EVERGREEN • EAST HILLS VISION STRATEGY

SAN JOSÉ, CALIFORNIA

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APPENDIX

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AIR QUALITY REPORT

EVERGREEN VISIONING PROJECT
EIR AIR QUALITY SECTION
SAN JOSE, CALIFORNIA

September 9, 2005

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INTRODUCTION

This report presents the results of the environmental air quality assessment conducted for the Evergreen Visioning Project (EVP) in San Jose, California. This EVP would facilitate the development of approximately 544 acres on five sites in the Evergreen Area. The five sites include the Arcadia Property, the Pleasant Hills Golf Course Property, the Berg/IDS Property, the Legacy Partners Property, and the Evergreen Valley College Property. The EVP also includes a transportation improvement project that would also widen portions of White Road from four-lanes to six-lanes between Ocala Avenue and Aborn Road. This report assesses the potential for air quality impacts resulting from the project by each scenario and presents mitigation measures to that would reduce significant noise impacts.

This analysis examines the degree to which the proposed project may result in significant adverse changes to air quality. Both short-term construction emissions occurring from activities such as site grading, as well as long-term effects related to the ongoing operation of the proposed project are discussed. The analysis contained herein focuses on air pollution from two perspectives: daily emissions and pollutant concentrations. "Emissions" refers to the actual quantity of pollutant, measured in pounds per day. "Concentrations" refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

OVERALL REGULATORY SETTING

The Federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the Federal level, the United States Environmental Protection Agency (USEPA) administers the Clean Air Act (CAA). The California Clean Air Act is administered by the California Air Resources Board (CARB) at the State level and by the Air Quality Management Districts at the regional and local levels. The Bay Area Air Quality Management District (BAAQMD) regulates air quality at the regional level, which includes the nine-county Bay Area.

United States Environmental Protection Agency

The USEPA is responsible for enforcing the Federal CAA. The USEPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). The NAAQS are required under the 1977 CAA and subsequent amendments. The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by the CARB.

California Air Resources Board

In California, the CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for meeting the state requirements of the Federal CAA, administering the California CAA, and establishing the California Ambient Air Quality Standards (CAAQS). The California CAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the California Ambient Air Quality Standards (CAAQS). The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. The CARB regulates mobile air pollution sources, such as motor vehicles. The agency is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. The CARB has established passenger vehicle fuel specifications. The CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

Bay Area Air Quality Management District

In 1955, the California Legislature created the Bay Area Air Quality Management District (BAAQMD). The agency is primarily responsible for assuring that the National and State ambient air quality standards are attained and maintained in the Bay Area. The BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, as well as many other activities. The BAAQMD has jurisdiction over much of the nine-county Bay Area counties.

National and State Ambient Air Quality Standards

As required by the Federal Clean Air Act, the NAAQS have been established for six major air pollutants: carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O_3), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), sulfur oxides, and lead. Pursuant to the California Clean Air Act, the State of California has also established ambient air quality standards, known as the California Ambient Air Quality Standards (CAAQS). These standards are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles.

Both State and Federal standards are summarized in Table 1. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation and other aspects of the general welfare. The use of the NAAQS or CAAQS is a function of the project approval process. The NAAQS is applicable if the project is federally funded or requires federal action. The proposed project is not federally funded and does not require federal action. Additionally, the CAAQS are more stringent than the NAAQS. Thus, the CAAQS are used as the comparative standard in the analysis contained in this report.

Table 1 Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	NATIONAL STANDARDS [a]	
			Primary [b,c]	Secondary [b,d]
Ozone	8-hour	0.07 ppm (154 $\mu g/m^3$)	0.08 ppm (176$\mu g/m^3$)	—
	1-hour	0.09 ppm (180 $\mu g/m^3$)	--(e)	Same as primary
Carbon monoxide	8-hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
Nitrogen dioxide	Annual	—	0.053 ppm (100 $\mu g/m^3$)	Same as primary
	1-hour	0.25 ppm (470 $\mu g/m^3$)	—	—
Sulfur dioxide	Annual	—	0.03 ppm (80 $\mu g/m^3$)	—
	24-hour	0.04 ppm (105 $\mu g/m^3$)	0.14 ppm (365 $\mu g/m^3$)	—
	3-hour	—	—	0.5 ppm (1,300 $\mu g/m^3$)
	1-hour	0.25 ppm (655 $\mu g/m^3$)	—	—
PM_{10}	Annual	20 $\mu g/m^3$	50 $\mu g/m^3$	Same as primary
	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$	Same as primary
$PM_{2.5}$	Annual	12 $\mu g/m^3$	15 $\mu g/m^3$	
	24-hour	—	65 $\mu g/m^3$	
Lead	Calendar quarter	—	1.5 $\mu g/m^3$	Same as primary
	30-day average	1.5 $\mu g/m^3$	—	—

Notes: (a) Standards, other than for 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.

(b) Concentrations are expressed first in units in which they were promulgated. Equivalent units given in parenthesis.

(c) Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than 3 years after that state's implementation plan is approved by the EPA.

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

(e) The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.

Criteria Air Pollutants & Effect

Air quality studies generally focus on five pollutants that are most commonly measured and regulated: CO, O_3, NO_2, SO_2, and suspended particulate, i.e., PM_{10} and $PM_{2.5}$.

Carbon Monoxide. CO, a colorless and odorless gas, interferes with the transfer of oxygen to the brain. It can cause dizziness and fatigue, and can impair central nervous system functions. CO is emitted almost exclusively from the incomplete combustion of fossil fuels. Automobile exhausts release approximately 70 percent of the CO in the Bay Area. A substantial amount also comes from burning wood in fireplaces and wood stoves. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. The highest CO concentrations measured in the Bay Area are typically recorded during the winter.

Ozone. O_3, a colorless toxic gas, is the chief component of urban smog. O_3 enters the blood stream and interferes with the transfer of oxygen, depriving sensitive tissues in the heart and brain of oxygen. Although O_3 is not directly emitted, it forms in the atmosphere through a chemical reaction between reactive organic gas (ROG) and nitrogen oxides (NO_X) under sunlight.[1] ROG and NOx are primarily emitted from automobiles and industrial sources. O_3 is present in relatively high concentrations within the Bay Area, and the damaging effects of photochemical smog are generally related to the concentration of O_3. Highest O_3 concentrations occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies.

Nitrogen Dioxide. NO_2, a reddish-brown gas, irritates the lungs. It can cause breathing difficulties at high concentrations. Like O_3, NO_2 is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as nitrogen oxides (NO_x) and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10} (see discussion of PM_{10} below).

