an identified location and are usually associated with manufacturing and industrial processing plants. Area sources are widely distributed and consist of many small emission sources. Area source examples include lawnmowers and other landscape maintenance equipment, natural gas fired water and space heaters, and consumer products such as paints, hairspray, deodorant, and similar products with evaporative emissions. Mobile sources emissions are from motor vehicles, including tailpipe, evaporative, and fugitive emissions.

Air pollutants emitted by stationary and mobile sources are regulated by federal and state law. Certain of these regulated pollutants are known as “criteria air pollutants”, and are emitted as primary and secondary pollutants. The criteria pollutants are particulate matter (PM), ground-level ozone (O₃), carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂), and lead (Pb).

Primary criteria air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂), and most forms of particulate matter (PM₁₀ and PM_{2.5}) are primary air pollutants. Secondary criteria air pollutants are those formed by chemical and photochemical reactions in the atmosphere. Ozone and nitrogen dioxide are the principal secondary pollutants.

The U.S. Environmental Protection Agency has developed National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants. At the state level, the California Air Resources Board has developed California Ambient Air Quality Standards (CAAQS). Table 4.4-1 shows the NAAQS and CAAQS. Areas that do not meet the NAAQS and/or CAAQS are classified as non-attainment areas.

The SVAB is non-attainment of the federal and state ozone standards. The Placer County portion of the SVAB is in non-attainment of federal PM₁₀ standards as well (see Table 4.2-2). If attainment is not demonstrated by 2013, substantial financial penalties and/or stricter air quality standards could be imposed on all jurisdictions within the SVAB, including Placer County.

Placer County has been designated as a non-attainment area for state AAQS for ozone and PM₁₀, and is unclassified for PM_{2.5} and CO (meaning there is not enough data to classify the region

attainment or non-attainment for these pollutants). Placer County has been designated as an attainment area for all other criteria air pollutants.

Until 1998, the SVAB was classified as “non-attainment” with respect to the federal CO standards. Currently, the SVAB is considered a federal planning area for CO standards. A federal planning area is a basin that was in non-attainment and needs to demonstrate compliance with the federal standards for two consecutive years and to develop a maintenance plan demonstrating that emission levels will remain in compliance for at least ten years to achieve attainment again.

Placer County has been designated as a non-attainment area for state AAQS for ozone, PM_{2.5} and PM₁₀, and is unclassified for CO (meaning there is not enough data to classify the region attainment or non-attainment for these pollutants). Placer County has been designated as an attainment area for all other criteria air pollutants.

Ozone

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Ozone is a severe eye, nose, and throat irritant. Ozone also attacks synthetic rubber, textiles, plants, and other materials; it causes extensive damage to plants, such as leaf discoloration and cell damage. State standards for ozone have been set for a one-hour averaging time. The state one-hour ozone standard is 0.09 ppm. EPA recently replaced the one-hour federal ozone standard with an 8-hour standard of 0.075 ppm, while ARB recently enacted a state 8-hour standard of 0.07 ppm.

Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, including reactive organic gases (ROG) and oxides of nitrogen (NO_x) react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. ROG and NO_x are emitted by mobile sources and stationary combustion equipment.

TABLE 4.4-1

CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	CAAQS ^a	NAAQS ^b
Ozone (O ₃)	1 hour	0.09 ppm	NA
	8 hours	0.070 ppm	0.075 ppm
Carbon monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hours	9.0 ppm	9 ppm
Nitrogen dioxide (NO ₂)	1 hour	0.18 ppm	NA
	Annual	0.030 ppm	0.053 ppm
Sulfur dioxide (SO ₂)	1 hour	0.25 ppm	NA
	3 hours	NA	0.5 ppm
	24 hours	0.04 ppm	0.14 ppm
	Annual	NA	0.03 ppm
Inhalable particulate matter (PM ₁₀)	24 hours	50 µg/m ³	150 µg/m ³
	Annual	20 µg/m ³	NA
Fine particulate matter (PM _{2.5})	24 hours	NA	35 µg/m ³
	Annual	12 µg/m ³	15 µg/m ³
Sulfates	24 hours	25 µg/m ³	NA
Lead (Pb)	30 days	1.5 µg/m ³	NA
	Calendar quarter	NA	1.5 µg/m ³
Hydrogen sulfide	1 hour	0.03 ppm	NA
Vinyl chloride	24 hours	0.010 ppm	NA

Source: California Air Resources Board 2010a.

Note: NA = not applicable, ppm = parts per million.

^aThe CAAQS for ozone, CO, SO₂ (1- and 24-hour), NO₂, PM₁₀, and PM_{2.5} are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

^bThe NAAQS, other than ozone and those based on annual averages, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

TABLE 4.4-2
SACRAMENTO VALLEY AIR BASIN
STATE AND NATIONAL AMBIENT AIR QUALITY ATTAINMENT STATUS

Air Pollutant	Attainment Status – SVAB
Ozone (O ₃)	Non-attainment for NAAQS 8-hour; Non-attainment for CAAQS 1-hour and 8-hour/Serious
Carbon monoxide (CO)	Attainment/maintenance for federal standards; unclassified for state standards
Nitrogen dioxide (NO ₂)	Attainment
Sulfur dioxide (SO ₂)	Attainment
Suspended particulate matter (PM ₁₀)	Attainment for NAAQS; Non-attainment for CAAQS
Particulate matter (PM _{2.5})	Non-attainment for NAAQS; Non-attainment for CAAQS
Sulfates	Attainment
Lead (Pb)	Attainment
Hydrogen sulfide	Unclassified
Source: California Air Resources Board, 2010.	

Table 4.4-3 shows monitoring results for the ozone monitoring station closest to the proposed project, which is located in the City of Roseville. This station shows several violations of the state and federal ozone standards during the most recent three years of monitoring.

TABLE 4.4-3
OZONE MONITORING RESULTS
NORTH SUNRISE MONITORING STATION

Ozone (O3)	2007	2008	2009
Highest 1-hour average, ppm	0.109	0.134	0.113
Highest 8-hour average, ppm	0.100	0.106	0.101
Days > state 1-hour standard	4	20	13
Days > state 8-hour standard	20	38	32
Days > federal 8-hour standard	8	22	19
Percent of year covered	96	99	99
Sources: California Air Resources Board 2010.			

Carbon Monoxide

CO is inert to plants and materials but can significantly affect human health. CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Effects on humans range from slight headaches and nausea to death.

State and federal CO standards have been set for both 1- and 8-hour averaging times. The state 1-hour standard is 20 ppm, and the federal 1-hour standard is 35 ppm. Both the state and federal standards for the 8-hour averaging period are 9 ppm.

Motor vehicles are the predominant source of CO emissions in most areas. High CO levels develop primarily during winter when light winds combine with the formation of ground-level temperature inversions typically from evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. Overall, CO emissions have been reduced in the last few years as a result of cleaner tailpipes in newer model cars, use of oxygenated fuel, and modifications to cleaner-burning fuel in fleet mixes.

No CO monitoring is currently conducted in Placer County. The closest CO monitoring station is located in Sacramento County. The results from the last three years of monitoring are shown in Table 4.4-4. No violations of either the state or federal CO standards were recorded at this monitoring station during the three most recent years.

**TABLE 4.4-4
CARBON MONOXIDE MONITORING RESULTS
NORTH HIGHLANDS-BLACKFOOT WAY MONITORING STATION**

Carbon Monoxide (CO)	2007	2008	2009
Highest 1-hour average, ppm	5.1	2.3	n/a
Highest 8-hour average, ppm	1.73	1.90	1.66
Sources: California Air Resources Board 2010; US EPA 2010. n/a data not available			

Oxides of Nitrogen

NO_x contributes to smog and can injure plants and animals and affect human health. NO_x also contributes to acidic deposition and reacts with ROG in the presence of sunlight to form photochemical smog. NO_x concentrations result in a brownish color because they absorb the blue-green area of the visible spectrum, greatly affecting visibility.

NO_x is emitted primarily by combustion sources, including both mobile and stationary sources. NO_x also is emitted by a variety of area sources, ranging from wildfires and prescribed fires to water-heating and space-heating systems powered by fossil fuels.

The state NO_x standard is 0.18 ppm for the 1-hour average and 0.03 ppm for the annual average. The federal NO_x standard is 0.053 ppm on an annual average. No violations of the NO_x standard were recorded in the SVAB during the three recent years of monitoring.

Particulate Matter

PM₁₀ and PM_{2.5}

Health concerns associated with suspended particulate matter (PM) focus on particles small enough to reach the lungs when inhaled. PM can damage human health and retard plant growth,

as well as reduce visibility, soil buildings and other structures, and corrode materials. PM₁₀ consists of inhalable particles that are 10 microns in diameter or smaller; PM_{2.5} consists of inhalable particles that are 2.5 microns in diameter or smaller. The state PM₁₀ standards are 50 µg/m³ as a 24-hour average, and 20 µg/m³ as an annual geometric mean. The federal PM₁₀ standard is 150 µg/m³ as a 24-hour average. The federal PM_{2.5} standards are 35 µg/m³ as a 24-hour average and 15 µg/m³ as an annual average. The state PM_{2.5} standard equals 12 µg/m³ on an annual average.

