4.2 AIR QUALITY

This section analyzes the impacts of the Parklands Specific Plan upon local and regional air quality. Both temporary impacts relating to construction activity and long-term impacts associated with population growth and associated growth in vehicle traffic and energy consumption are discussed. Impacts relating to global climate change are also discussed at the end of this section.

4.2.1 Setting

a. Local Climate and Meteorology. The semi-permanent high pressure system west of the Pacific coast strongly influences California's weather. It creates sunny skies throughout the summer and influences the pathway and occurrence of low pressure weather systems that bring rainfall to the area during October through April. As a result, wintertime temperatures in Ventura are generally mild, while summers are warm and dry. During the day, the predominant wind direction is from the west and southwest, and at night, wind direction is from the north and generally follows the Santa Clara River Valley.

Predominant wind patterns are occasionally broken during the winter by storms coming from the north and northwest and by episodic Santa Ana winds. Santa Ana winds are strong northerly to northeasterly winds that originate from high pressure areas centered over the desert of the Great Basin. These winds are usually warm, very dry, and often full of dust. They are particularly strong in the mountain passes and at the mouths of canyons.

Daytime summer temperatures in the area average in the high 70s to the low 90s. Nighttime low temperatures during the summer are typically in the high 50s to low 60s, while the winter high temperatures tend to be in the 60s. Winter low temperatures are in the 40s. Annual average rainfall in Ventura ranges from about 14 to 16 inches, the majority of which falls in winter months.

Two types of temperature inversions (warmer air on top of colder air) are created in the Ventura County area: subsidence and radiational (surface). The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high pressure area to the low pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but is most evident during the summer months. Surface inversions are formed by the more rapid cooling of air near the ground at night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed. The primary air pollutant of concern during the subsidence inversions is ozone, while carbon monoxide and nitrogen oxides are of greatest concern during winter inversions.

b. Local Regulatory Framework. Both the federal and state governments have established ambient air quality standards for the protection of public health. The U.S. Environmental Protection Agency (USEPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency. Local control in air quality management is provided by the CARB through county-level Air Pollution Control Districts (APCDs). The

CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 .air basins statewide. In addition, the City further regulates air quality through the City's Air Quality Ordinance (Ordinance 93-37). This ordinance requires developers of projects that generate emissions exceeding Ventura County APCD (VCAPCD) significance thresholds to pay air quality impact fees that are placed in a transportation demand management (TDM) fund that is used by the City to offset project emissions through implementation of regional air quality programs.

The USEPA has set primary national ambient air quality standards (NAAQS) for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), suspended particulates, known as PM_{10} (particulate matter with a diameter of 10 microns or less) and $PM_{2.5}$ (particulates of less than 2.5 microns in diameter), and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, the State of California has established health-based ambient air quality standards for these and other pollutants, some of which are more stringent than the federal standards. Table 4.2-1 lists the current Federal and State standards for regulated pollutants.

Table 4.2-1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.075 ppm	0.07 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.03 ppm
	1-Hour	---	0.18 ppm
Sulfur Dioxide	Annual	0.03 ppm	---
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	---	0.25 ppm
PM_{10}	Annual	---	20 $\mu g/m^3$
	24-Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
$PM_{2.5}$	Annual	15 $\mu g/m^3$	12 $\mu g/m^3$
	24-Hour	35 $\mu g/m^3$	--
Lead	30-Day Average	---	1.5 $\mu g/m^3$
	3-Month Average	1.5 $\mu g/m^3$	---

ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, www.arb.ca.gov/research/aaqs/aaqs2.pdf, April 1, 2008.

Ventura County has been listed as "moderate nonattainment" for the eight-hour ozone standard with an estimated attainment date of June 2010.

The USEPA has issued a staff paper regarding the policy implications of the latest scientific and technical information regarding particulate matter. In this report, USEPA staff recommends continuing the $PM_{2.5}$ annual standard while reducing the 24-hour standard to between 25-35 $\mu g/m^3$ or reducing the annual standard to 12 $\mu g/m^3$ (same as California standard) and the 24-hour standard to 35-40 $\mu g/m^3$. The PM_{10} standard is recommended to be revised to not include the 2.5 micron increment.

Ventura is located in the Ventura County portion of the South Central Coast Air Basin. The VCAPCD is the designated air quality control agency in the Ventura County portion of the Basin. The Ventura County portion of the South Central Coast Air Basin is a state and federal non-attainment area for ozone (1-hour and 8-hour, respectively) and a state non-attainment area for suspended particulates (PM_{10} & $PM_{2.5}$). In addition, though the Ventura County portion of the South Central Coast Air Basin is in attainment for the state and federal carbon monoxide standards, carbon monoxide can potentially be a problem at heavily congested intersections. Each of these pollutants is described below. The City of Ventura is within the "Ventura growth area."

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic gases (ROG). Nitrogen oxides are formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in serious concentrations between the months of May and October. Ozone is a pungent, colorless toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Suspended Particulates. PM_{10} is small particulate matter measuring no more than 10 microns in diameter. It is mostly composed of dust particles, nitrates, and sulfates. PM_{10} is a by-product of fuel combustion and wind erosion of soil and unpaved roads, and is directly emitted into the atmosphere through these processes. PM_{10} is also created in the atmosphere through chemical reactions. Particles less than 10 micrometers in diameter (PM_{10}) pose a health concern because they can be inhaled into and accumulate in the respiratory system. Particles less than 2.5 micrometers (=microns) in diameter ($PM_{2.5}$) are referred to as "fine" particles and are believed to pose the greatest health risks. Because of their small size (approximately 1/30th the average width of a human hair), fine particles can lodge deeply into the lungs. Fine particulate matter is composed primarily as a by-product of combustion, while matter between 2.5 and 10 microns is mostly dust from roads and grinding or crushing operations. Fine particulate matter poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