Sulfur Oxides. Sulfur oxides, primarily SO_2, are a product of high-sulfur fuel combustion. The main sources of SO_2 are coal and oil used in power stations, in industries, and for domestic heating. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 concentrations have been reduced to levels well below the state and national standards, but further reductions in emissions are needed to attain compliance with standards for PM_{10}, of which SO_2 is a contributor.

Suspended Particulate Matter. Particulate matter pollution consists of very small particles suspended in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when industry and gaseous pollutant undergo chemical reactions in the atmosphere. Respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$) represent fractions of particulate matter. PM_{10} refers to particulate matter less than 10 microns in diameter and $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter. Major sources of $PM_{2.5}$ results primarily from diesel fuel combustion (from motor vehicles, power generation,

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[1] *ROG and NO_X are emitted from automobiles and industrial sources.*

industrial facilities), residential fireplaces, and wood stoves. PM_{10} include all $PM_{2.5}$ sources as well as emissions from dust generated by construction, landfills, and agriculture; wildfires and brush/waste burning, industrial sources, windblown dust from open lands, and atmospheric chemical and photochemical reactions. PM_{10} and $PM_{2.5}$ pose a greater health risk than larger-size particles, because these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract increasing the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Whereas, larger particles tend to collect in the upper portion of the respiratory system, $PM_{2.5}$ are so tiny that they can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Toxic Air Contaminants (TAC)

TACs are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., benzene near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the ARB, and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants programs. California has adopted a comprehensive diesel risk reduction program. The U.S. EPA has adopted low sulfur diesel fuel standards that will reduce diesel particulate matter substantially. These go into effect in June 2006.

In cooler weather, smoke from residential wood combustion can be a source of TACs. Localized high TAC concentrations can result when cold stagnant air traps smoke near the ground and, with no wind, the pollution can persist for many hours. This occurs in sheltered valleys during the winter. Woodsmoke also contains a significant amount of PM_{10} and $PM_{2.5}$. Woodsmoke is an irritant and is implicated in worsening asthma and other chronic lung problems.

AIR QUALITY PLANNING

Bay Area Clean Air Plan

The BAAQMD along with the other regional agencies (i.e., Association of Bay Area Governments and the Metropolitan Transportation Commission) has prepared an Ozone Attainment Plan to address the NAAQS for O_3. A Carbon Monoxide Maintenance Plan was also prepared in 1994 to demonstrate how the NAAQS for carbon monoxide standard will be

maintained. Another plan, the Bay Area Clean Air Plan, was prepared to address the more stringent requirements of the California Clean Air Act with respect to O_3. This plan includes a comprehensive strategy to reduce emissions from stationary, area, and mobile sources. The plan objective is to indicate how the region would make progress toward attaining the stricter state air quality standards, as mandated by the California Clean Air Act. The plan is designed to achieve a region-wide reduction of O_3 precursor pollutants through the expeditious implementation of all feasible measures. Air quality plans addressing the California Clean Air Act are developed about every three years. The latest plan (Bay Area 2000 Clean Air Plan) was prepared in 2000. The plan proposes implementation of transportation control measures (TCMs) and programs such as *Spare the Air*. *Spare the* Air is a public outreach program designed to educate the public about air pollution in the Bay Area and promote individual behavior changes that improve air quality. Some of these measures or programs rely on local governments for implementation. The 2001 Ozone Plan included the strategy to attain the national ambient air quality standard for O_3. In 2004, U.S. EPA made a finding that the Bay Area has attained the national 1-hour ozone standard. Because of this finding, the previous planning commitments in the 2001 Ozone Attainment Plan are no longer required. The finding of attainment does not mean the Bay Area has been reclassified as an attainment area for the 1-hour standard. The region must submit a redesignation request to EPA in order to be reclassified as an attainment area. To address both the national and California ambient air quality standards, the BAAQMD is preparing an updated ozone strategy. In 2004, the BAAQMD held community meetings throughout the Bay Area to describe the draft control measures proposed for the Ozone Strategy and to invite public input. The draft Ozone Strategy, including proposed control measures, will be released for public review in 2005.

A key element in air quality planning is to make reasonably accurate projections of future human activities that are related to air pollutant emissions. Most important is vehicle activity. The BAAQMD uses population projections made by the Association of Bay Area Governments and vehicle use trends made by the Metropolitan Transportation Commission to formulate future air pollutant emission inventories. The basis for these projections comes from cities and counties. In order to provide the best plan to reduce air pollution in the Bay Area, accurate projections from local governments are necessary. When General Plans are not consistent with these projections, they cumulatively reduce the effectiveness of air quality planning in the region.

San José General Plan

The San José General Plan includes the following policies intended to control or reduce air pollution impacts:

- *Air Quality Policy 1* states that the City should take into consideration the cumulative air quality impacts from proposed developments and should establish and enforce appropriate land uses and regulations to reduce air pollution consistent with the region's Clean Air Plan and state law.

- *Air Quality Policy 2* states that expansion and improvement of public transportation services and facilities should be promoted, where appropriate, to both encourage energy conservation and reduce air pollution.

- *Air Quality Policy 5* states that in order to reduce vehicle miles traveled and traffic congestion, new development within 1,000 feet of an existing or planned transit station should be designed to encourage the usage of public transit and minimize the dependence on the automobile through the application of site design guidelines.

- *Energy Policy 1* states that the City should promote development in areas served by public transit and other existing services. Higher residential densities should be encouraged to locate in areas served by primary public transit routes and close to major employment centers.

- *Energy Policy 2* states that decisions on land use should consider the proximity of industrial and commercial uses to major residential areas in order to reduce the energy used for commuting.

- *Transportation, Pedestrian Facilities, Policy 17* states that pedestrian travel should be encouraged as a mode of movement between residential and non-residential areas throughout the City and in activity areas.

- *Transportation, Pedestrian Facilities, Policy 19* states that the City should encourage walking, bicycling, and public transportation as preferred modes of transportation.

- *Transportation, Pedestrian Facilities, Policy 23* states that each land use has different pedestrian needs. Street and sidewalk designs should relate to the function of the adjoining land use(s) and transit access points.

- *Transportation, Transportation Systems Management/Transportation Demand Management, Policy 28* states that the City should promote participation and implementation of appropriate Transportation Demand Management measures such as carpooling and vanpooling, preferential parking and staggered work hours/flextime, as well as bicycling and walking, by all employers.

- *Transportation, Bicycling, Policy 50* states that the City should develop a safe, direct, and well-maintained transportation bicycle network linking residences, employment centers, schools, parks and transit facilities and should promote bicycling as an alternative mode of transportation for commuting as well as for recreation.