PM₁₀ and PM_{2.5} emissions are generated by a wide variety of sources, including agriculture, industrial activities, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. Table 4.4-5 shows the past three years worth of PM₁₀ and PM_{2.5} monitoring results for the Roseville North Sunrise monitoring station. One violation of the state PM₁₀ standards was recorded at this monitoring location. The Roseville North Sunrise monitoring station also recorded one violation of the federal 8 hour PM_{2.5} standard during the most recent three years.

**TABLE 4.4-5
PARTICULATE MATTER MONITORING RESULTS
AT THE ROSEVILLE NORTH SUNRISE MONITORING STATION**

Particulate Matter (PM10)	2007	2008	2009
Highest 24-hour average, µg/m ³	45.0	73.9	33.6
Days > state standard ^a	0	1	0
Days > federal standard ^a	0	0	0
Percent of year covered	98	100	100
Particulate Matter (PM2.5)	2007	2008	2009
Highest 24-hour average, µg/m ³	30.0	<u>60.0</u>	22.6
Days > federal standard ^a	0	1	0
Percent of year covered	96	92	99
<p>Note: <u>Underlined values</u> represent those in excess of applicable NAAQS. Bold values represent those in excess of the applicable CAAQS.</p> <p>Source: California Air Resources Board, 2010.</p> <p>^aDays over state or federal standards are measured days, not estimated days.</p>			

Tim Rimpo 2010

Sulfur Dioxide

The major health concerns associated with inhalation of SO₂ are effects on breathing, respiratory illness, alterations in pulmonary defenses, and aggravation of existing cardiovascular disease. Children, the elderly, and people with asthma, cardiovascular disease, or chronic lung diseases—such as bronchitis or emphysema—are most susceptible to adverse health effects from exposure to SO₂. SO₂ is a precursor to sulfates, which are associated with acidification of lakes and streams, accelerated corrosion of buildings and monuments, reduced visibility, and other adverse health effects.

EPA's health-based NAAQS for SO₂ is 0.03 ppm measured as an annual arithmetic mean concentration, 0.14 ppm measured over a 24-hour period, and 0.5 ppm measured over a 3-hour average period. California's SO₂ standard is 0.04 ppm measured over a 24-hour average period and 0.25 ppm measured over 1-hour.

SO₂ belongs to the family of gases called sulfur oxides. These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and also during metal smelting and other industrial processes.

Lead

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, as discussed in detail below, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the U.S. Environmental Protection Agency (EPA) set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. EPA banned the use of leaded gasoline in highway vehicles in December 1995 (EPA 2008a).

As a result of EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector have declined dramatically (95% between 1980 and 1999) and levels of lead in the air decreased by 94% between 1980 and 1999. Transportation sources, primarily airplanes, now contribute only 13% of lead emissions. A National Health and Nutrition Examination Survey reported a 78% decrease in the levels of lead in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded gasoline (EPA 2008a).

The decrease in lead emissions and ambient lead concentrations over the past 25 years is California's most dramatic success story with regard to air quality management. The rapid decrease in lead concentrations can be attributed primarily to phasing out the lead in gasoline. This phase-out began during the 1970s, and subsequent California Air Resources Board (ARB) regulations have virtually eliminated all lead from gasoline now sold in California. All areas of the state are currently designated as attainment for the state lead standard (EPA does not designate areas for the national lead standard). Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose "hot spot" problems in some areas. As a result, ARB identified lead as a toxic air contaminant.

Toxic Air Contaminants (TAC)

Concentrations of TACs, or in federal parlance, hazardous air pollutants (HAPs), are also used as indicators of ambient-air-quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to the *California Almanac of Emissions and Air Quality* (ARB 2007a), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter exhaust emissions from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, ARB has made preliminary concentration estimates based on a PM exposure method. This method uses the ARB emissions inventory's PM₁₀ database, ambient PM₁₀ monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, *para*-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Diesel PM poses the greatest health risk among these 10 TACs. Based on receptor modeling techniques, ARB estimated the diesel PM health risk in the SVAB in 2000 to be 360 excess cancer cases per million people. Since 1990, the health risk of diesel PM in the SVAB has been reduced by 52%. Overall, levels of most TACs have gone down since 1990 except for *para*-dichlorobenzene, acetaldehyde and formaldehyde (ARB 2007a). As stated earlier, new research suggests that diesel PM, which is a component of PM_{2.5}, is more toxic than previously estimated (ARB 2008i). Thus, ARB's diesel PM reduction efforts and reductions in public exposure to diesel PM are of increased importance. ARB's Risk Reduction Plan to Reduce Particulate Matter Emission from Diesel-Fueled Engines and Vehicles (CARB, October 2000) ("Diesel Reduction Plan") calls for all new diesel-fueled vehicles and engines to use state-of-the-art catalyzed diesel particulate filters and very low-sulfur diesel fuel. The projected emission benefits associated with the full implementation of ARB's plan, including proposed federal measures, are reductions in diesel PM emissions and associated cancer risks of 75 percent by 2010 and 85 percent by 2020. (*Ibid*, p. 2.)

Emission Sources

Stationary

According to ARB Community Health Air Pollution Information System, there are no major stationary sources of TACs within two miles of the Plan area (ARB 2008e, 2008f). The closest stationary source of TACs to the Plan area is H.B. Fuller Co., which is approximately 3.5 miles to the northwest.

Mobile

On-Road Vehicle Traffic

Vehicles on area roadways, specifically Baseline Road and Fiddymont Road, are sources of diesel PM and other TACs associated with vehicle exhaust.

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) may be found in at least 44 of California's 58 counties. Asbestos is the name for a group of naturally occurring silicate minerals. Exposure to asbestos may result in inhalation or ingestion of asbestos fibers, which over time may result in damage to the lungs or membranes that cover the lungs, leading to illness or even death.

Naturally occurring asbestos, often found in serpentine rock formations, is present in several foothill areas of Placer County. When material containing naturally occurring asbestos is disturbed, asbestos fibers may be released and become airborne, thereby creating a potential health hazard.

The California Geological Survey's map shows areas of higher probability for asbestos-containing rock within the broad zone of faults that follow the low foothills and lie in a southeast-to-northwest band. The Placer County communities of Auburn, Colfax, Meadow Vista, and Foresthill are among those that are within this fault band. Generally, there are no areas of high probability of occurrence of naturally occurring asbestos in areas of Placer County west of Folsom Lake or south of Wise Road. The communities of Roseville, Granite Bay, Rocklin, Lincoln, Loomis, Penryn, and Newcastle lie within geologic areas that have a lower probability for the presence of naturally occurring asbestos. There are some isolated areas of higher probability of presence of naturally occurring asbestos within the Tahoe National Forest.

According to *Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California* (Higgins and Clinkenbeard 2006) and *A General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos* (Churchill and Hill 2000), the Plan area is located in an area that is least likely to contain NOA.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Potential existing sources of odor in the vicinity include industrial land uses (e.g., Western Placer landfill located approximately two miles northeast of the site, and City of Roseville Pleasant Grove Wastewater Treatment Plant, south of the project area).

4.4.3 REGULATORY SETTING

Air quality within the SVAB is regulated by EPA, ARB, and PCAPCD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

Criteria Air Pollutants

Federal Plans, Policies, Regulations, and Laws

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

The CAA required EPA to establish NAAQS. As shown in Table 4.4-2, EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead. The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with non-attainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA must review all state SIPs to determine whether they conform to the mandates of the CAA and the amendments thereof, and to determine whether implementing them will achieve air quality goals. If EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) that imposes additional control measures may be prepared for the non-attainment area. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may cause sanctions to be applied to transportation funding and stationary air pollution sources in the air basin.

State Plans, Policies, Regulations, and Laws

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The

CCAA, which was adopted in 1988, required ARB to establish CAAQS (Table 4.4-2). ARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

Among ARB's other responsibilities are overseeing local air district compliance with California and federal laws, approving local air quality plans, submitting SIPs to EPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels. There are 15 non-attainment areas for the national ozone standard and two non-attainment areas for the PM_{2.5} standard within the SVAB. The SIP identifies how each area will attain the federal standards. ARB and local air pollution control districts are currently developing plans for meeting new national air quality standards for ozone and PM_{2.5}. ARB adopted its State Strategy for the 2007 SIP in September 2007. ARB also provides land use guidance, as it relates to air quality, including criteria for siting schools and other sensitive land uses.

California Code of Regulations, Title 13, Sections 2180-2194 requires that all heavy duty vehicles powered by a diesel engine and operating on California highways, submit to a smoke emissions test. Vehicles with 1991 or newer model-year diesel engines may not exceed an opacity level of more than 40%. Vehicles with 1990 or older model-year diesel engines may not exceed an opacity level of 55%.