An important fraction of the particulate matter emission inventory is that formed by diesel engine fuel combustion. Particulates in diesel emissions are very small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. The California Office of Environmental Health Hazard Assessment (OEHHA) reviewed and evaluated the potential for diesel exhaust to affect human

health, and the associated scientific uncertainties (California EPA, ARB, April 1998). Based on the available scientific evidence, a level of diesel PM exposure below which no carcinogenic effects are anticipated has not been identified. The Scientific Review Panel that approved the OEHHA report determined that based on studies to date that 3×10^{-4} $(\mu g/m^3)^{-1}$ is a reasonable estimate of the unit risk for diesel PM. This means that a person exposed to a diesel PM concentration of 1 $\mu g/m^3$ continuously over the course of a lifetime has a 3 per 10,000 chance (or 300 in one million chance) of contracting cancer due to this exposure. Based on an estimated year 2000 statewide average concentration of 1.26 $\mu g/m^3$ for indoor and outdoor ambient air, about 380 excess cancer cases per one million population could be expected if diesel PM concentrations remained the same (ARB, October 2000).

Diesel PM emissions are estimated to be responsible for about 70% of the total ambient air toxics risk. In addition to these general risks, diesel PM can also be responsible for elevated localized or near-source exposures ("hot spots"). Depending on the activity and nearness to receptors, these potential risks can range from small to 1,500 per million or more (ARB, October 2000). Risk characterization scenarios have been conducted by the ARB staff to determine the potential excess cancer risks involved due to the location of individuals near to various sources of diesel engine emissions, ranging from school buses to high volume freeways.

Diesel PM emissions are expected to decline 30% from 2000 to 2020 due to currently adopted on-road standards and fleet turnover as new vehicles with controls replace older vehicles with little or far less effective controls, but such reductions will not be sufficient to fully reduce the existing risk. In addition, ARB staff have prepared a Diesel Risk Reduction Plan (ARB, October 2000) that includes a comprehensive plan to further reduce diesel PM emissions. The ARB is in the process of developing specific regulations to implement the plan. The basic concept is to require all new diesel-fueled vehicles and engines to use state-of-the-art catalyzed diesel particulate filters (DPFs) and very low-sulfur diesel fuel. Also, where technically and economically feasible, the ARB staff recommends that existing vehicles and engines should be retro-fitted to further reduce particulate emissions. For example, the ARB in 2001 adopted new PM and NO_x emission standards to clean up large diesel engines that power big-rig trucks, trash trucks, delivery vans and other large vehicles. The new standard for PM takes effect in 2007 and reduces emissions to 0.01 gram of PM per brake horsepower-hour (g/bhp-hr.), a 90% reduction from the existing standard.

The USEPA is also working to reduce the emissions from diesel engines. The USEPA finalized a new rule in December 2000 for on-road vehicles requiring petroleum refiners to remove all but 15 ppm of sulfur from diesel fuel by mid-2006, and requiring engine makers to reduce particulate matter emissions by almost 90% and NO_x levels by up to 95% for new engines by the model year 2007.

Carbon Monoxide. Carbon monoxide, a colorless, odorless, poisonous gas, is a local pollutant that is found in high concentrations only very near the source. The major source of carbon monoxide is automobile engines. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

c. Current Ambient Air Quality. The Air Quality Monitoring Station at El Rio is the nearest to the City and most representative of air quality in the plan area vicinity. The El Rio monitoring station measures ozone, NO_2, PM_{10}, and $PM_{2.5}$. The closest monitoring station reporting CO is the Goleta-Fairview station in Santa Barbara. There are no CO monitoring stations in Ventura County. Table 4.2-2 lists the ambient air quality data for the El Rio and Goleta-Fairview monitoring stations.

Table 4.2-2
Ambient Air Quality Data Concentrations

Pollutant	Air Pollution Data		
	2005	2006	2007
Ozone, ppm - maximum hourly concentration (ppm)	0.076	0.089	0.089
Number of days of state exceedances (>0.09 ppm)	0	0	0
Number of days of federal exceedances (>0.12 ppm)	0	0	0
Ozone, ppm - maximum 8-hour concentration (ppm)	0.068	0.070	0.072
Number of days of State exceedances (>0.07 ppm)	0	0	1
Number of days of federal exceedances (>0.08 ppm)	0	0	0
Carbon Monoxide, ppm - Worst 8 Hours[a]	0.83	0.80	1.10
Number of days of state 1-hour exceedances (>20.0 ppm)[a]	0	0	0
Number of days of state 8-hour exceedances (>9.0 ppm)[a]	0	0	0
Nitrogen Dioxide, ppm - Worst Hour	0.070	0.050	0.053
Number of days of state exceedances (>0.25 ppm)	0	0	0
Particulate Matter <10 microns, maximum concentration in $\mu g/m^3$ (State/Fed)	54.4/54.0	119.1/119.4	248/245.5
Number of samples of state exceedances (>50 $\mu g/m^3$)	2	4	2
Number of samples of federal exceedances (>150 $\mu g/m^3$)	0	0	1
Particulate Matter <2.5 microns, maximum 24-hour average concentration in $\mu g/m^3$	35.2	29.8	39.9
Estimated number of days of federal 24-hour average exceedances (>65 $\mu g/m^3$)	0	0	0

Source: ARB, Air Quality Data Statistics; available at http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start
a Goleta-Fairview site results.