- *Transportation, Bicycle, Policy 52* states that priority improvements to the Transportation Bicycle Network should include: bike routes linking light rail stations to nearby neighborhoods, bike paths along designated trails and pathway corridors, and bike paths linking residential areas to major employment centers.

SETTING

Climate and Topography

The climate is mainly characterized by warm dry summers with abundant sunshine and cool moist winters with variable cloudiness. The proximity of the Pacific Ocean and San Francisco Bay has a moderating influence on the climate. The portion of the project in San José lies in the

Santa Clara Valley, which is generally oriented from the northwest to the southeast. This valley is bounded to the north by the San Francisco Bay, and by mountains to the east, south, and west. The surrounding terrain greatly influences winds in the valley, resulting in a prevailing wind that follows along the valley's northwest-southeast axis. During the afternoon and early evening, a north-northwesterly sea breeze often flows from the Bay through the valley, and a light south-southeasterly drainage flow often occurs during the late evening and early morning hours.

Typical summer maximum temperatures for the region are in the 80's, while winter maximum temperatures are in the high 50's or low 60's. Minimum temperatures usually range from the high 50's in the summer to the upper 30's and low 40's in the winter. Rainfall in the valley is approximately 20 to 25 inches per year, occurring mostly in the months of November through March.

Air quality standards for ozone traditionally are exceeded when relatively stagnant conditions occur for periods of several days during the warmer months of the year. Weak wind flow patterns combined with strong inversions substantially reduces normal atmospheric mixing. Key components of ground-level ozone formation are sunlight and heat; therefore, significant ozone formation only occurs during the months from late spring through early fall. Prevailing winds during the summer and fall can transport and trap ozone precursors from the more urbanized portions of the Bay Area. Meteorological factors make air pollution potential in the Santa Clara Valley quite high. The clear skies with relatively warm conditions that are typical in summer combine with transported and localized air pollutant emissions to elevate ozone levels. The surrounding mountains up slope and down slope flows may also recirculate pollutants already present, contributing to the buildup of air pollution. Light winds and stable conditions during the late fall and winter contribute to the buildup of particulate matter from motor vehicles, agriculture, and wood burning in fireplaces and stoves.

Air Monitoring Data

Air quality in the region is controlled by the rate of pollutant emissions and meteorological conditions. Meteorological conditions such as wind speed, atmospheric stability, and mixing height may all affect the atmosphere's ability to mix and disperse pollutants. Long-term variations in air quality typically result from changes in air pollutant emissions, while frequent, short-term variations result from changes in atmospheric conditions. The San Francisco Bay Area is considered to be one of the cleanest metropolitan areas in the country with respect to air quality. The BAAQMD monitors air quality conditions at over 30 locations throughout the Bay Area. There are several BAAMQD monitoring stations in San José. Air pollutant concentrations measured at stations closest to the project area are shown in Table 2.

The pollutant of most concern in the San José area is ozone, since prevailing summertime wind conditions tend to cause a build up of ozone in the southern Santa Clara Valley. Ozone levels measured in San Jose, exceeded the state ozone standard from 0 to 4 times in 2000-2004. Neither the former federal 1-hour ozone standard nor the current 8-hour standard has been exceeded in the last five years. Measured exceedances of the state PM_{10} standard have occurred between 0 and 4 times each year in San Jose. Exceedances of the federal $PM_{2.5}$ standard were not measured in San Jose. The entire Bay Area, including San Jose, did not experience any

exceedances of other air pollutants. Table 3 reports the number of days that an ambient air quality standard was exceeded at any of the stations in San José near the project and in the entire Bay Area.

Table 2 Highest Measured Air Pollutant Concentrations

Pollutant	Average Time	MEASURED AIR POLLUTANT LEVELS				
		2000	2001	2002	2003	2004*
East San Jose						
Ozone (O_3)	1-Hour	**0.10** ppm	0.09 ppm	0.09 ppm	**0.10** ppm	0.09 ppm
	8-Hour	0.07 ppm	0.06 ppm	0.07 ppm	0.07 ppm	0.07 ppm
San José 4th Street/Central (relocated in 2002)						
Ozone (O_3)	1-Hour	0.07 ppm	**0.11** ppm	-- ppm	**0.12** ppm	0.09 ppm
	8-Hour	0.06 ppm	0.07 ppm	-- ppm	0.08 ppm	0.07 ppm
Carbon Monoxide (CO)	8-Hour	6.3 ppm	5.1 ppm	4.5 ppm	4.0 ppm	2.9 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.11 ppm	0.11 ppm	0.08 ppm	0.09 ppm	0.07 ppm
	Annual	0.025ppm	0.024ppm	NA	0.021ppm	NA
San Jose – Tully Road						
Fine Particulate Matter ($PM_{2.5}$)	1-Hour	**69** ug/m^3	**75** ug/m^3	**70** ug/m^3	**58** ug/m^3	NA
	Annual	21 ug/m^3	23 ug/m^3	NA	**25** ug/m^3	NA
Respirable Particulate Matter (PM_{10})	24-Hour	NA	NA	**58** ug/m^3	**52** ug/m^3	NA
	Annual	NA	NA	NA	**10** ug/m^3	NA
Bay Area (Basin Summary)						
Ozone (O_3)	1-Hour	**0.15** ppm	**0.13** ppm	**0.16** ppm	**0.13** ppm	**0.11** ppm
	8-Hour	**0.11** ppm	**0.10** ppm	**0.11** ppm	**0.10** ppm	0.08 ppm
Carbon Monoxide (CO)	8-Hour	6.3 ppm	5.1 ppm	4.5 ppm	4.0 ppm	3.4 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.11 ppm	0.11 ppm	0.08 ppm	0.09 ppm	0.07 ppm
	Annual	0.025ppm	0.024ppm	0.014ppm	0.021ppm	0.019ppm
Fine Particulate Matter ($PM_{2.5}$)	1-Hour	NA	NA	**77** ug/m^3	56 ug/m^3	**74** ug/m^3
	Annual	NA	NA	14 ug/m^3	11.7 ug/m^3	11.6 ug/m^3
Respirable Particulate Matter (PM_{10})	24-Hour	**76** µg/m^3	**109** µg/m^3	**84** µg/m^3	**60** µg/m^3	**65** µg/m^3
	Annual	**24** ug/m^3	**26** ug/m^3	**25** ug/m^3	**25** ug/m^3	**26** ug/m^3

* Partial data set for some pollutants

Source: California Air Resources Board 2004.

Note: ppm = parts per million and ug/m^3 = micrograms per cubic meter
Values reported in bold exceed ambient air quality standard
NA = data not available.