Title 13, article 4.8, Chapter 9 regulates diesel fleet emissions. The contractor shall use CARB ultra low sulfur diesel fuel for all diesel-powered equipment. In addition, low sulfur fuel shall be utilized for all stationary equipment. Targets for each year between 2011 to 2020 are mandated for particulate matter emissions. A large or medium fleet must meet a Diesel PM index that is less

than or equal to the calculated target rates. Small fleets will be required to comply with Diesel PM averages starting in 2020.

The California Portable Equipment Registration Program, Section 2452 regulates portable equipment and requires that such equipment be registered with the air district. Registered portable engines shall not exceed the following emission limits:

- 550 pounds per day per engine of CO
- 150 pounds per day per engine of particulate matter less than 10 microns
- For registered portable engines operating onshore, 10 tons for each pollutant per district per year per engine for NO_x, SO_x, VOC, PM₁₀ and CO in non-attainment areas.

AB 1807 and AB 2588

State requirements specifically address air toxics issues through Assembly Bill (AB) 1807 (known as the Tanner Bill), which established the state air toxics program and AB 2588, the Air Toxics Hot Spots Information and Assessment Act. Under this bill, stationary sources of emissions are required to report the types and quantities of certain substances that their facilities routinely release through the air. The air quality regulations developed from these bills have been modified to incorporate the federal regulations associated with the federal Clean Air Act Amendments of 1990.

SB 375

The Sustainable Communities and Climate Protection Act of 2008, Senate Bill 375, requires CARB to set targets for GHG reduction for 2020 and 2035 and further requires the 18 Metropolitan Planning Organizations ("MPOs") adopt Sustainable Communities Strategies ("SCS") to achieve these Targets in their Regional Transportation Plans. ARB adopted reduction targets in September 2010 and identified the SACOG target as a seven percent GHG reduction within the geographic area of the MPO by 2020 and a 16 percent reduction by 2035.

Local Plans, Policies, Regulations, and Laws

At the local level air quality is managed through land use and development planning practices.

Placer County Air Pollution Control District

The PCAPCD attains and maintains air quality conditions in Placer County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of the PCAPCD includes the preparation of plans for the attainment of ambient air quality standards, adoption, and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. The PCAPCD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the CAA, CAAA, and the CCAA. Air quality plans applicable to the proposed project are discussed below.

The PCAPCD, in coordination with the air quality management districts and air pollution control districts of El Dorado, Sacramento, Solano, Sutter, and Yolo counties prepared and submitted the 1991 Air Quality Attainment Plan (AQAP) in compliance with the requirements set forth in the CCAA, which specifically addressed the non-attainment status for ozone, CO, PM_{2.5} and PM₁₀. The CCAA also requires a triennial assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures.

As a non-attainment area, the region is also required to submit rate-of-progress milestone evaluations in accordance with the CAAA. Milestone reports were prepared for 1996, 1999, 2002 and most recently in 2006. These milestone reports include compliance demonstrations that the requirements have been met for the Sacramento non-attainment area. The air quality attainment plans and reports present comprehensive strategies to reduce ROG, NO_x, and PM₁₀ emissions from stationary, area, mobile, and indirect sources. Such strategies include the adoption of rules and regulations; enhancement of CEQA participation; implementation of a new and modified indirect source review program; adoption of local air quality plans; and stationary-, mobile-, and indirect-source control measures.

The Sacramento Regional 8-Hour Ozone Attainment Reasonable Further Progress Plan (December 2008) demonstrates how existing and new control strategies will provide the necessary future emission reductions to meet the federal Clean Air Act requirements for reasonable further progress and attainment of the 1997 8-hour ozone for the Sacramento region. In addition, this Plan includes an updated emission inventory, sets new motor vehicle emission budgets for transportation and general conformity purposes, provides photochemical modeling results, and documents the implementation of reasonably available control measures.

As mentioned above, the PCAPCD adopts rules and regulations. All projects are subject to PCAPCD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the proposed project may include, but are not limited to:

Rule 202-Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated as number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

Rule 205-Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause to have a natural tendency to cause injury or damage to business or property. The provisions of Rule 205 do not apply to odors emanating from agriculture operations necessary for the growing of crops or raising of fowl or animals.

Rule 217-Cutback and Emulsified Asphalt Paving Materials. A person shall not manufacture for sale nor use for paving, road construction or road maintenance any: rapid cure cutback asphalt; slow cure cutback asphalt containing organic compounds which evaporate at 500°F or lower as determined by current American Society for Testing and Materials (ASTM) Method D402; medium cure cutback asphalt except as provided in Section 1.2.; or emulsified asphalt containing organic compounds which evaporate at 500°F or lower as determined by current ASTM Method D244, in excess of 3% by volume.

Rule 218-Application of Architectural Coatings. No person shall manufacture, blend, or repackage for sale within PCAPCD; supply, sell, or offer for sale within PCAPCD; or solicit for application or apply within the PCAPCD, any architectural coating with a volatile organic carbon (VOC) content in excess of the corresponding specified manufacturer's maximum recommendation.

Rule 225- Wood Burning Appliances No person shall sell or supply new wood burning appliances unless it is a U.S. EPA phase II Certified wood burning appliance, pellet-fueled wood burning heater, masonry heater, or determined to meet the U.S. EPA standard for particulate matter emissions standards.

Rule 228-Fugitive Dust.

- **Visible Emissions Not Allowed Beyond the Boundary Line:** A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area (including disturbance as a result of the raising and/or keeping of animals or by vehicle use), such that the presence of such dust remains visible in the atmosphere beyond the boundary line of the emission source.
- **Visible Emissions from Active Operations:** In addition to the requirements of Rule 202, Visible Emissions, a person shall not cause or allow fugitive dust generated by active operations, an open storage pile, or a disturbed surface area, such that the fugitive dust is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke as dark or darker in shade as that designated as number 2 on the Ringelmann Chart, as published by the United States Bureau of Mines.
- **Concentration Limit:** A person shall not cause or allow PM₁₀ levels to exceed 50 micrograms per cubic meter (µg/m³) (24-hour average) when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other EPA-approved equivalent method for PM₁₀ monitoring.
- **Track-Out onto Paved Public Roadways:** Visible roadway dust as a result of active operations, spillage from transport trucks, and the track-out of bulk material onto public paved roadways shall be minimized and removed.

- The track-out of bulk material onto public paved roadways as a result of operations, or erosion, shall be minimized by the use of track-out and erosion control, minimization, and preventative measures, and removed within one hour from adjacent streets such material anytime track-out extends for a cumulative distance of greater than 50 feet onto any paved public road during active operations.
- All visible roadway dust tracked-out upon public paved roadways as a result of active operations shall be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. Wet sweeping or a High Efficiency Particulate Air (HEPA) filter equipped vacuum device shall be used for roadway dust removal.
- Any material tracked-out, or carried by erosion, and clean-up water, shall be prevented from entering waterways or storm water inlets as required to comply water quality control requirements.
- **Minimum Dust Control Requirements:** The following dust mitigation measures are to be initiated at the start and maintained throughout the duration of the construction or grading activity, including any construction or grading for road construction or maintenance.
 - Unpaved areas subject to vehicle traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered.
 - The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.
 - Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.
 - Prior to any ground disturbance, including grading, excavating, and land clearing, sufficient water must be applied to the area to be disturbed to prevent emitting

dust exceeding Ringelmann 2 and to minimize visible emissions from crossing the boundary line.

- Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt, from being released or tracked offsite.
- When wind speeds are high enough to result in dust emissions crossing the boundary line, despite the application of dust mitigation measures, grading and earthmoving operations shall be suspended.
- No trucks are allowed to transport excavated material off-site unless the trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments, and loads are either covered with tarps; or wetted and loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.
- **Wind-Driven Fugitive Dust Control:** A person shall take action(s), such as surface stabilization, establishment of a vegetative cover, or paving, to minimize wind-driven dust from inactive disturbed surface areas.

Rule 501-General Permit Requirement: Any person operating an article, machine, equipment or other contrivance, the use of which may cause, eliminate, reduce, or control the issuance of air contaminants, shall first obtain a written permit from the Air Pollution Control Officer (APCO). Stationary sources subject to the requirements of Rule 507, Federal Operating Permit Program, must also obtain a Title V permit pursuant to the requirements and procedures of that rule.

City of Roseville

The following goals, objectives, and policies are included in the *City of Roseville General Plan Air Quality Element* (City of Roseville 2010 as amended).

Goals:

Air Quality Goal 1: Improve Roseville's air quality by: a) Achieving and maintaining ambient air quality standards established by EPA and the ARB; and b) Minimizing public exposure to toxic or hazardous air pollutants and any pollutants that create a public nuisance though irritation to the senses (such as unpleasant odors).

Air Quality Goal 2: Integrate air quality planning with the land use and transportation planning process.

Air Quality Goal 3: Encourage the coordination and integration of all forms of public transport while reducing motor vehicle emissions through a decrease in the average daily trips and vehicle miles traveled and by increasing the commute vehicle occupancy rate by 50% to 1.5 or more persons per vehicle.

Air Quality Goal 4: Increase the capacity of the transportation system, including the roadway system and alternate modes of transportation.

Air Quality Goal 5: Provide adequate pedestrian and bikeway facilities for present and future transportation needs.