Ozone concentrations at the El Rio monitoring station exceeded the state standard only once during the 2005-2007 period and federal standards were not exceeded. Measured concentration samples of PM_{10} at El Rio exceeded state standards between 2 to 4 times per year from 2005-2007. Federal exceedances occurred once in the year 2007; 2005 and 2006 did not report any exceedances of the federal standard. Estimates were used due to a lack of samples. Ventura County is in attainment for the federal $PM_{2.5}$ standard. Neither carbon monoxide nor nitrogen dioxide at the El Rio station exceeded federal or state standards. Carbon monoxide concentrations at the Goleta-Fairview monitoring station did not exceed state or federal standards during the 2005-2007 period.

The major sources of ozone precursors in Ventura County are motor vehicles and other mobile equipment, solvent use, pesticide application, the petroleum industry, and electric utilities. The major sources of PM_{10} are road dust, construction, mobile sources, and farming operations. Locally, Santa Ana winds are responsible for entraining dust and occasionally causing elevated PM_{10} levels.

d. Air Quality Management Plan. The Federal Clean Air Act Amendments (CAAA) mandate that states submit and implement a State Implementation Plan (SIP) for areas not meeting air quality standards. The SIP includes pollution control measures to demonstrate how the standards will be met through those measures. The SIP is established by incorporating measures established during the preparation of AQMPs and adopted rules and regulations by each local APCD and AQMD, which are submitted for approval to the ARB and the USEPA. The goal of an AQMP is to reduce pollutant concentrations below the National Ambient Air Quality Standards (NAAQS) through the implementation of air pollutant emissions controls.

The USEPA designated Ventura County a moderate nonattainment area for the 8-hour ozone standard based on Ventura County's ozone levels over the previous three years in 2004. Moderate ozone nonattainment areas are required to obtain the federal 8-hour ozone standard by June 15, 2010. On February 14, 2008, ARB formally requested that the USEPA reclassify Ventura County to a serious 8-hour ozone nonattainment area. This means that Ventura County must meet the federal 8-hour ozone standard by June 15, 2013. VCAPCD has released a Final 2007 AQMP (May 2008), which presents new control measures intended to bring the County into compliance by that date.

The 2007 AQMP also presents the 2003 – 2005 Triennial Assessment and Plan Update required by the California Clean Air Act (CCAA). The goal of the CCAA is to achieve more stringent health-based state air quality standards at the earliest practicable date. Ventura County is designated a severe nonattainment area under the CCAA and must meet many of the most stringent requirements under this act.

While the Final 2007 AQMP contains some additional local control measures, most of the emissions reductions that Ventura County needs to attain the federal 8-hour ozone standard and continued progress to the state ozone standard will come from the ARB's 2007 SIP. This SIP contains comprehensive emission reduction programs that focus on reducing emissions from mobile sources, consumer products, and pesticides to significantly improve air quality. Based on photochemical modeling and the use of the local and state control measures, Ventura County is projected to attain the federal ozone standard by the required 2013 date.

e. Sensitive Receptors. Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are therefore schools and hospitals. Sensitive receptors in the project vicinity include residents of the mobile home park to the west of the project site, seniors living at the assisted living community north of the site across Telegraph Road, and patients of the medical offices located across Wells Road to the east.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. The analysis of the proposed Parklands Specific Plan's air quality impacts follows the guidance and methodologies recommended in the Ventura County air Quality Assessment Guidelines (October 2003). To calculate construction and operational emission estimates, URBEMIS 2007 (v.9.2.2) was used. Default assumptions were used to calculate construction, area, and operational emissions associated with the project, when project specific information was not available.

Projects and programs requiring an analysis of consistency with the AQMP include general plan updates and amendments, specific plans, area plans, large residential developments and large commercial/industrial developments. The consistency analysis evaluates the following questions:

- *Are the population projections used in the plan or project equal to or less than those used in the most recent AQMP for the same area?*
- *Is the rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?*
- *Have all applicable land use and transportation control measures from the AQMP been included in the plan or project to the maximum extent feasible?*

If the answer to all of the above questions is yes, then the proposed project or plan is considered consistent with the AQMP. If the answer to any one of the questions is no, then Specific Plan buildout could potentially delay or preclude attainment of the state ozone standard. This would be considered inconsistent with the AQMP.

To analyze project generated emissions, the VCAPCD's *Air Quality Assessment Guidelines* recommends significance thresholds for projects proposed in Ventura County. Under these guidelines, projects that generate more than 25 lbs per day of ROG or NO_x are considered to individually and cumulatively jeopardize attainment of the federal ozone standard and thus have a significant adverse impact on air quality. The VCAPCD's 25 pounds per day thresholds for ROG and NOx does not apply to construction emissions since such emissions are temporary. For construction impacts, the VCAPCD recommends imposition of mitigation if emissions of either pollutant exceed 25 pounds per day. The VCAPCD also recommends minimizing fugitive dust through various dust control measures.

The VCAPCD has not established numeric thresholds for particulate matter. However, a project that may generate fugitive dust emissions in such quantities as to cause injury,

detriment, nuisance, or annoyance to any considerable number of persons, or which may endanger the comfort, repose, health, or safety of any such person, or which may cause or have a natural tendency to cause injury or damage to business or property is considered to have a significant air quality impact by the VCAPCD. This threshold is particularly applicable to the generation of fugitive dust during construction grading operations. As outlined in the VCAPCD's Guidelines for the Preparation of Air Quality Impact Analyses, the project's impact is considered significant if it would:

- *Generate daily emissions exceeding 25 lbs of reactive organic compounds (ROC/G) or nitrogen oxides (NOx);*
- *Cause an exceedance or making a substantial contribution to an exceedance of an ambient air quality standard;*
- *Directly or indirectly cause the existing population to exceed the population forecasts in the most recently adopted AQMP;*
- *Be inconsistent with the Ventura County AQMP and emit greater than two lbs of ROC/G or NOx per day; or,*
- *Create a human health hazard by exposing sensitive receptors to toxic air emissions.*

Impacts relating to CO concentrations are considered significant if the additional CO from a project creates a "hot spot" where either the California one-hour standard of 20 parts per million (ppm) carbon monoxide or the federal and state eight hour standard of 9.0 ppm is exceeded.

b. Project Impacts and Mitigation Measures.