Table 3 Annual Number of Days Exceeding Ambient Air Quality Standards

Pollutant	Standard	Monitoring Station	Days Exceeding Standard				
			2000	2001	2002	2003	2004
Ozone (O3.)	NAAQS 1-hr	San Jose BAY AREA	0 3	0 1	0 2	0 1	0 0
	NAAQS 8-hr	San Jose BAY AREA	0 4	0 7	0 7	0 7	0 0
	CAAQS 1-hr	San Jose BAY AREA	1 12	2 15	0 16	4 19	0 7
Fine Particulate Matter (PM_{10})	NAAQS 24-hr	San Jose BAY AREA	0 0	0 0	0 0	0 0	0 0
	CAAQS 24-hr	San Jose BAY AREA	2 7	4 10	2 6	2 6	0 --
Fine Particulate Matter ($PM_{2.5}$)	NAAQS 24-hr	San Jose BAY AREA	NA 1	NA 5	NA 7	0 0	0 --
All Other (CO, NO_2, Lead, SO_2)	All Other	San Jose (Tully) BAY AREA	0 0	0 0	0 0	0 0	0 0

Attainment Status

Areas that do not violate ambient air quality standards are considered to have attained the standard. Violations of ambient air quality standards are based on air pollutant monitoring data and are judged for each air pollutant. The Bay Area as a whole does not meet State or Federal ambient air quality standards for ground level O_3 and State standards for fine particulate matter.

Under the Federal CAA, the US EPA had designated the region as *moderate non-attainment* for ground level O_3. However, the US EPA has recognized that the region has not violated the 1-hour O_3 standard over the last three years (2000-2003) and has proposed to redesignate the Bay Area as a maintenance area. This was the first step towards designating the Bay Area as attainment of that standard. U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005. The 8-hour ozone standard is now the prevailing federal standard for ground-level ozone. US EPA classified the region as marginally nonattainment in 2004 for the newer more stringent 8-hour O_3 standard. EPA requires the region to adopt a plan that will bring it into attainment with that standard by 2007. The Bay Area has met the CO standards for over a decade and is classified *attainment maintenance* by the US EPA. The US EPA grades the region *unclassified* for all other air pollutants, which include PM_{10} and $PM_{2.5}$.

At the State level, the region is considered *serious non-attainment* for ground level O_3 and non-attainment for PM_{10}. California ambient air quality standards are more stringent than the national ambient air quality standards. The region is required to adopt plans on a triennial basis that show progress towards meeting the State O_3 standard. The area is considered attainment or unclassified for all other pollutants.

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following people who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks.

ENVIRONMENTAL IMPACTS AND MITIGATION

Thresholds of Significance

The CEQA Guidelines (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance. The following are the significance criteria that the BAAQMD has established to determine project impacts:

Construction

The BAAQMD's approach to the CEQA analysis of construction impacts is to emphasize the implementation of effective and comprehensive control measures rather than detailed quantification of emissions. If the appropriate construction controls are implemented, air pollutant emissions for construction activities would be considered less than significant.

Operations

Plan build out would cause a significant air quality impact if it were to result in:

- Ozone precursor emissions (ROG and NO_x) and PM_{10} emissions from direct and indirect sources (non typical construction) that exceed the thresholds recommended by the BAAQMD. The BAAQMD recommends a threshold of 80 pounds per day or 15 tons per year for direct and indirect sources of ROG, NO_x, and PM_{10}.

- Emissions of carbon monoxide cause a projected exceedance of the ambient carbon monoxide state standard of 9.0 ppm for 8-hour averaging period.

Consistency with Clean Air Planning Efforts

The *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans (1999)* recommends using an analysis that determines the consistency between the plan's projected population growth and vehicle miles traveled (VMT) to the projections in the latest Clean Air Plan (CAP). Consistency is also demonstrated by assessing whether the plan implements all of the applicable CAP transportation control measures, and assess whether the plan provides buffer zones around potential sources of odors, toxics, and accidental releases.

ENVIRONMENTAL IMPACTS

Impact 1: **Construction Impacts.** Construction activity during build out of individual EVP projects would generate air pollutant emissions that could expose sensitive receptors to substantial pollutant concentrations. This is a potentially significant impact under all scenarios.

Build out of each EVP project site would involve construction that could last over several years. Construction activities may include demolition and removal of existing buildings or structures. All construction would likely include an initial grading of sites and then many small and medium size construction projects that could result in different air quality impacts based on their size, duration and proximity to sensitive receptors. Construction activities would generate pollutant emissions from the following construction activities: grading, construction worker travel to and from project sites, delivery and hauling of construction supplies and debris to and from the project site, and fuel combustion by on-site construction equipment. These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants.

PM_{10} is typically the most significant source of air pollution from construction, particularly during site preparation and grading. PM_{10} emissions from construction can vary daily, depending on various factors, such as the level of activity, type of construction activity taking place, the equipment being operated, weather conditions, and soil conditions.

Similar to construction dust, exhaust emissions are difficult to predict. Exhaust from diesel powered construction equipment affects regional ozone levels as well as localized particulate matter concentrations. Diesel particulate matter is considered a toxic air contaminant. Diesel fuel will be reformulated beginning in 2006 to reduce particulate emissions. In addition, cleaner diesel powered equipment will replace older construction equipment leading to an overall decrease in emissions of exhaust particulate matter and ozone precursor emissions. However, emission reductions are still needed on individual construction projects to reduce the exposure of sensitive receptors to toxic air contaminants and reduce regional ozone levels.

Typically, the BAAQMD does not require quantitative analysis for construction. Rather the analysis is focused on identifying the most appropriate control measures. The BAAQMD has identified a set of feasible PM_{10} control measures for construction activities. These measures are listed at the end of this section under "Construction Phase Mitigation Measures." According to

the BAAQMD CEQA Guidelines, if all of these control measures are implemented, a less than significant impact is expected for PM_{10} emissions.

Scenario I-VI

Construction would occur under all scenarios. The location, amount and intensity of construction would vary by scenario. However, air quality impacts from construction under all scenarios would be considered potentially significant.

Mitigation Measure AQ-1: Construction Phase Mitigation Measures

The following is a list of feasible control measures that the BAAQMD recommends for construction emissions of PM_{10}. These mitigation measures shall be implemented for all areas (both on-site and off-site) where construction activities would occur.