Air Quality Goal 6: Promote a well-designed and efficient light rail and transit system.

Air Quality Goal 7: While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation.

Policies:

Air Quality Policy 1: Cooperate with other agencies to develop a consistent and effective approach to air pollution planning.

Air Quality Policy 2: Work with PCAPCD to monitor all air pollutants of concern on a continuous basis.

Air Quality Policy 3: Develop consistent and accurate procedures for evaluating the air quality impacts of new projects.

Air Quality Policy 4: As part of the development review process, develop mitigation measures to minimize stationary and area source emissions.

Air Quality Policy 5: Develop transportation systems that minimize vehicle delay and air pollution.

Air Quality Policy 6: Develop consistent and accurate procedures for mitigating transportation emissions from new and existing projects.

Air Quality Policy 7: Encourage alternative modes of transportation including pedestrian, bicycle, and transit.

Air Quality Policy 8: Separate air pollution-sensitive land uses from sources of air pollution.

Air Quality Policy 9: Encourage land use policies that maintain and improve air quality.

Air Quality Policy 10: Conserve energy and reduce air emissions by encouraging energy efficient building designs and transportation systems.

City of Roseville Development Standards

The City maintains policies and guidelines regarding grading, erosion control, inspection, and permitting. Section 16.20.040 of the Roseville Municipal Code regulates stockpiling and grading, and addresses condition under which permits and grading plans are required. Section 16.20.070 identifies grading plan performance standards.

A grading plan shall comply with the following criteria:

- A. Fill or cut slopes with a height exceeding five feet shall not exceed a slope of 4:1.
- B. When grading around native oak trees:
 1. Cut or fill slopes exceeding two feet in height shall not be permitted within a distance of 1.5 times the radius of the tree's protected zone.
 2. The grade shall not be raised or lowered around more than 50 percent of the protected zone; and
 3. The grading shall not change the drainage pattern within a distance of 1.5 times the radius of the tree's protected zone.

Section 16.20.020 requires that all grading be performed in accordance with either City of Roseville Improvement Standards or Chapter 16 of the Zoning Ordinance, whichever, is more restrictive. The Public Works Department requires that a grading permit be obtained prior to grading activities. At that time the Applicant must submit, for review and approval, Improvement and/or Grading Plans along with a site-specific Stormwater Pollution Prevention Plan (SWPPP). Slopes or banks along creek channels must be designed with proper slope protection to prevent soil erosion and channel-bank undercutting. The City has also adopted standards that would apply to projects within public right-of-way or easements.

CREEKVIEW SPECIFIC PLAN

The CSP includes the following features that would minimize the CSP's operational emissions containing ROG, NO_x, PM₁₀, PM_{2.5} and CO. the following measures are required to reduce the generation of these operational emissions:

- Land use plan with compact form and higher density uses, consistent with the SACOG Blueprint and the City's Blueprint Implementation Strategies, proximate to transit services, schools and parks.
- Class I bikeway system to provide convenient pedestrian/bicycle connections throughout the plan area with linkages to the City's existing bikeway system.
- Class II and III on-street bikeway system
- Development of a commercial and business professional center that provide services proximate to residential areas to reduce reliance on the automobile
- Streets designed to maximize connectivity
- Provision of a park and ride lot, bus transfer station, bus stops, and right of way for future bus rapid transit.

4.4.4 IMPACTS

Air quality impacts fall into two categories: short-term emissions due to construction and long-term impacts due to project operation. Impacts in each category can be classified as having effects on a regional or local scale.

A technical study prepared by Rimpo Associates, Appendix F to this Draft EIR, is the basis for the following analysis.

Thresholds of Significance

For purposes of this analysis, the following thresholds of significance, as derived from Appendix G to the State CEQA Guidelines and as identified by PCAPCD, have been used to determine whether implementation of the proposed Project would result in significant air quality impacts.

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

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable NAAQS or CAAQS (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.

As stated in Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. Thus, implementation of the proposed Project would result in significant air quality impacts if Project construction or operation would:

- Exceed the PCAPCD thresholds for regional emissions:
 - Reactive Organic Gases (ROG): 82 lbs/day
 - Nitrogen Oxides (NO_x): 82 lbs/day
 - Particulate Matter (PM₁₀): 82 lbs/day¹
 - Carbon Monoxide (CO): 550 lbs/day
- Generate localized concentrations of CO that exceed the 1-hour 20 parts per million (ppm) or the 8-hour 9 ppm air quality standards.

¹ The PCAPCD has not established a threshold for PM_{2.5}.

IMPACT 4.4-1	GENERATE SHORT-TERM CONSTRUCTION RELATED EMISSIONS	
Applicable Policies and Regulations	PCAPD Rules 205 and 207 City of Roseville Construction Standards, Section III	
	CSP	Urban Reserve
Significance with Policies and Regulations	Significant	Significant
Mitigation Measures:	MM 4.4-1 Dust and Construction Control Measures; 4.4-2 A-H Short-term Construction Related Impacts	WMM 4.4-2 Dust and Construction Control Policies and WMM 4.4-3 Reduction of Construction Emissions
Significance after Mitigation:	Short-term Significant and Unavoidable	Short-term Significant and Unavoidable

CREEKVIEW SPECIFIC PLAN

Construction activities associated with development within the CSP area would consist of clearing vegetation, excavation, trenching and grading. These activities would temporarily increase particulate dust emissions. In addition, construction vehicles traveling on unpaved surfaces would generate dust, as would wind blowing over exposed earth at active construction sites. These emissions could contribute to regional fugitive dust and PM₁₀ air pollution. The generation of dust during construction activities could adversely affect sensitive receptors and construction workers, and would exceed the PCAPCD thresholds. Dust caused by construction activities could exacerbate existing respiratory problems such as asthma. Dust can also adversely affect children and the elderly who are more susceptible to respiratory illnesses.

The CSP project includes development of residential, commercial and business professional, park, public/quasi-public land uses. URBEMIS2007 Version 9.2.4 was used to estimate emissions resulting from the construction of the CSP project, beginning in 2012 with completion by 2025. The proposed project would be built in three phases. Emissions were estimated for each year of construction. A detailed list of the assumptions used to estimate construction emissions is included in Appendix F.

Construction-related emissions are described as “short-term” or temporary in duration and have the potential to represent a significant impact with respect to air quality. Construction-related activities associated with the proposed project would result in project-generated emissions of criteria air pollutants (PM₁₀ and PM_{2.5}) and ozone precursors (ROG and NO_x) from site preparation (e.g., excavation, grading, and clearing); off-road equipment, material transport, and worker commute exhaust emissions; vehicle travel on unpaved roads; paving; application of architectural coatings; and other miscellaneous activities.

Emissions of fugitive PM dust (e.g., PM₁₀ and PM_{2.5}) are associated primarily with ground disturbance activities during site preparation (e.g., grading) and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT on- and off-site. Exhaust emissions from diesel equipment and worker commute trips also contribute to short-term increases in total PM emissions, but to a much lesser extent. Emissions of ozone precursors are primarily associated with off-road (e.g., gas and diesel) construction equipment exhaust. Worker commute trips and other construction-related activities (e.g., application of architectural coatings) also contribute to short-term increases in such emissions.

Project-generated, construction-related emissions of criteria air pollutants and precursors were modeled in accordance with PCAPCD-recommended methodologies. Precise, project-specific data (e.g., construction equipment types and number requirements, and maximum daily acreage disturbed) are not available at the time of this analysis. Project-generated emissions were modeled based on general information provided in the project description and default URBEMIS settings and parameters attributable to the construction period and site location. In order to estimate reasonable worst-case conditions, the modeling assumed construction of the entire project at one time with construction conducted simultaneously on multiple portions of the site at one time, was assumed.

Table 4.4-6 summarizes the modeled emissions for construction over time. Construction-related air quality effects were determined by comparing these modeling results with applicable PCAPCD significance thresholds. Refer to Appendix F for detailed modeling input parameters and results.

Based on the modeling conducted, construction-related activities would result in NO_x and PM₁₀ emissions that exceed PCAPCD’s significance threshold of 82 lb/day. Thus, project-generated

construction-related emissions of criteria air pollutants and precursor emissions could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be **significant**.

Mitigation Measure 4.4-1 specifies dust and construction control measures that would reduce construction emissions and MM 4.4-2 A-H specifically address dust control measures. As shown in Table 4.4-7, levels of ROG, NO_x, PM₁₀ and PM_{2.5} will decrease somewhat with mitigation, but NO_x will not be reduced to a level that is less than significant. Therefore, construction related emissions would remain a short-term **significant and unavoidable** impact

**TABLE 4.4-6
2025 BUILDOUT CONSTRUCTION EMISSIONS
(UNMITIGATED POUNDS PER DAY)**

	ROG	NO _x	CO	PM10	PM2.5	CO ₂
2012	50	128	104	473	104	1,800
2013	49	119	99	472	103	2,207
2014	48	110	95	471	103	2,207
2015	47	101	90	471	102	2,207
2016	46	92	87	470	102	2,207
2017	44	84	84	470	101	2,198
2018	44	77	81	469	101	2,207
2019	43	70	78	469	100	2,207
2020	43	64	76	469	100	2,215
2021	43	63	70	469	100	2,207
2022	43	63	70	469	100	2,199
2023	43	63	70	469	100	2,199
2024	43	63	70	469	100	2,216
2025	43	63	70	469	100	1,195
Threshold	82	82	550	82	None	None

Notes: CO₂ emissions in metric tons per year, all other pollutants in pounds per day. Bolded values indicate emissions exceeding PCAPCD significance thresholds.