Impact AQ-1 Project construction would generate temporary air pollutant emissions of ozone precursors ROG and NOx, as well as fugitive dust (PM_{10}). However, implementation of standard dust and emission control conditions would reduce impacts to a less than significant level per the VCAPCD guidelines. Therefore, construction-related air quality impacts would be Class III, *less than significant*.

As discussed in Section 2.0, *Project Description*, buildout of the Parklands Specific Plan would include the development of a 66.7-acres site with predominantly residential uses. Construction activity and associated emissions of ozone precursors (ROG and NOx) and dust (PM_{10}) would occur periodically over the approximate three year construction time frame.

Construction under the specific plan would generate temporary air pollutant emissions due to the use of heavy construction equipment and potential generation of fugitive dust. An analysis was conducted assuming that project grading would be conducted during a period of six months, with cut and fill balanced and 17 active acres at one time would generate an estimated 182 lbs of fugitive dust per day. The modeling analysis assumed default construction equipment. Construction-related emissions are shown in Table 4.2-3.

The CARB has identified diesel exhaust particulate matter as a Toxic Air Contaminant (TAC). Diesel exhaust includes hundreds of different gaseous and particulate components, many of which are toxic. The grading equipment has the potential to expose sensitive populations in the

vicinity to elevated levels of diesel exhaust. As indicated by the URBEMIS modeling in Appendix B, PM_{10} and $PM_{2.5}$ emissions in diesel exhaust would be 2.88 and 2.65 pounds per day, respectively. Additionally, the VCAPCD determines construction impacts as temporary and insignificant and would therefore not contribute to operational emissions. Therefore, potential TACs emissions would be less than significant.

Table 4.2-3
Construction Emissions Estimates (lbs/day)

Phase	ROG	NO_x	PM_{10}
Grading	6.34	49.28	333.81
Building Construction	71.93	39.40	0.47

Source: URBEMIS 2007 v 9.2
Modeling results included in Appendix B.

Fugitive dust generated during grading can be reduced by approximately 46% by watering twice per day (SCAQMD). The VCAPCD does not classify construction impacts as significant because of their temporary nature. Although construction-related impacts are considered less than significant because of their temporary nature, if standard controls are implemented, impacts are less than significant. The following controls are found within Mitigation Measure AQ-3 of the 2005 City of Ventura General Plan FEIR.

In order to reduce impacts associated with ROC emissions (a precursor to ozone) the following measures shall be implemented:

- *Equipment engines should be maintained in good condition and in proper tune, as per manufacturer's specifications.*
- *During the smog season (May through October), the construction period should be lengthened so as to minimize the number of vehicles and equipment operating at the same time. The construction work day will be between the hours of 7 a.m. to 5 p.m.*
- *Construction activities should utilize new technologies to control ozone precursor emissions as they become available and feasible.*

During clearing, grading, earth moving, or excavation operation, excessive fugitive dust emissions shall be controlled by regular watering with reclaimed water, paving construction roads, or other dust preventive measures using the following procedures:

- *All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day and during grading and/or excavation activities.*

- *All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 20 mph averaged over one hour) so as to prevent excessive amounts of dust.*
- *All material transported offsite shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.*
- *Facemasks shall be used by all employees involved in grading or excavation operations during dry periods to reduce inhalation of dust, which may contain the fungus that causes San Joaquin Valley Fever.*
- *The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust.*

After clearing, grading, earth moving, or excavation operations, and during construction activities, fugitive dust emissions shall be controlled using the following procedures:

- *All inactive portions of construction sites shall be seeded and watered until grass cover is grown.*
- *All active portions of construction sites shall be sufficiently watered to prevent excessive amounts of dust.*

At all times, fugitive dust emissions shall be controlled using the following procedures:

- *Construction site vehicle speeds shall be limited to 15-mph.*
- *All areas with vehicle traffic shall be watered periodically.*
- *Use of dust palliatives shall meet the road oil requirements of Ventura County APCD Rule 74.4, Cutback Asphalt.*
- *Streets adjacent to construction sites shall be swept as needed to remove silt, which may have accumulated from construction activities so as to prevent excessive amounts of dust.*

The standard conditions required by the City of Ventura mentioned above reduce construction related air quality impacts to less than significant.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact AQ-2 Operational emissions of ROG and NO_x would exceed VCAPCD thresholds. However, these impacts are mitigable with payment of Transportation Demand Management (TDM) fees. Therefore, the project would have a Class II, *significant but mitigable,* impact to regional air quality.

Worst-case daily emissions of ozone precursors ROG and NO_x were estimated based on the proposed uses of the project, as well as the estimated number of project-generated vehicle trips. Vehicle trips are discussed in detail in Section 4.13, *Transportation & Circulation.*

Vehicular and non-vehicular operational related impacts for 499 residential units, 11.5 acres of parks, 25,000 square feet of commercial and a 6,560 square foot community center were analyzed using URBEMIS 2007 v. 9.2.2 software. Emissions would be generated by both vehicular and non-vehicular sources. Non-vehicular sources, also termed area source emissions, include fuel combustion emissions from solvent use, reactive organic compounds from propellants, such as those contained within aerosol and non-aerosol consumer products, as well as emissions from mobile utility equipment such as lawn and garden equipment. Results of the URBEMIS 2007 v.9.2.2 modeling analysis are shown in Table 4.2-4 (modeling results are contained in Appendix B).