1. Sprinkle water to all active construction areas at least twice daily and more often when conditions warrant.
2. Cover all trucks hauling soil, sand and other loose materials or require all trucks to maintain at least two feet of freeboard.
3. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
4. Sweep daily all paved access roads, parking areas, and staging areas at construction sites.
5. Sweep streets daily if visible soil material is carried onto adjacent public streets.
6. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas.
7. Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
8. Limit traffic speeds on unpaved roads to 15 miles per hour.
9. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
10. Replant vegetation in disturbed areas as quickly as possible.
11. Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.
12. Suspend grading activities when winds exceed 25 miles per hour (mph) and visible dust clouds cannot be prevented from extending beyond active construction areas.
13. Limit the area subject to excavation, grading and other construction activity at any one time.

The mitigation measures listed below should be implemented to reduce NO_x and diesel particulate emissions from on-site construction equipment. At a minimum, these measures should apply to grading projects:

1. At least 50 percent of the heavy-duty, off-road equipment used for construction shall be CARB-certified off-road engines or equivalent, or use alternative fuels (such as biodiesel) that result in lower particulate emissions.
2. Ensure proper maintenance of all construction equipment.

3. The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g., compressors).
4. Diesel equipment standing idle for more than two minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were on site.
5. The City shall designate a Disturbance Coordinator responsible for ensuring that mitigation measures to reduce air quality impacts from construction are properly implemented. The Disturbance Coordinator shall be responsible for notifying adjacent land uses (i.e., sensitive receptors such as residences within 200 feet of construction activities) of construction activities and schedules and shall provide a written list of the aforementioned air pollutant control measures. The list shall identify a contact person that would respond to any complaints. A log shall be kept of all complaints, the actions taken to remedy any valid complaint, and the response period. The City shall review this log on a periodic basis.

Conclusion After Mitigation: The construction period air quality impacts would be reduced to a level of less-than-significant per BAAQMD guidelines.

Impact 2: **Operational Impacts – Regional Air Quality.** The EVP would generate new emissions that would affect long-term air quality of the region, possibly inhibiting the ability of the region to attain and maintain ambient air quality standards. This would be a *significant* impact.

Emissions of ozone precursor pollutants (i.e., reactive organic gases [ROG] and nitrogen oxides [NOx]) and small particulate matter (i.e., PM_{10}) can affect air quality throughout the Bay Area. It is virtually impossible to predict the affect of emissions from the EVP to levels of ozone and PM_{10} in the region. However, the significance of individual EVP projects and the overall EVP air pollutant emissions are evaluated against emission significance thresholds established by the BAAQMD.

To evaluate the EVP effects on regional air quality, emissions of ozone precursor pollutants and PM_{10} were predicted. The URBEMIS2002 Model, obtained from the California Air Resources Board, was used to predict air pollutant emissions associated with project-related automobile use. This model combines assumptions for automobile activity (e.g., number of trips, vehicle mix, vehicle miles traveled, etc.) with vehicle emission factors.

Project trip generation data provided by the Traffic Engineer (i.e., Hexagon Transportation Consultants) were used as input to the model. Hexagon Transportation Consultants estimated daily project trip generation for each land use type of each Site under all six scenarios. Total trips were adjusted by Hexagon Transportation Consultants to account for pass-by, diverted and internal trip reductions. These adjustments were applied to the URBEMIS2002 modeling inputs.

The vehicle mix was adjusted to reflect the overall mix for Santa Clara County. This was done by running the BURDEN portion of CARB's EMFAC2002 model and then using the output to calculate the county-wide vehicle mix percentages based on the number of trips.

The URBEMIS2002 model also calculates area source emissions from sources such as space and water heating, use of landscape equipment, and use of consumer products. These emissions are calculated based on the number and type of residential units and square footage of other non-residential uses.

The URBEMIS2002 modeling was conducted for each site, for all six scenarios. Modeling was conducted for 2015, which is considered the very earliest year that full build out could occur. Emission rates for ozone precursor pollutants are anticipated to decrease in the future due to improvements in vehicle emissions controls and turnover of the regional fleet (i.e., older more polluting vehicles are replaced with newer and cleaner vehicles). Full build out is assumed in 2020 under this analysis.

Results of the URBEMIMIS2002 modeling are presented in Appendix A, along with the modeling output files. Project site impacts are discussed under each scenario.

Scenario I – No Project

The no project scenario would include planned development, which would generate air pollutant emissions. This scenario would include residential development at the Arcadia site and industrial development for the Legacy Berg site. Air pollutant emissions fo r this scenario are summarized in Table 4 are presented below. These emissions establish the baseline that regional air quality impacts for other Scenarios are compared against.

Table 4 Daily Emissions Associated with Scenario I

Scenario	ROG	NO_X	PM_{10}
Scenario I – No build	240 lbs/day	243 lbs/day	499 lbs/day

Approved industrial development at the Berg/IDS and Legacy Partners properties would account for much of the emissions anticipated under this scenario.

Scenario II – Very Low Development

This scenario would include construction of up to 3,600 new residences, approximately 500,000 square feet of new commercial uses, and about 75,000 square feet of new office uses. The campus industrial uses would not be constructed. Under this scenario, existing office and training facilities at the Evergreen Valley College property would be removed, and existing neighborhood retail uses at the Quimby/White property would be expanded. The modeled changes to regional emissions associated with each of these uses are summarized in Table 5.

Table 5 Daily emissions Associated with Scenario II

Property	ROG	NO_X	PM_{10}
Arcadia	**168 lbs/day**	**122 lbs/day**	**220 lbs/day**
Evergreen Valley College	73 lbs/day	73 lbs/day	**134 lbs/day**
Pleasant Hills Golf Course	51 lbs/day	29 lbs/day	49 lbs/day
Legacy/Berg	<0 lbs/day	<0 lbs/day	<0 lbs/day
Quimby/White	14 lbs/day	17 lbs/day	33 lbs/day
Various other sources	**87 lbs/day**	**85 lbs/day**	**154 lbs/day**
BAAQMD Thresholds	*80 lbs/day*	*80 lbs/day*	*80 lbs/day*
Net Scenario II Impact*	**273 lbs/day**	**163 lbs/day**	**476 lbs/day**

* Accounts for existing uses to be removed and Scenario I approved uses.

The cumulative emissions under this scenario would be significant since they exceed the BAAQMD thresholds for ROG, NOx, and PM_{10}. The emissions associated with build out of the Arcadia property would be significant since they alone exceed the thresholds, even when accounting for the approved uses at the site. PM_{10} emissions associated with build out of the Pleasant Hills Golf Course site would also be significant.