Source: Tim Rimpo, 2010

**TABLE 4.4-7
2025 BUILDOUT CONSTRUCTION EMISSIONS
(MITIGATED, POUND PER DAY)**

	ROG	NO _x	CO	PM10	PM2.5	CO ₂
2012	50	128	104	40	13	1,800
2013	49	119	99	39	13	2,207
2014	48	110	95	39	12	2,207
2015	47	101	90	38	12	2,207
2016	46	92	87	37	11	2,207
2017	45	84	84	37	11	2,198
2018	44	77	81	37	10	2,027
2019	44	70	78	36	10	2,207
2020	43	64	76	36	10	2,215
2021	43	63	70	36	10	2,207
2022	43	63	70	36	10	2,199
2023	43	63	70	36	10	2,199
2024	43	63	70	36	10	2,216
2025	43	63	70	36	10	1,195
Threshold	82	82	550	82	None	None

Notes: CO₂ emissions in metric tons per year, all other pollutants in pounds per day. Bolded values indicate emissions exceeding PCAPCD significance thresholds.

Source: Tim Rimpo, 2010

URBAN RESERVE

As with the CSP, future construction associated with development of the Urban Reserve area would generate PM₁₀. It is expected that grading would generate in excess of 82 lbs per day. These emissions would vary by day, depending on the amount of grading, and whether multiple

projects were graded simultaneously within the Urban Reserve area. This would be a **significant impact**. Previously adopted WMM 4.4-2, *Dust and Construction Control Policies*, identified in the WRSP EIR, would continue to apply to the Urban Reserve area and requires that dust control measures be implemented. Such measures would include covering all trucks transporting sand, soil or other loose material, prohibiting open burning of vegetation, and reducing traffic speeds on all unpaved roads. Previously adopted WMM 4.4-3, *Reduction of Construction Emissions*, requires implementation of measures, to be developed in consultation with the PCAPCD, such as use of heavy-duty off-road equipment included in the inventory powered by CARB certified off-road engines or other measures to reduce particulate matter and nitrogen oxide emissions through the use of emulsified diesel fuel and/or particulate matter traps. Compliance with these mitigation measures, PCAPCD Rules 205 and 207, and City Construction Standards would reduce construction emission from future development in the Urban Reserve area. However, because the amount of grading on a single day would likely exceed PCAPCD thresholds, this is considered a short-term **significant and unavoidable** impact.

IMPACT 4.4-2	GENERATE LONG-TERM OPERATIONAL RELATED (REGIONAL) EMISSIONS	
Applicable Policies and Regulations	None Applicable	
	CSP	Urban Reserve
Significance with Policies and Regulations	Significant	Significant
Mitigation Measures:	WMM 4.4-4 Project Measures to Reduce Operational Emissions; WMM 4.4-6 Operational Emissions Policies	WMM 4.4-4 Project Measures to Reduce Operational Emissions WMM 4.4-6 Operational Emissions Policies
Significance after Mitigation:	Significant and Unavoidable	Significant and Unavoidable

CREEKVIEW SPECIFIC PLAN

Area- and Mobile-Source Emissions

Project-generated, regional area- and mobile-source emissions of ROG, NO_x, and PM₁₀ were modeled using URBEMIS2007. URBEMIS allows land use selections that include project location specifics and trip generation rates. URBEMIS accounts for area-source emissions from the usage of natural gas, landscape maintenance equipment, and consumer products; and mobile-source emissions associated with vehicle trip generation. Regional area- and mobile-source emissions were modeled based on proposed land uses types and sizes as described in Chapter 2, Project Description, and the trip generation data described in Section 4.4, Transportation and Circulation. The trip generation data includes data for internal and pass-by trips.

Buildout of the project will result in the generation of criteria pollutant emissions from mobile and area source emissions. The emissions from the project would exceed the PCAPCD thresholds for ROG, NO_x, CO and PM₁₀. Table 4.4-8 summarizes emissions associated with operation of the 2025 buildout. The estimates represent peak summer emissions. This is a **significant** impact.

The project design is consistent with SACOG's Blueprint planning principles and incorporates new urbanism design concepts that increase the walkability and accessibility of land uses and results in land use that are more proximate to one another more proximate to one another and accessible to services and jobs. This type of community is more accessible by non-automotive transportation methods (i.e., walking, bicycling) which results in a project-wide reduction in vehicle miles traveled over more conventional suburban community design of the 1980s and 1990s. While previously adopted WMM 4.4-4 (Project Measures to Reduce Operational Emissions) and WMM 4.4-6 (Operational Emissions Policies) identified in the WRSP EIR, are available, and would reduce these impacts, no other feasible mitigation is available to reduce these emissions to levels that are less than the thresholds. Operational impacts, therefore, would remain **significant and unavoidable**.

TABLE 4.4-8
CRITERIA POLLUTANT EMISSIONS
AT BUILDOUT (2025) COMPARED TO THRESHOLDS
(POUNDS PER DAY)

Buildout	ROG	NO_x	CO	PM₁₀	PM_{2.5}
Area Sources	143.90	26.93	84.40	0.25	0.25
Transportation	98.62	72.16	842.82	292.66	55.66
Total	242.52	99.09	927.22	292.91	55.91
PCAPCD Significance Threshold	82	82	550	82	N/A
Exceed Threshold?	Yes	Yes	Yes	Yes	No

Stationary Source Emissions

The proposed CSP would likely include stationary sources of pollutants that would be required to obtain permits to operate under PCAPCD Rule 501-General Permit Requirements and Rule 507-Federal Operating Permit Program. These sources could include, but not be limited to, diesel-engine generators for emergency power generation; central heating boilers; kitchen equipment at restaurants; and dry cleaning equipment. The permit process would assure that these sources would be equipped with the required emission controls and that individually would comply with permitting requirements. However, collectively, all of these stationary sources will be additive to the estimated area and mobile source emissions described above. This would result in a **significant** impact.

MM 4.4-4 *Project Measures to Reduce Operational Emissions* would reduce stationary source emissions. However, following mitigation, the impact would remain **significant and unavoidable**.

TABLE 4.4-9
CRITERIA POLLUTANT EMISSIONS
AT BUILDOUT (2025) COMPARED TO THRESHOLDS
(POUNDS PER DAY) WITH MITIGATION

Buildout	ROG	NOx	CO	PM10	PM2.5
Area Sources	140.9	21.71	81.90	0.24	0.24
Transportation	9862	72.16	842.82	292.66	55.66
Total	239.4	93.87	924.74	292.90	55.90
PCAPCD Significance Threshold	82	82	550	82	N/A
Exceed Threshold?	Yes	Yes	Yes	Yes	No

Source: Tim Rimpo 2010

URBAN RESERVE

Long-term air quality within the Urban Reserve area, as well as within the air basin, would be adversely affected by both mobile sources and area source emissions. It is expected that both vehicular and area source emissions for the Urban Reserve area, if developed, would exceed thresholds established by the PCAPCD, which would be a **significant** impact.

Previously adopted WMM 4.4-6, identified in the WRSP EIR, would continue to apply to the Urban Reserve area and requires that specific plans and/or development plans include emission-reducing measures such as transit and pedestrian-oriented facilities, bike paths, and the measures identified in WMM 4.4-4. *Project Measures to Reduce Operational Emissions*. These measures would reduce the generation of ROG, NOx and CO emissions due to future development of the Urban Reserve area. Nonetheless, operational emissions likely would exceed PCAPCD thresholds, even with mitigation, resulting in a **significant and unavoidable** impact.

IMPACT 4.4-3	GENERATE CARBON MONOXIDE EMISSIONS AT LOCAL INTERSECTIONS	
Applicable Policies and Regulations	None Applicable	
	CSP	Urban Reserve
Significance with Policies and Regulations	Less Than Significant	Less Than Significant
Mitigation Measures:	None Required	None Required
Significance after Mitigation:	Less Than Significant	Less Than Significant

CREEKVIEW SPECIFIC PLAN

Background CO concentrations in the Roseville area are low, and future roadside CO concentrations are expected to decrease from existing roadside CO concentrations despite anticipated increases in traffic volumes, due to improved fuel combustion efficiency.

CO concentrations were estimated for the five intersections projected by traffic modeling to be most congested. A summary of the CO modeling results is included in Table 4.4-10. As Table 4.4-10 shows, the maximum 1-hour and 8-hour concentrations for all intersections are substantially less than either the state or federal ambient air quality standards. Because these intersections represent worst case conditions, CO concentrations at all other intersections would also be less than federal or state standards.