Table 4.2-4
Projected Daily Operational and Area Emissions

Project Component	Emissions (lbs/day)	
	ROG	NO_X
Stationary	33.30	5.64
Mobile	48.36	47.20
Total	81.66	52.84
Adjusted Total *	**66.42**	**49.72**
Threshold	*25*	*25*

Source: URBEMIS 2007 v.9.2.2 (see Appendix B).
** Adjusted total reflects daily emissions based on incorporation of URBEMIS "mitigation" (residential mix of uses, local-serving retail, residential transit service, residential bicycle/pedestrian friendliness, non-residential mix of uses, non-residential local-serving retail, non-residential transit service, and non-residential pedestrian/bicycle friendliness). These are project characteristics, and are already included in the existing environment, as well as enhanced with development under the Specific Plan as proposed.*

Project-related emissions (adjusted total) would exceed the 25 lbs/day VCAPCD significant threshold for ROC by about 41 lbs and exceed the 25 lbs/day NOx threshold by about 25 lbs. Thus, although growth accommodated under the specific plan is within the parameters considered in the 2005 General Plan EIR, impacts would be significant unless mitigation is incorporated.

The City's Air Quality Ordinance (Ordinance 93-37) requires developers of projects that generate emissions exceeding VCAPCD significance thresholds to pay air quality impact fees that are placed in an air quality mitigation fund that is used to offset project emissions through implementation of regional air quality programs. The fee is based on a formula developed by the VCAPCD and included in the District's Air Quality Assessment Guidelines (October 2003). Funds are used to implement such programs as enhanced public transit service, vanpool programs/subsidies, rideshare assistance programs, clean fuel programs, improved pedestrian and bicycle facilities, and park-and-ride facilities.

Mitigation Measures. The following mitigation measures would reduce air emissions associated with operation of the project.

AQ-2 (a) **Energy Efficiency.** The residential and commercial structures proposed for development under the Parklands Specific Plan shall be designed to increase energy efficiency 20% beyond Title 24 requirements to partially offset the operational emissions associated with daily operation of the proposed project following buildout. Proposed energy conservation measures shall be specified in individual building plans and shall be subject to review and approval by the Inspection Services Division.

AQ-2(b) **Air Quality Mitigation Fund.** The applicant shall contribute toward an air Quality Mitigation fund to be used to develop regional programs to offset air pollutant emissions associated with implementation of the Parklands Specific Plan. The total amount that would be contributed to this fund shall be calculated based upon the methodology described in Ordinance 93-37. Fees may be adjusted by the City over time if development totals or emission or cost factors change. The fund shall be used to finance City programs to reduce regional air pollutant emissions. Specific mitigation measures that could be undertaken using the fund include, but are not limited to, enhanced public transit service, vanpool programs/subsidies, rideshare assistance programs, clean fuel programs, improved pedestrian and bicycle facilities, and park-and-ride facilities.

Significance After Mitigation. Implementation of the recommended mitigation measures would reduce ROG and NO_x emissions associated with the operation of the Parklands Specific Plan development. Payment of TDM fees would mitigate the impacts to a less than significant level. Using the current inflation rate and methodologies described in Ordinance 93-37, the TDM fee estimate would be $102,220 for a 2010 completion year (see Appendix B).

Impact AQ-3 **Development under the specific plan would not result in LOS E or F at any study area intersections after mitigation. Therefore, impacts relating to CO hotspots would be Class III, *less than significant*.**

Areas with high vehicle density, such as congested intersections and parking garages, have the potential to create high concentrations of CO, known as CO hotspots. A CO hotspot analysis is required by the Ventura County Air Quality Assessment Guidelines (VCAPCD, 2003) if:

- *Indirect emissions are greater than the applicable ozone project significance thresholds (25 lbs per day NOx and ROG); and*
- *Roadway intersections currently operate at, or are expected to operate at, Levels of Service E, or F.*

As indicated in Table 4.2-4, operational NOx and ROG would exceed the VCAPCD ozone thresholds. However, project-level impacts to intersections in the vicinity would be minimal, as all intersections would operate at LOS C or better. With the addition of cumulative traffic (cumulative plus project scenario), the intersection of Darling Road/Wells Road would operate at LOS F. However, implementation of mitigation measure T-2(a-b) would require payment of

traffic impact fees and intersection improvements to add an eastbound left-turn lane, a second southbound left-turn lane, and a second westbound left-turn lane. With payment of fees and implementation of intersection improvements, the intersection of Darling Road and Wells Road would operate at LOS D, indicating that traffic volumes are not substantial enough to trigger a CO hotspot. Moreover, it should be noted that CO hotspots are most likely to occur where air circulation is hindered by topography or structures, such as at underpasses. The intersection of Darling Road/Wells Road includes two open fields to the east, a golf course, and a residential structure set back from the intersection. The openness of the intersection would allow for continual air flow and work against air stagnation. Therefore, the potential for adverse effects related to CO hotspots is less than significant.

Mitigation Measures. The impact related to CO hotspots is less than significant without mitigation. No mitigation is required.

Significance after Mitigation. The impact would remain less than significant without mitigation.

Impact AQ-4 The proposed project would not generate population growth beyond AQMP forecasts. Impacts relating to AQMP consistency would therefore be Class III, *less than significant*.

A significant impact to air quality would occur if the proposed project would conflict with or obstruct implementation of the Ventura County AQMP. Per the VCAQMD Assessment Guidelines, project consistency with the AQMP can be determined by comparing the actual population growth in the county with the projected growth rates used in the AQMP. Vehicle use, energy consumption, and associated air pollutant emissions are directly related to population growth. The population forecasts upon which the Ventura County AQMP is based are used to estimate future emissions and devise appropriate strategies to attain state and federal air quality standards. When population growth exceeds the forecasts upon which the AQMP is based, emission inventories could be surpassed, which could affect attainment of standards.