Scenario III –Low Development

This scenario would include construction of up to 4,200 new residences, approximately 500,000 square feet of new commercial uses, and about 75,000 square feet of new office uses. The campus industrial uses would not be constructed. Under this scenario, existing office and training facilities at the Evergreen Valley College property would be removed, and existing neighborhood retail uses at the Quimby/White property would be expanded. The modeled changes to regional emissions associated with each of these uses are summarized in Table 6.

Table 6 Daily Emissions Associated with Scenario III

Scenario\Property	ROG	NO_X	PM_{10}
Arcadia	**199 lbs/day**	**139 lbs/day**	**249 lbs/day**
Evergreen Valley College	75 lbs/day	74 lbs/day	**136 lbs/day**
Pleasant Hills Golf Course	57 lbs/day	32 lbs/day	54 lbs/day
Legacy/Berg	<0 lbs/day	<0 lbs/day	<0 lbs/day
Quimby/White	14 lbs/day	17 lbs/day	33 lbs/day
Various other sources	**94 lbs/day**	**89 lbs/day**	**161 lbs/day**
BAAQMD Thresholds	*80 lbs/day*	*80 lbs/day*	*80 lbs/day*
Net Scenario II Impact*	**330 lbs/day**	**194 lbs/day**	**530 lbs/day**

* Accounts for existing uses to be removed and Scenario I approved uses.

The cumulative emissions under this scenario would be significant since they exceed the BAAQMD thresholds for ROG, NOx, and PM_{10}. The emissions associated with build out of the Arcadia property would be significant since they alone exceed the thresholds, even when accounting for the approved uses at the site. PM_{10} emissions associated with build out of the Pleasant Hills Golf Course site would also be significant.

Scenario IV – Medium Development

This scenario would include construction of up to 4,600 new residences, approximately 500,000 square feet of new commercial uses, and about 75,000 square feet of new office uses. The campus industrial uses would not be constructed. Under this scenario, existing office and training facilities at the Evergreen Valley College property would be removed, and existing neighborhood retail uses at the Quimby/White property would be expanded. The modeled changes to regional emissions associated with each of these uses are summarized in Table 7.

Table 7 Daily Emissions Associated with Scenario IV

Scenario\Property	ROG	NO_X	PM_{10}
Arcadia	**216 lbs/day**	**148 lbs/day**	**264 lbs/day**
Evergreen Valley College	78 lbs/day	76 lbs/day	**138 lbs/day**
Pleasant Hills Golf Course	62 lbs/day	35 lbs/day	59 lbs/day
Legacy/Berg	<0 lbs/day	<0 lbs/day	<0 lbs/day
Quimby/White	14 lbs/day	17 lbs/day	33 lbs/day
Various other sources	**97 lbs/day**	**91 lbs/day**	**165 lbs/day**
BAAQMD Thresholds	*80 lbs/day*	*80 lbs/day*	*80 lbs/day*
Net Scenario II Impact*	**368 lbs/day**	**217 lbs/day**	**568 lbs/day**

* Accounts for existing uses to be removed and Scenario I approved uses.

The cumulative emissions under this scenario would be significant since they exceed the BAAQMD thresholds for ROG, NOx, and PM_{10}. The emissions associated with build out of the Arcadia property would be significant since they alone exceed the thresholds for all three pollutants, even when accounting for the approved uses at the site. PM_{10} emissions associated with build out of the Pleasant Hills Golf Course site would also be significant.

Scenario V – High Development

This scenario would include construction of up to 5,700 new residences, approximately 500,000 square feet of new commercial uses, and about 75,000 square feet of new office uses. The campus industrial uses would not be constructed. Under this scenario, existing office and training facilities at the Evergreen Valley College property would be removed, and existing neighborhood retail uses at the Quimby/White property would be expanded. The modeled changes to regional emissions associated with each of these uses are summarized in Table 8.

Table 8 Daily Emissions Associated with Scenario V

Scenario\Property	ROG	NO_X	PM_{10}
Arcadia	**199 lbs/day**	**139 lbs/day**	**249 lbs/day**
Evergreen Valley College	**94 lbs/day**	**85 lbs/day**	**153 lbs/day**
Pleasant Hills Golf Course	78 lbs/day	44 lbs/day	74 lbs/day
Legacy/Berg	<0 lbs/day	<0 lbs/day	<0 lbs/day
Quimby/White	14 lbs/day	17 lbs/day	33 lbs/day
Various other sources	**109 lbs/day**	**99 lbs/day**	**178 lbs/day**

BAAQMD Thresholds	*80 lbs/day*	*80 lbs/day*	*80 lbs/day*
Net Scenario II Impact*	**475 lbs/day**	**283 lbs/day**	**677 lbs/day**

* Accounts for existing uses to be removed and Scenario I approved uses.

The cumulative emissions under this scenario would be significant since they exceed the BAAQMD thresholds for ROG, NOx, and PM_{10}. The emissions associated with build out of the Arcadia property would be significant since they alone exceed the thresholds, even when accounting for the approved uses at the site. Project emissions associated with build out of the Pleasant Hills Golf Course site would also be significant, since they exceed the thresholds for all three pollutants.

Scenario VI – Retain Development

This scenario would include construction of up to 3,900 new residences, approximately 500,000 square feet of new commercial uses, and about 75,000 square feet of new office uses. The 4.66 million square feet of campus industrial uses would be constructed. Under this scenario, existing office and training facilities at the Evergreen Valley College property would be removed, and existing neighborhood retail uses at the Quimby/White property would be expanded. The modeled changes to regional emissions associated with each of these uses are summarized in Table 9.

Table 9 Daily Emissions Associated with Scenario VI

Scenario\Property	ROG	NO_X	PM_{10}
Arcadia	**199 lbs/day**	**139 lbs/day**	**249 lbs/day**
Evergreen Valley College	**94 lbs/day**	**85 lbs/day**	**153 lbs/day**
Pleasant Hills Golf Course	78 lbs/day	44 lbs/day	74 lbs/day
Legacy/Berg	0 lbs/day	0 lbs/day	0 lbs/day
Quimby/White	14 lbs/day	17 lbs/day	33 lbs/day
Various other sources	**125 lbs/day**	**109 lbs/day**	**194 lbs/day**
BAAQMD Thresholds	*80 lbs/day*	*80 lbs/day*	*80 lbs/day*
Net Scenario II Impact*	**510 lbs/day**	**398 lbs/day**	**962 lbs/day**

* Accounts for existing uses to be removed and Scenario I approved uses.

The cumulative emissions under this scenario would be significant since they exceed the BAAQMD thresholds for ROG, NOx, and PM_{10}. The emissions associated with build out of the Arcadia property would be significant since they alone exceed the thresholds, even when accounting for the approved uses at the site. Project emissions associated with build out of the Pleasant Hills Golf Course site would also be significant, since they exceed the thresholds for all three pollutants.