**TABLE 4.4-10
2025 MODELED CARBON MONOXIDE LEVELS**

Intersection	Receptor	2025 Buildout ¹	
		1-hour CO ²	8-hour CO ³
Baseline Road and Fiddymment Road	1	5.7	2.3
	2	5.7	2.3
	3	5.7	2.3
	4	5.7	2.3
Pleasant Grove Blvd. & Fiddymment Road	1	5.7	2.3
	2	5.8	2.4
	3	5.6	2.3
	4	5.8	2.4
Pleasant Grove Boulevard and Roseville Parkway	1	5.8	2.4
	2	5.9	2.5
	3	5.8	2.4
	4	5.9	2.5
Foothills Blvd & Athens Avenue	1	5.5	2.2
	2	5.5	2.2
	3	5.5	2.2
	4	5.5	2.2
Foothills Boulevard and Vineyard Road	1	5.7	2.3
	2	5.7	2.3
	3	5.7	2.3
	4	5.7	2.3
Notes:			
¹ Background concentrations of 5.1 ppm and 1.9 ppm were added to the modeling 1-hour and 8-hour results, respectively			
² The federal and state 1-hour standards are 35 and 20 ppm, respectively			
³ The federal and state 8-hour standards are 9 and 9.0 ppm, respectively			

4.4 AIR QUALITY

The CO results demonstrate that the proposed CSP would not cause or contribute to violations of the state or federal CO standards. Consequently, the project would not expose sensitive receptors to substantial concentrations of CO. This is a **less than significant** impact.

URBAN RESERVE

As described above, background CO concentrations in the Roseville area are low, and future roadside CO concentrations are expected to decrease from existing roadside CO concentrations despite anticipated increases in traffic volumes, due to improved fuel combustion efficiency. It is anticipated that future development in the Urban Reserve, similar to the CSP, would not generate substantial intersection concentrations of CO. Therefore, this impact would be **less than significant**.

IMPACT 4.4-4	EXPOSURE TO TOXIC AIR CONTAMINANTS	
Applicable Policies and Regulations	Clean Air Act (NESHAPs Program) AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987) PCAPCD Rules and Regulations	
	CSP	Urban Reserve
Significance with Policies and Regulations	Potentially Significant	Potentially Significant
Mitigation Measures:	WMM 4.4-7 (a) Risk Assessment and Site Specific Measures; MM 4.4-3 Screening Health Risks	WMM 4.4-7 (a) Risk Assessment and Site Specific Measures
Significance after Mitigation:	Less Than Significant	Less Than Significant

CREEKVIEW SPECIFIC PLAN

The proposed CSP has the potential to expose sensitive receptors to concentrations of TACs in two ways: 1) exposure to construction activities, in particular particulate matter from diesel-fueled engines; or 2) locating residences in proximity to sources of TACs, such as industrial uses or high capacity roadways. This analysis evaluates the location of sensitive receptors, which consist of schools and residences in relation to potential sources of toxic air contaminants: construction

equipment, industrial sources and high capacity roadways. This analysis also considers the prevailing wind direction in the area.

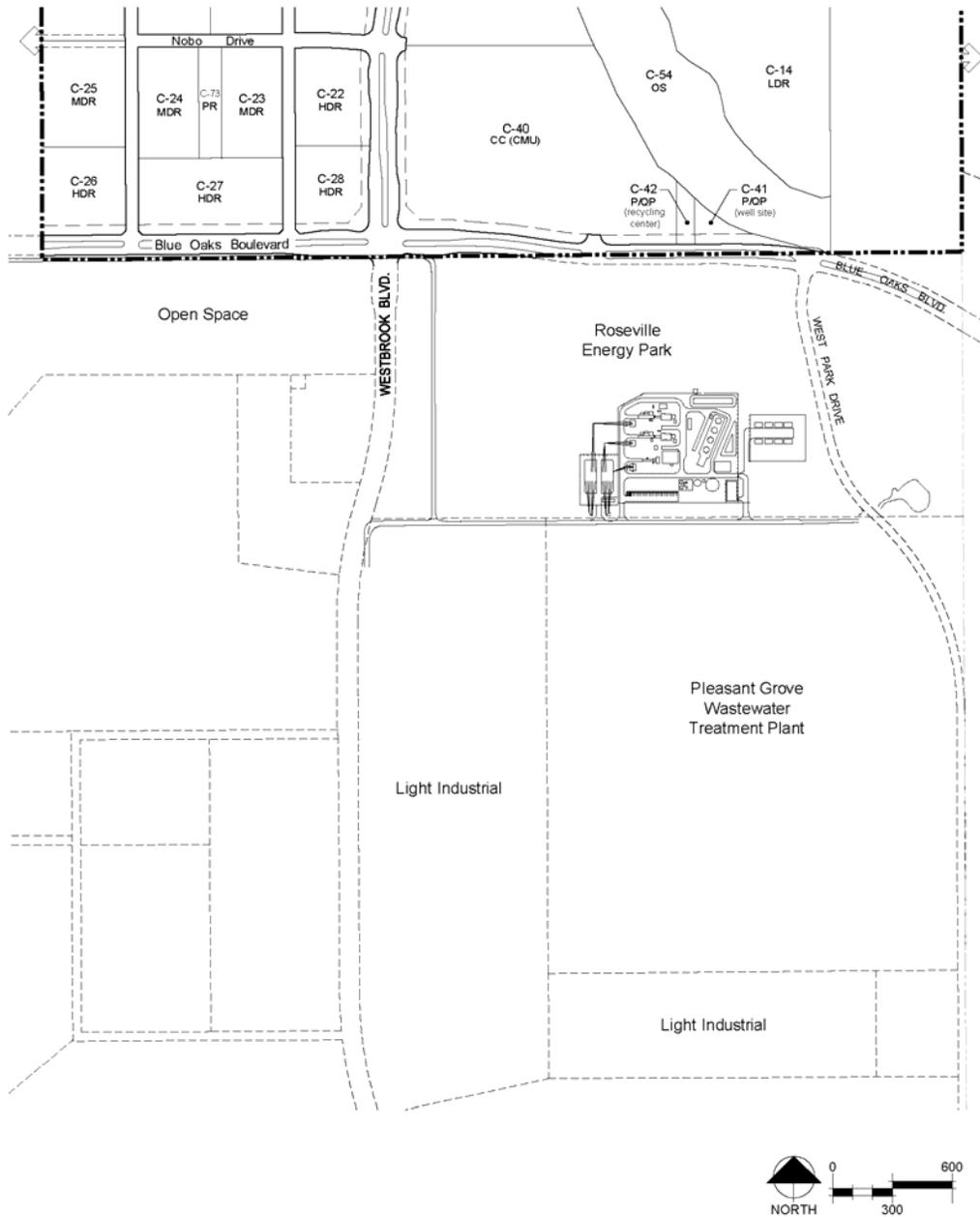
Figure 2-4 (in Section 2, *Project Description*) shows that the proposed school site in the CSP would be located near Westbrook Boulevard, a six-lane arterial. ARB has developed recommendations against siting new sensitive land uses, such as schools, within 500 feet of freeways or arterials that have more than 100,000 AADT per day (California Air Resources Board Land Use Planning Handbook, 2005). Key recommendations in the Handbook include taking steps to avoid siting new, sensitive land uses in the following locations:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles / day
- Within 1,000 feet of a major service and maintenance rail yard
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, within 500 feet)
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The closest freeways are Interstate 80 and State Route 65, which are located several miles from the project. Arterials in the City of Roseville, such as Westbrook Boulevard, are sized to handle less than 100,000 AADT. AADT on CSP arterials would be substantially less than 100,000 (approximately 40,000 ADT) through the year 2025. Consequently, the location of schools near arterials does not pose a substantial health risk for any of the CSP proposed schools.

FIGURE 4.4-1

PROXIMITY TO INDUSTRIAL USES



The location of any industrial uses south or southeast of the proposed CSP area could potentially result in the location of residences downwind from industrial sources of TACs. Industrial sources can generate a wide variety of TACs, from fuel combustion and from the use of hazardous chemicals that could become airborne. As discussed in subsection 4.4.2, above, over time ARB's Diesel Reduction Plan, will further protect future residents from exposure to diesel emissions.

While construction vehicles are expected to generate diesel exhaust, the impacts would be short-term in duration and are not expected to significantly impact existing residents adjacent to the Project area, or future uses within the project area.

Roseville Energy Park

The Roseville Energy Park (REP) represents the largest potential source of TACs upwind of the CSP area. The REP is an energy facility that generates TACs from natural gas combustion and from diesel emergency generator testing. The California Energy Commission conducted a screening level health risk assessment (HRA) for the REP prior to its construction. That analysis found that the REP would not cause significant acute, chronic or carcinogenic health risks to existing or future residences in the vicinity².

At the time subdivisions are planned for development within the CSP, nearby and internal uses will be reviewed to determine the potential for exposure to TACs. This is a **potentially significant** Impact.