The Ventura County AQMP relies on the most recent population estimates developed by the Metropolitan Planning Organization (MPO). SCAG acts as the MPO for Ventura County. According to SCAG's 2008 Regional Transportation Plan (RTP) population forecasts, the projected 2010 population for the City of Ventura is 112,044. For the purposes of this analysis, it is presumed that the construction of 499 residential units would be completed in 2010. Based on the current average household size in the City (2.6 persons/ household), this number of units would generate 1,297 new residents. When added to the current population of 108,261 (California Department of Finance, 2008, this would bring the overall population to 109,558. This is well within the projected citywide population of 112,044 for 2010. Therefore, development of the 499 residences would not in itself generate population exceeding regional forecasts and would be consistent with the AQMP.

Mitigation Measures. None required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. The Ventura County Air Basin is currently a non-attainment area for both the federal and state standards for ozone and the state standard for PM_{10}. Exceedance of air quality standards is the result of past and ongoing urban and rural development that has caused emissions to exceed the air basin's capacity for dispersal and removal of the air pollutants. However, the Ventura County AQMP predicts attainment of state and federal standards through imposition of various control mechanisms and, as discussed under Impact AQ-3, the proposed project is consistent with the AQMP. Consequently, although emissions associated with the vehicle trips generated by the Parklands Specific Plan (during worst-case events) exceed VCAPCD thresholds, this increase in emissions is not expected to delay attainment of air quality standards. Cumulative impacts would therefore be less than significant and the project's contribution to cumulative air quality impacts would not be cumulatively considerable.

d. Global Climate Change. Global climate change (GCC) is a change in the average weather of the earth that is measured by temperature, wind patterns, precipitation, and storms over a long period of time. The baseline by which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed an unprecedented acceleration in the rate of warming during the past 150 years.

GCC is a documented effect, with the degree to which the change is caused by anthropogenic (man-made) sources still under study. The increase in warming has coincided with the global Industrial Revolution, which has seen the widespread reduction of forests to accommodate urban centers and agriculture and the use of fossil fuels, primarily burning of coal, oil, and natural gas for energy. Per the United Nations Intergovernmental Panel on Climate Change (2007), the understanding of anthropogenic warming and cooling influences on climate has led to a very high confidence (90% or greater chance) that the global average net effect of human activities since 1750 has been one of warming. Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations per the IPCC (November 2007). While there is some disagreement by individual scientists[1] with some of the findings of the IPCC, the overwhelming majority of scientists working on climate change agree with the main conclusions, as do the vast majority of major scientific societies and national academies of science. Disagreement within the scientific community is always present for all issues, however, the current state of knowledge is substantially in favor of GCC warming, with eleven of the last twelve years (1995-2006) ranking among the twelve warmest years in the instrumental record of global surface temperature since 1850 (IPCC, 2007). In addition, the majority of scientists agree that anthropogenic sources are a main, if not primary, contributor to the GCC warming.

Greenhouse Gases (GHGs). Gases that trap heat in the atmosphere are often called greenhouse gases (GHG), analogous to the way in which a greenhouse retains heat. Common

[1] *A list of such scientists can be found at http://en.wikipedia.org/wiki/List_of_scientists_opposing_the_mainstream_scientific_assessment_of_global_warming*

GHG include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O_x), fluorinated gases, and ozone. GHG are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6), which are byproducts of certain industrial processes (Cal EPA, 2006b).

The accumulation of GHG in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHG, the earth's surface would be about 34° C cooler (CAT, 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (USEPA, April 2008). CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the last half of the 20th Century. Concentrations of CO_2 in the atmosphere have risen approximately 35% since the Industrial Revolution. Per the IPCC (2007), the global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 parts per million (ppm) to 379 ppm in 2005. The atmospheric concentration of CO_2 in 2005 exceeds by far the natural range over the last 650,000 years (180 to 300 ppm) as determined from ice cores. The annual carbon dioxide concentration growth rate was larger during the last 10 years (1995–2005 average: 1.9 ppm per year), than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year) although there is year-to-year variability in growth rates.

Methane. Methane (CH_4) is an extremely effective absorber of radiation, though its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to some other GHGs. It is approximately 20 times more effective at trapping heat in the atmosphere than CO_2 (global warming potential [GWP] 20x that of CO_2). Over the last two hundred and fifty years, the concentration of CH_4 in the atmosphere increased by 148% (IPCC 2007). Anthropogenic sources of CH_4 include landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (USEPA, April 2008).

Nitrous Oxide. Concentrations of nitrous oxide (N_2O) also began to rise at the beginning of the industrial revolution. N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizers that contain nitrogen. Use of these fertilizers has increased over the last century. Its GWP is 300x that of CO_2.

Flourinated Gases (HFCS, PFCS and SF_6). Flourinated gases, such as hydroflourocarbons (HFCs), perflourocarbons (PFCs) and sulfurhexafluoride (SF_6), are powerful greenhouse gases that are emitted from a variety of industrial processes. Flourinated gases are used as substitutes for

ozone-depleting substances such as chloroflourocarbons (CFCs), hydrochloroflourocarbons (HCFCs), and halons, which have been regulated since the mid-1980s because of their ozone destroying potential and are phased out under the *Montreal Protocol* and Clean Air Act Amendments of 1990. Flourinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but each molecule can have a much greater global warming effect. SF_6 is the most potent greenhouse gas the IPCC has evaluated.

Greenhouse Gas Inventory. Worldwide anthropogenic emissions of GHG were approximately 40,000 million metric tons of carbon dioxide equivalent (CDE[2]), including ongoing emissions from industrial and agricultural sources, but excluding emissions from land use changes (ie: deforestation, biomass decay) (IPCC, 2007). CO_2 emissions from fossil fuel use accounts for 56.6% of the total emissions of 49,000 million metric tons CDE (includes land use changes) and all CO_2 emissions are 76.7% of the total. Methane emissions account for 14.3% and N_2O emissions for 7.9% (IPCC, 2007).