Overview of Emissions Associated with Each Scenario

Emissions associated with each plan scenario are shown in Table 10. The percentage increases above emissions from approved uses (Scenario I) are also shown. ROG emissions would increase at a higher rate due to the increase in the number of residential uses, which include substantial area source ROG emissions such as those from consumer products.

Table 10 Daily Emissions in Pounds Per Day for Each Development Scenario Along with the Percentage Increase Over No Project Development

Pollutant	Scenario					
	I	II	III	IV	V	VI
ROG	240	513 (114%)	569 (138%)	608 (154%)	715 (198%)	749 (213%)
NOx	243	402 (65%)	434 (78%)	456 (88%)	522 (115%)	637 (162%)
PM_{10}	499	716 (43%)	769 (54%)	807 (62%)	916 (84%)	1201 (141%)

Mitigation Measure 2a: Operational Phase Trip Reduction Mitigation Measures

The EVP emissions analysis reported for each scenario includes the trip reductions that account for passby, internal and diverted trips. A majority of emissions that could be reduced from this development would be associated with new vehicle trips. However, a large portion of the ROG emissions is associated with consumer product use that cannot be controlled through project level mitigation measures. The plan should incorporate the following measures, which would reduce traffic trips and thus air pollutant emissions.

1. Improve existing or construct new bus pullouts and transit stops at convenient locations with pedestrian access to the project sites. Pullouts should be designed so that normal traffic flow on arterial roadways would not be impeded when buses are pulled over to serve riders. Stops should include nearby shelter, benches and posting of transit information.
2. For office and commercial uses, charge parking rates that encourage use of alternative transportation. At a minimum, this would include elimination of free public parking spaces for weekday parking in excess of 2 hours.
3. Bicycle amenities should be provided throughout the project areas. Each project should be reviewed and appropriate bicycle amenities should be included. This would include secure bicycle parking for office and retail employees, bicycle racks for retail customers and bike lane connections throughout each project site. Offsite bicycle lane improvements should be considered for roadways that would serve EVP projects.
4. Consider providing pedestrian signage and signalization. Include convenient pedestrian crossings at strategic areas with count-down signals that would enhance pedestrian use.
5. Provide a form of shuttle bus service to regional transit centers for areas not served by scheduled bus service or for large employment centers.
6. At large employment centers (including retail uses), implement feasible and reasonable TDM measures such as ride-matching program or guaranteed ride home programs

7. Employers of new commercial and office uses should be required to post transit rates and scheduling information on bulletin boards.

Mitigation Measure 2b: Operational Phase Traffic Management Mitigation Measures

Reduce traffic congestion through implementation of a traffic management plan that would include the following elements:

1. Traffic signal synchronization on major arterial roadways to avoid unnecessary idling and accelerations
2. Use of roundabouts or other traffic control features that calm traffic on minor arterial roadways and local streets
3. Construct necessary turn pocket lanes to avoid excess traffic queuing into through lanes.

Mitigation Measure 2c: Operational Phase Area Source Mitigation Measures

New development projects should indirectly reduce air pollutant emissions through the following measures:

1. For all buildings (residential, commercial and office), provide outdoor electrical outlets and encourage the use of electrical landscape maintenance equipment. Also, provide electrical outlets for recharging electrical automobiles in commercial and industrial parking lots as well as new residences. Provide 220 V outlets in each residential garage/parking facilities suitable for electrical auto recharging.
2. Consider use of solar water heating in commercial, industrial and residential units. As an alternative, use additional insulation, better windows and doors, and other energy conservation measures sufficient to reduce energy use by 15 percent below the minimum Title 24 standards.
3. Review landscape plans to ensure that they provide new trees that would shade buildings and walkways in summer to reduce the cooling loads on buildings.
4. Only allow low-emitting fireplaces for residential uses, such as those that only burn natural gas

Conclusion After Mitigation: The impact would remain significant and unavoidable, even with full implementation of the above mitigation measures. Direct and indirect emissions of ROG and PM_{10} associated with full build-out of the plan would have to be reduced by 100 percent or greater to mitigate the significance of the impact. Therefore, this adverse impact can be reduced, but not fully mitigated through implementation of this mitigation measure.

Impact 3: **Operational Impacts – Local Air Quality.** Build out of the EVP area under the project would generate traffic that could affect local carbon monoxide concentrations. This would be a *less-than significant* impact for all Scenarios.

Carbon monoxide (CO) emissions from traffic generated by the EVP would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have

the greatest potential to cause high localized concentrations of CO. Seven intersections that were studied for traffic impacts were also evaluated for roadside CO concentrations. These are the intersections that are anticipated to experience the combination of highest traffic volumes and worst congestion. CO concentrations were predicted for these intersections through air dispersion modeling using the Caline4 Model. Operational traffic volumes were obtained from the Traffic Engineer, Hexagon Transportation Consultants. Emission factors were combined with traffic information. These emission factors were produced using CARB's EMFAC2002 model with Santa Clara County wintertime default inputs. Emission factors for very slow speeds (5 miles per hour) to simulate conditions near intersections. The modeled concentrations were added to background levels to predict the resulting concentration. Although there are 1- and 8-hour standards for CO, the 8-hour standard is the most stringent and is always exceeded if the 1-hour standard is exceeded. Therefore, this analysis evaluated impacts against the 8-hour standard.

Results of the CO prediction assessment are shown in Table 11. Existing 8-hour CO concentrations are currently below California Ambient Air Quality Standards (CAAQS). Predicted 8-hour CO concentrations with the EVP are anticipated to remain below CAAQS. Although traffic will increase under build out of the different EVP scenarios, CO concentrations are anticipated to decrease because vehicles will be cleaner and pollute less. Therefore, the impact of the different EVP scenarios on local air quality is considered to be *less than significant*.