Previously adopted WMM 4.4-7 (a) *Risk Assessment and Site Specific Measures*, identified in the WRSP EIR, which continues to apply to the CSP area, requires that proposed uses within the CSP that could generate TACs, demonstrate that the applicable health risk thresholds will not be exceeded by submitting an application for a Permit to Operate to the PCAPCD. The PCAPCD will review each use. If it is determined that there are potential risks, a risk assessment and menu of site specific measures that could lessen impacts associated with toxic air contaminants would be required. With mitigation, this impact would be **less than significant**.

² CEC, 2004.

URBAN RESERVE

With future development proposals for the Urban Reserve, if it is determined that there are potential risks due to emissions of TACs, pursuant to previously adopted WMM 4.4-7 (a), a risk assessment and implementation of project-specific measures that could lessen impacts associated with toxic air contaminants would be required. With implementation of WMM 4.4-7 (a), impacts due to exposure to TACs would be reduced to a **less than significant level**.

IMPACT 4.4-5	EXPOSURE OF SENSITIVE RECEPTORS TO ODORS	
Applicable Policies and Regulations	PCAPCD Rule 205	
	CSP	Urban Reserve
Significance with Policies and Regulations	Less Than Significant	Less Than Significant
Mitigation Measures:	None Required	None Required
Significance after Mitigation:	Less Than Significant	Less Than Significant

CREEKVIEW SPECIFIC PLAN

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptor. Although offensive odors rarely cause any physical harm, they still can be unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

The CSP would result in diesel exhaust emissions from on-site construction equipment during project construction. The construction phase diesel exhaust emissions would be intermittent and temporary, and would dissipate rapidly from the source with an increase in distance. In addition, as discussed in subsection 4.4.2, above, ARB’s Diesel Reduction Plan, over time, will further protect future residents from exposure to diesel emissions.

4.4 AIR QUALITY

The CSP would not involve the long-term operation of any new sources of odor. However, implementation of the CSP would involve development of commercial land uses that may be minor odor sources (e.g., dry cleaners, diesel generators). These sources are typical of an urban environment.

The proposed project site is located near the Pleasant Grove WWTP, which is south of the CSP. Although unlikely, the PGWWTP may occasionally emit odors that could affect sensitive receptors within the project area. Residential uses on the southern portion of the site would have the highest likelihood of encountering odors within one mile of the WWTP. Although odors are a nuisance, it is not considered a significant impact. Exposure to odors is considered a **less than significant**. As explained in the Project Description, as part of the project future residences shall be informed of the proximity of the PGWWTP.

URBAN RESERVE

While no specific development in the Urban Reserve area is proposed at this time, future residences on the southern portion of the partial may be subject to potential odors during times when the wind blows toward these residences from the PGWWTP. Similar to the project, this impact is considered **less than significant**.

IMPACT 4.4-6	Consistency with Plans and Policies	
Applicable Policies and Regulations	State Implementation Plan	
	CSP	Urban Reserve
Significance with Policies and Regulations	Significant	Significant
Mitigation Measures:	WMM 4.4-4 Project Measures to Reduce Operational Emissions; MM 4.4-1 Dust and Construction Control Measures	WMM 4.4-6 Operational Emissions Policies
Significance after Mitigation:	Significant and Unavoidable	Significant and Unavoidable

CREEKVIEW SPECIFIC PLAN

Operational emissions associated with development of the CSP area would exceed the PCAPCD thresholds for NO_x and particulates. The CSP is not currently included in the City of Roseville or Placer County General Plans. As a result, the emissions associated with the development of the CSP area are not accounted for in the SIP. Therefore, growth associated with the annexation area would hinder the PCAPCD's ability to bring the region into attainment of federal and State ambient air quality standards. This is considered a **significant**.

Previously adopted WMM 4.4-4, identified in the WRSP EIR, and MM4.4-1 *Dust and Construction Control* would reduce air quality emissions, but not to level consistent with the current SIP. If the proposed CSP is approved and included in the City's General Plan, it will eventually be included in the SIP when it is next updated. ARB is the lead agency for all purposes with regard to the SIP. Local air districts, and other state agencies such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to ARB for review and approval. ARB forwards SIP revisions to the U.S. Environmental Protection Agency (U.S. EPA) for approval and publication in the Federal Register. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items which are included in the California SIP. At any one time, several California submittals are pending U.S. EPA approval. With mitigation this impact remains **significant and unavoidable** because amending the SIP is not within the jurisdiction or control of the city.

URBAN RESERVE

Operational emissions associated with development of the entire Project area, including future development of the Urban Reserve area, would exceed the PCAPCD thresholds for CO, ROG, NO_x and particulates. As with the CSP portion of Project area, development of the Urban Reserve parcel is not currently included in the City of Roseville or Placer County General Plans. As a result, the emissions associated with the development of the entire project area are not accounted for in the State Implementation Plan (SIP). Therefore, growth associated with the Urban Reserve area would hinder the PCAPCD's ability to bring the region into attainment of federal and State ambient air quality standards. This is considered a **significant** impact.

Previously adopted WMM 4.4-6 *Operational Emissions Policies*, identified in the WRSP, would continue to apply to the Urban Reserve area and would reduce air quality emissions, but not to a level consistent with the current SIP. If future development of the Urban Reserve area is approved and included in the City's General Plan, it will eventually be included in the SIP when it is next updated. With mitigation, this impact would remain **significant and unavoidable**, because amending the SIP is not within the jurisdiction or control of the City of Roseville.

4.4.5 MITIGATION MEASURES

The Project area was included in the program-level analysis of the West Roseville Specific Plan Final EIR. Mitigation adopted by the City Council at time of approval in 2004 is still applicable in the CSP area unless superseded by CSP project-specific mitigation, and will continue to apply to the Urban Reserve area unless noted. The following refers to the previously adopted WRSP mitigation measures as "WMM", and will show either ~~strikeout~~ for language that is being eliminated from the previously adopted WMMs or underline for language that is proposed to be added to the previously adopted WMMs.

WMM 4.4-2 *Dust and Construction Control Policies (Impact 4.4-1 Urban Reserve)*

Specific Plans and/or other development proposals for the ~~Remainder Area~~Urban Reserve shall require dust control measures that are adequate to reduce PM₁₀ emissions below PCAPCD thresholds. Such measures could include hydro seeding, covering trucks, reducing traffic speed, prohibiting open burning, or other effective measures.

WMM 4.4-3 *Reduction of Construction Emissions (Impact 4.4-1- Urban Reserve)*

Specific plans and/or development proposals for the ~~Remainder Area~~Urban Reserve shall require emission control measures during construction. Such measures, which shall be developed in consultation with the PCAPCD, may include use of heavy-duty off-road equipment included in the inventory powered by CARB certified off-road engines, or other measures to reduce particulate matter and nitrogen oxide emissions through the use of emulsified diesel fuel and/or particulate matter traps.

WMM 4.4-4 *Project Measures to Reduce Operational Emissions (Impact 4.4-2 and 4.4-6 CSP and Urban Reserve)*

Following receipt of an application for a Tentative Maps (excluding the large lot subdivision map), Design Review Permit, conditional use permits and/or all discretionary permits, as found to be in compliance with the 30% reduction analysis applicable for individual projects with the Specific Plan, the City will forward an early consultation notice to the Placer County Air Pollution Control District (PCAPD). Where the PCAPD provides comments on a specific development proposal, the City shall consult with PCAPD and the developer to incorporate measures recommended by the PCAPD and agreed to by the City into the project. Where the PCAPD does not provide comment on a specific development proposal, the City shall incorporate measures that reduce vehicle emissions and operation emissions from the proposed development. This measure will be implemented through project design, conditions of approval, noticing and disclosure statements, or through the City's plan check and inspection processes. This process is intended to ensure that best available and practical approaches are used to reduce operational emissions in specific tentative map and design review permit applications. The following is a listing of measures that shall be implemented for the purpose of reducing vehicle and operational emissions.

- Provide tree plantings that meet or exceed the requirements of the City's Community Design Guidelines to provide shading of buildings and parking lots.
- Landscape with native drought-resistant plants (ground covers, shrubs and trees) with particular consideration of plantings that are not reliant on gas-powered landscape maintenance equipment.
- Require all flat roofs on non-residential structures to have a white or silver cap sheet to reduce energy demand.

- Provide conductive/inductive electric vehicle charging station and signage prohibiting parking for non-electric vehicles within designated spaces within non-residential developments.
- Provide vanpool parking only spaces and preferential parking for carpools to accommodate carpools and vanpools in employment areas (e.g. community commercial, business-professional uses)
- All truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two-dock doors. Signs shall be posted stating "Diesel trucks are prohibited from idling more than five minutes and trucks requiring auxiliary power shall connect to the 110/208-vot outlets to run auxiliary equipment".
- Design streets to maximize pedestrian access to transit stops.
- Require site design to maximize access to transit lines, to accommodate bus travel, and to provide lighted shelters at transit access points.
- Develop the plan consistent with the higher residential densities (within approved residential density ranges of zone) provided around the village nodes and transit corridors.
- Include photovoltaic systems in project design and/or participate in Roseville Electric incentive programs for energy-efficient development where feasible.