Total U.S. greenhouse gas emissions in 2006 were 7,054 million metric tons CDE (USEPA, April 2008), or about 14% of total GHG emissions. Overall, total U.S. emissions have risen by 14.7 percent from 1990 to 2006, while emissions fell from 2005 to 2006, decreasing by 1.1% (75.7 MMT CDE). The following factors were primary contributors to this decrease: (1) compared to 2005, 2006 had warmer winter conditions, which decreased consumption of heating fuels, as well as cooler summer conditions, which reduced demand for electricity, (2) restraint on fuel consumption caused by rising fuel prices, primarily in the transportation sector and (3) increased use of natural gas and renewables in the electric power sector.

The primary GHG emitted by human activities in the United States was CO_2, representing approximately 84.8% of total GHG emissions (USEPA, April 2008). The largest source of CO_2, and of overall greenhouse gas emissions, was fossil fuel combustion. CH_4 emissions, which have declined from 1990 levels, resulted primarily from enteric fermentation associated with domestic livestock, decomposition of wastes in landfills, and natural gas systems. Agricultural soil management and mobile source fossil fuel combustion were the major sources of N_2O emissions. The emissions of substitutes for ozone depleting substances and emissions of HFC-23 during the production of HCFC-22 were the primary contributors to aggregate HFC emissions. Electrical transmission and distribution systems accounted for most SF_6 emissions, while PFC emissions resulted from semiconductor manufacturing and as a by-product of primary aluminum production.

The residential and commercial end-use sectors accounted for 20 and 18 percent, respectively, of CO_2 emissions from fossil fuel combustion in 2006 (USEPA, April 2008). Both sectors relied heavily on electricity for meeting energy demands, with 72 and 79 percent, respectively, of their emissions attributable to electricity consumption for lighting, heating, cooling, and operating appliances. The remaining emissions were due to the consumption of natural gas and petroleum for heating and cooking.

California is a substantial contributor of global GHGs as it is the second largest contributor in the United States and the sixteenth largest in the world (AEP, 2007). Based upon the 2004 GHG

[2] *Carbon dioxide equivalent (CDE or CO_2E) is a quantity that describes, for a given mixture and amount of GHGs, the amount of CO_2 (usually in metric tons; million metric tons [megatonne] = $MMTCO_2E$ = terragram [Tg] CO_2 Eq; 1,000 MMT = gigatonne) that would have the same global warming potential (GWP) when measured over a specified timescale (generally, 100 years).*

inventory data (the latest year available) compiled by the California Energy Commission (CEC, December 2006), California produced 492 MMT CDE (7% of US total). The major source of GHG in California is transportation, contributing 41% of the state's total GHG emissions. Electricity generation is the second largest source, contributing 22% of the state's GHG emissions (CEC, December 2006). Most, 81%, of California's 2004 GHG emissions (in terms of CDE) were carbon dioxide produced from fossil fuel combustion, with 2.8% from other sources of CO_2, 5.7% from methane, and 6.8% from nitrous oxide (CEC, December 2006). California emissions are due in part to its large size and large population. By contrast, California in 2001 had the fourth lowest CO_2 emissions per capita from fossil fuel combustion in the country, due to the success of its energy-efficiency and renewable energy programs and commitments that have lowered the state's GHG emissions rate of growth by more than half of what it would have been otherwise (CEC, December 2006). Another factor that has reduced California's fuel use and GHG emissions is its mild climate compared to that of many other states.

Effects of Global Climate Change. GCC has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming could be taking place, including substantial ice loss in the Arctic (IPCC, 2007).

According to ARB, some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (ARB 2006c, 2007c). Below is a summary of some of the potential effects reported by an array of studies that could be experienced in California as a result of global warming and climate change:

Air Quality. Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CEC, February 2006).

Water Supply. Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, "Considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change." (Climate Change and California Water Resources). For example, some studies identify little change in total annual precipitation in projections for California (California Climate Change Center, 2006). Other studies show significantly more precipitation (Climate Change and California Water Resources [(DWR 2006)]). Even assuming that climate change leads to long-term increases in precipitation,

analysis of the impact of climate change is further complicated by the fact that no studies have identified or quantified the runoff impacts such an increase in precipitation would have in particular watersheds (California Climate Change Center, 2006)). Also, little is known about how groundwater recharge and water quality will be affected (Id.). Higher rainfall could lead to greater groundwater recharge, although reductions in spring runoff and higher evapotranspiration could reduce the amount of water available for recharge (Ibid.).

The California Department of Water Resources (DWR 2006) report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta concludes that "[c]climate change will likely have a significant effect on California's future water resources . . . [and] future water demand." It also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain" (DWR, 2006).

This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood (DWR, 2006). DWR adds that "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky 2003; DWR 2005; Cayan 2006, Cayan, D., et al, 2006).

Hydrology. As discussed above, climate changes could potentially affect: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of sea water as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a $30 billion agricultural industry that produces half the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise as discussed previously: 1.0-4.5°F (0.6-2.5°C) in the next fifty years, and 2.2-10°F (1.4-5.8°C) in the next century, with significant regional variation (EPA 2000). Soil moisture is likely to decline in many regions, and intense rainstorms

are likely to become more frequent. Sea level could rise as much as two feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage (Parmesan, C. and H. Galbraith 2004.)

Regulatory Setting.