Table 11 Predicted 8-hour Carbon Monoxide Concentrations

Location	Carbon Monoxide Concentration						
	Existing	No Build	Scenario II	Scenario III	Scenario IV	Scenario V	Scenario VI
INTERSECTION 3105 King Road and Tully Road	7.2 ppm	5.2 ppm	5.5 ppm	5.5 ppm	5.5 ppm	5.5 ppm	5.4 ppm
Intersection 3108 McLaughlin Avenue and Tully Road	7.6 ppm	5.5 ppm	5.6 ppm	5.6 ppm	5.6 ppm	5.6 ppm	5.6 ppm
Intersection 3724 White Road and Ocala Avenue	6.3 ppm	5.0 ppm	5.0 ppm	5.0 ppm	5.0 ppm	5.0 ppm	5.1 ppm
Intersection 3747 White Road and Quimby Road	8.3 ppm	5.4 ppm	5.7 ppm	5.7 ppm	5.7 ppm	5.8 ppm	5.8 ppm
Intersection 5721 McLaughlin Avenue and Capitol Expressway	8.3 ppm	5.7 ppm	5.8 ppm	5.8 ppm	5.8 ppm	5.8 ppm	5.8 ppm
Intersection 5723 Silver Creek Road and Capitol Expressway	8.6 ppm	5.7 ppm	6.1 ppm	6.1 ppm	6.1 ppm	6.1 ppm	6.3 ppm
Intersection 5732 Capitol Expressway and Story Road	8.3 ppm	5.8 ppm	5.8 ppm	5.8 ppm	5.8 ppm	5.9 ppm	5.8 ppm

Note: California ambient air quality standard for 8-hour carbon monoxide levels is 9.0 ppm. Modeled levels are added to a Eight-hour background concentration of 4.0 ppm.
Source: Illingworth & Rodkin. June 2005.

Impact 4: **Consistency with Clean Air Planning Efforts.** The proposed EVP and General Plan Amendment for the project would conflict with regional clean air planning efforts. This would be a *significant* impact for Scenarios I-VI.

A key element in air quality planning is to make reasonably accurate projections of future human activities, particularly vehicle activities that are related to air pollutant emissions. The BAAQMD uses population projections made by the Association of Bay Area Governments and vehicle use trends made by the Metropolitan Transportation Commission to formulate future air pollutant emission inventories. These projections are based on estimates from cities and counties. In order to provide the best plan to reduce air pollution in the Bay Area, accurate projections from local governments are necessary. When General Plans are not consistent with these projections, they cumulatively reduce the effectiveness of air quality planning in the region. The ozone strategy that will address both the federal and State ozone standards is currently being prepared using the most recent projections. This plan is due to be released in late 2005. These population and travel projections do not include build out of the proposed EVP.

The Draft Specific Plan would result in an amount and intensity of growth in the Evergreen planning area that is not foreseen in the current General Plan, and therefore was not included in the projections used for the 2000 Bay Area Clean Air Plan or those that will be used in the ozone strategy. Scenario I is considered to be the assumed General Plan build out used for planning purposes. As shown in Table 10, Scenario II would have significant increases in ROG emissions (ROG is an ozone precursor pollutant), when compared to the Scenario I. Scenarios II through VI all have significantly greater ozone precursor emissions than Scenario I. Therefore, the EVP Scenarios II through VI would conflict with the Clean Air planning efforts. Although the population projections associated with Scenarios I-VI are not consistent with population assumptions clean air planning , it is consistent with many goals and policies of these efforts, because the EVP would provide for infill residential development. The development would be served by transit and would also include commercial developments that would serve both the project and existing residential development. However, new residential development in South San José would contribute to existing patterns of roadway congestion and regional air pollution.

Transportation Control Measures (TCMs) are included in the clean air planning efforts. The latest set of adopted TCMs, which local governments are considered as implementing agencies, are listed in Table 12. The EVP cannot individually implement the listed measures for each project, but the City's General Plan does include all those measures that are consistent with the City's responsibility.

The EVP sites, which are mostly infill, would not be located near major sources or air pollutant emissions (e.g., power plants or freeways) or odors (e.g., wastewater treatment plants). Widespread impacts from existing sources of air toxics or odors are not anticipated for proposed new residences under the EVP. However, there may be scattered small sources of odors or emissions that could have local impacts. For instance, residential development is proposed for the Berg property near an existing emergency generator used by the City of San José Municipal Water District. This generator is powered using diesel fuel, a toxic air contaminant. New residences could be located within about 200 feet of this generator, which is tested on a routine

basis. Screening level modeling of impacts from routine testing of this generator indicates that significant health risk impacts would not occur at these setback distances[2].

The EVP, with Mitigation Measure 2a and 2b, would reasonably incorporate TCMs identified by the BAAQMD for implementation by local governments. The EVP would not place new sources of odors or air toxics near existing or future sensitive receptors or place new sensitive receptors near sources of odors or air toxics. However, the EVP would lead to greater population growth in the area than anticipated in the Clean Air planning assumptions used by regional agencies to form strategies to attain and maintain air quality standards for ground-level ozone. As a result, the impact is considered significant.

Mitigation Measure: **None – impact is significant and unavoidable**

Mitigation measures 2a and 2b would slightly reduce the level of impact, but not to a less-than-significant level.

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[2] *The source is assumed to be a newer model (post 1987) diesel generator of 500 horsepower that operates 50 hours per year for routine testing. A significant risk is assumed to occur if the chances or contracting cancer over a 70-year lifetime exposure to the source are 10 in one million or greater.*

Table 12 Transportation Control Measures to be Implemented by Cities

Transportation Control Measure	Description
1. Support Voluntary Employer-Based Trip Reduction Programs	• Provide assistance to regional and local ridesharing organizations; advocate legislation to maintain and expand incentives (e.g., tax deductions/credits).
9. Improve Bicycle Access and Facilities	• Improve and expand bicycle land system by providing bicycle access in plans for all new road construction or modification. • Establish and maintain bicycle advisory committees in all nine Bay Area counties. • Designate a staff person as a Bicycle Program Manager. • Develop and implement comprehensive bicycle plans. • Encourage employers and developers to provide bicycle access and facilities. • Provide bicycle safety education.
12. Improve Arterial Traffic Management	• Study signal preemption for buses on arterials with high volume of bus traffic. • Improve arterials for bus operations and to encourage bicycling and walking. • Continue and expand local signal timing programs, only where air quality benefits can be demonstrated.
15. Local Clean Air Plans, Policies and Programs	• Incorporate air quality beneficial policies and programs into local planning and development activities, with a particular focus on subdivision, zoning and site design measures that reduce the number and length of single-occupant automobile trips.
17. Conduct Demonstration Projects	• Promote demonstration projects to develop new strategies to reduce motor vehicle emissions. Projects include: low emission vehicle fleets and LEV refueling infrastructure.
19. Pedestrian Travel	• Review/revise general/specific plan policies to promote development patterns that encourage walking and circulation policies that emphasize pedestrian travel and modify zoning ordinances to include pedestrian-friendly design standards. • Include pedestrian improvements in capital improvement programs. • Designate a staff person as a Pedestrian Program Manager.
20. Promote Traffic Calming Measures	• Include traffic calming strategies in the transportation and land use elements of general and specific plans. • Include traffic calming strategies in capital improvement programs.