Measures for Residential Units:

- Require electrical outlets be installed on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.
- Require installation of a gas outlet in the rear of residential buildings for use of outdoor cooking appliances, such as gas burning barbeques.
- Require installation of low nitrogen oxide (NOx) hot water heaters (beyond District Rule 246 requirements)

- Provide notice to homebuyers of incentive and rebate programs available through Roseville Electric or other providers that encourage the purchase of electric landscape maintenance equipment.
- Prior to approval of Tentative Maps: provide notice to homebuyers through CC&Rs or other mechanisms to inform them that only gas fireplaces would be permitted.

WMM 4.4-6 *Operational Emissions Policies (Impact 4.4-2 CSP and Urban Reserve and 4.4-6 Urban Reserve)*

Specific plans and/or development proposals for the ~~Remainder Area~~ Urban Reserve shall include measures to reduce operational emissions. Such measures may include but would not be limited to transit and pedestrian-oriented facilities (e.g., park and ride lots, bus stops), bike trails and facilities, energy-saving measures in buildings, as well as the measures described in WM 4.4-4. Appropriate measures shall be selected in consultation with the city and PCPCD.

WMM 4.4-7 (a) - *Risk Assessment and Site Specific Measures (Impact 4.4-4 CSP and Urban Reserve)*

Users that could generate toxic air contaminants will be required to submit a Permit to Operate to the PCAPCD. The District will review the use and if a proposed project would cause the combined emissions of TACs to exceed the risk standard of ten in one million at residences or public uses (schools, parks, etc), additional modeling and/or environmental review would be required to demonstrate emissions from that use or other uses would be reduced so that the standard is not exceeded. For example, an applicant could propose to retrofit an existing operation in order to lower the total TAC emissions in the CSP area.

MM 4.4-1 *Dust and Construction Control Measures (Impact 4.4-1 CSP)*

In accordance with the Placer County Air Pollution Control District (PCAPCD), the applicant shall comply with all applicable rules and regulations as listed above (e.g., Rule 202, 218 and 228). In addition, prior to the approval of a discretionary

permit, the applicant(s) shall implement the following measures unless superseded by state or other more stringent standards:

- A. Construction equipment exhaust emissions shall not exceed Placer County APCD Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified by APCD to cease operations and the equipment must be repaired within 72 hours. *(Based on APCD Rule 202)*
- B. The contractor shall suspend all grading operations when fugitive dust exceeds Placer County APCD 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% opacity and not go beyond the property boundary at any time. Lime or other drying agents utilized to dry out wet grading areas shall not exceed Placer County APCD Rule 228 Fugitive Dust limitations. Operators of vehicles and equipment found to exceed opacity limits will be notified by APCD and the equipment must be repaired within 72 hours. *(Based on APCD Rule 228)*
- C. During construction, traffic speeds on all unpaved surfaces shall be limited to 15 miles per hour or less. *(Based on APCD Rule 228 / section 401.2)*
- D. During construction, no open burning of removed vegetation shall be allowed unless permitted by the PCAPCD. All removed vegetative material shall be either chipped on site or taken to an appropriate recycling site, or if a site is not available, a licensed disposal site. *(Based on APCD Rule 310)*
- E. A person shall not discharge into the atmosphere volatile organic compounds (VOC's) caused by the use or manufacture of Cutback or Emulsified asphalts for paving, road construction or road maintenance,

unless such manufacture or use complies with the provisions Rule 217.
(Based on APCD Rule 217).

- F. Processes that discharge 2 pounds per day or more of air contaminants, as defined by Health and Safety Code Section 39013, to the atmosphere may require a permit. Permits may be required for both construction and operation. Developers/contractors should contact the District prior to construction and obtain any necessary permits prior to the issuance of a Building Permit. (Based on the California Health & Safety Code section 39013: <http://www.leginfo.ca.gov>)

The following mitigation measures shall be implemented to reduce short-term construction-related air quality impacts. In addition, dust control measures are required to be implemented by all projects in accordance with the City of Roseville Grading Ordinance, and the PCAPCD Fugitive Dust Rule 228.

MM 4.4-2 (A). Prior to approval of Grading or Improvement Plans, (whichever occurs first), on project sites greater than one acre, the Applicant shall submit to PCAPCD a Construction Emission / Dust Control Plan within 30 days prior to groundbreaking. If the PCAPCD does not respond within 20 days, the plan shall be considered approved. The applicant shall provide written evidence, provided by the APCD, to the City that the plan has been submitted to APCD. It is the responsibility of the applicant to deliver the approved plan to the local jurisdiction.

MM 4.4-2 (B). Include the following standard note on the Grading or Improvement Plan: The prime contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used in aggregate of 40 or more hours for the construction project. If any new equipment is added after submission of the inventory, the prime contractor shall contact the APCD prior to the new equipment being utilized. At least three business days prior to the use of subject heavy-duty off road equipment, the project representative shall provide the District with the anticipated construction timeline including start date, name and phone number of the property owner, project manager and on-site foreman.

- MM 4.4-2 (C).** Prior to approval of Grading or Improvement Plans, whichever occurs first, the applicant shall provide a written calculation to the Placer County APCD 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 NOx reduction and 45 percent particulate reduction as required by CARB. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. The following link shall be used to calculate compliance with this condition and shall be submitted to the Placer County APCD as described above:
<http://www.airquality.org/ceqa/> (click on the current "Roadway Construction Emissions Model").
- MM 4.4-2 (D).** In order to control dust, operational watering trucks shall be on site during construction hours. In addition, dry, mechanical sweeping is prohibited. Watering of a construction site shall be carried out in compliance with all pertinent APCD rules (or as required by ordinance within each local jurisdiction).
- MM 4.4-2 (E).** Include the following standard note on the Improvement/Grading Plan: If required by the Engineering Division and/or the Department of Public Works, the contractor shall hold a pre-construction meeting prior to any grading activities (or as required by ordinance within each local jurisdiction). The contractor shall invite the Placer County APCD to the pre-construction meeting in order to discuss the construction emission/dust control plan with employees and/or contractors.
- MM 4.4-2 (F).** Include the following standard note on the Improvement/Grading Plan: During construction the contractor shall utilize existing power sources (e.g., power poles) or clean fuel (i.e. gasoline, biodiesel, natural gas) generators rather than temporary diesel power generators.
- MM 4.4-2 (G).** Prior to building permit approval, the applicant shall show, on the plans submitted to the Building Department, provisions for construction of new residences, and

where natural gas is available, the installation of a gas outlet for use with outdoor cooking appliances, such as a gas barbecue or outdoor recreational fire pits.

MM 4.4-3 Screening Health Risks (Impact 4.4-4 CSP)

For those projects which include stationary sources (i.e. gasoline dispensing facility, auto painting, dry cleaning, large HVAC units, etc.), the applicant shall obtain an Authority to Construct (ATC) permit prior to the issuance of a Certificate of Occupancy NOTE: A third party detailed Health Risk Assessment may be required as a part of the permitting process.

If significant acute, chronic, or carcinogenic health risks are predicted, then measures shall be identified that reduce all health risks to less than significant levels. Such analysis and mitigation may include:

- Land use and site design requirements including building setbacks and building orientation.
- Consideration of the distance between industrial uses (emissions) and the location of potential sensitive receptors and implementation of setbacks to maximize distance.

Application of scrubbers or other modifications to uses to further reduce emissions.

MM 4.4-4 Operational Emissions (Impact 4.4-2 CSP)

The proposed project exceeds the cumulative air quality thresholds as established by the APCD (a maximum of 10 pounds per day of ROG and/or NOx) In order to mitigate the projects contribution to long-term emission of pollutants, the applicant shall either:

- a. Establish mitigation on-site by incorporating design features within the project. This may include, but not be limited to: "green" building features such solar panels, energy efficient heating and cooling, exceeding Title 24 standards, bike lanes, bus shelters, etc. NOTE: The specific amounts of "credits" received shall be established and coordinated through the Placer County Air Pollution Control District.

- b. Establish mitigation off-site within the same region (i.e. east or west Placer County) by participating in an offsite mitigation program, coordinated through the Placer County Air Pollution Control District. Examples include, but are not limited to participation in a “Biomass” program that provides emissions benefits; retrofitting, repowering, or replacing heavy duty engines from mobile sources (i.e. busses, construction equipment, on road haulers); or other program that the project proponent may propose to reduce emissions.
- c. Participate in the Placer County Air Pollution District Offsite Mitigation Program by paying the equivalent amount of money, which is equal to the projects contribution of pollutants (ROG and NOx), which exceeds the cumulative threshold of 10 pounds per day. The estimated payment for the proposed project is based on \$14,300 per ton for a one year period. The actual amount to be paid shall be determined, and satisfied per current California Air Resource Board guidelines, at the time of recordation of the Building Permit.
- d. Any combination of a, b, or c, as determined feasible by the Director of APCD.

NOTE: All mitigation measures (either a, b, c, or d) must be satisfied prior to issuance of a Building Permit. It is the applicant’s responsibility to forward written proof of satisfaction of this condition to APCD.