International and Federal. The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since is was signed on March 21, 1994. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008–2012. It should be noted that although the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States has not bound itself to the Protocol's commitments (UNFCCC, 2007)

The United States is currently using a voluntary and incentive-based approach toward emissions reductions in lieu of the Kyoto Protocol's mandatory framework. The Climate Change Technology Program (CCTP) is a multi-agency research and development coordination effort (which is led by the Secretaries of Energy and Commerce) that is charged with carrying out the President's National Climate Change Technology Initiative (CCTP, December 2007; http://www.epa.gov/climatechange/policy/cctp.html).

To date, the USEPA has not regulated GHGs under the Clean Air Act, however, the U.S. Supreme Court in *Massachusetts v. EPA* (April 2, 2007) held that the USEPA can, and should, consider regulating motor-vehicle GHG emissions. The USEPA has not yet promulgated federal regulations limiting GHG emissions. The USEPA in December 2007 also denied California's request for a waiver to directly limit GHG tailpipe emissions, which prompted a suit by California in January 2008 to overturn that decision.

California Regulations. Assembly Bill (AB) 1493, requiring the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State was signed into law in September 2002 by Governor Gray Davis. Governor Schwarzenegger issued Executive Order S-3-05 in 2005 that established statewide GHG emissions reduction targets. S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent of 1990 levels (CalEPA 2006a).

Governor Schwarzenegger signed AB 32, the "California Global Warming Solutions Act of 2006," into law in the fall of 2006. AB 32 requires the California Air Resources Board (ARB) to adopt regulations by January 1, 2008 to require reporting and verification of statewide GHG emissions. ARB is to produce a plan by January 1, 2009, to indicate how emission reductions will be achieved from significant GHG sources via regulations, market mechanisms, and other actions. In addition, this law requires ARB to adopt regulations by January 1, 2010, to implement the early action GHG emission reduction measures that can be implemented before the adoption of those recommended

by the 2009 plan. The bill requires achievement by 2020 of a statewide GHG emissions limit equivalent to 1990 emissions (essentially a 25% reduction below 2005 emission levels; same requirement as under S-3-05), and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions.

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an important environmental issue that requires analysis under CEQA. This bill directs the California Office of Planning and Research to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, by July 1, 2009. The Resources Agency is required to certify or adopt those guidelines by January 1, 2010.

Executive Order S-01-07 was enacted by Governor Schwarzenegger on January 18, 2007. The order mandates that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In addition, a Low Carbon Fuel Standard ("LCFS") for transportation fuels is to be established for California.

In response EO S-3-05, the CalEPA created the Climate Action Team (CAT), which, in March 2006, published the Climate Action Team Report (the "2006 CAT Report"). The 2006 CAT Report identifies a recommended list of strategies that the State could pursue to reduce climate change greenhouse gas emissions. These are strategies that could be implemented by various State agencies to ensure that the Governor's targets are met and can be met with existing authority of the State agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, landfill methane capture, etc.

The ARB in response to the requirements of AB-32 produced a list of 37 early actions for reducing GHG emissions in June 2007. ARB expanded this list in October 2007 to 44 measures that have the potential to reduce GHG emissions by at least 42 million metric tons of CO_2 emissions by 2020, representing about 25% of the estimated reductions needed by 2020 (ARB, October 2007). ARB staff is working on 1990 and 2020 GHG emission inventories in order to refine the projected reductions needed by 2020. After completing a comprehensive review and update process, the ARB has approved a 1990 statewide GHG level and 2020 limit of 427 MMT CDE.

For more information on the Assembly Bills and Executive Orders identified above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and http://www.arb.ca.gov/cc/cc.htm.

Local Regulations and CEQA Requirements. GHG emissions contributing to global climate change have only recently been addressed in CEQA documents, such that CEQA and case law do not provide guidance relative to their assessment. Quantitative significance thresholds for this topic have not been adopted by the State of California, or any particular air pollution control district, including the VCAPCD. The Office of Planning and Research (OPR) is directed under Senate Bill 97, to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions through CEQA by July 1, 2009. Those guidelines may recommend thresholds, but no adopted thresholds are available at this time. In the interim, the OPR has recently completed a Technical Advisory

(June 2008) for addressing climate change in CEQA documents to guide the structure of climate change analysis.

Climate Change Impact Analysis. The information provided in this section is based on recently established California goals for reducing greenhouse gas (GHG) emissions as well as a project-specific emissions inventory developed for the proposed project. Determining how a proposed project might contribute to climate change, and what the overall effect of an individual project would be based on that contribution is still undergoing debate at this time. As previously discussed, no approved thresholds or methodologies are currently available for determining the significance of a project's potential cumulative contribution to global climate change in CEQA documents. An individual project (unless it is a massive construction project, such as a dam or a new freeway project, or a large fossil-fueled fired power plant) does not generate sufficient GHG emissions to directly influence global climate change; therefore, the issue of global climate change typically involves an analysis of whether a project's contribution towards a cumulative impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. The following is a good faith effort at disclosing the nature of the project's potential effect with regard to GHG emissions, and suggest measures as appropriate to reduce potential GHG emissions.

Methodology. This analysis is based on the methodologies recommended by the California Air Pollution Control Officers Association [CAPCOA] (January 2008) CEQA and Climate Change white paper and the Technological Advisory produced by the OPR, entitled CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review. The OPR Technological Advisory provides the overarching structure of climate change discussions, while the CAPCOA document provides the technological methodologies to assess GHG emissions.

The OPR Technical Advisory is a guidance document developed in cooperation with the Resources Agency, the California Environmental Protection Agency (Cal/EPA), and the California Air Resources Board (ARB). The document recommends an approach for agencies to analyze GHG emissions for projects. It recommends three basic steps: (1) identify and quantify the GHG emissions; (2) assess the significance of the impact on climate change; and (3) if the impact is found to be significant, identify alternatives and/or mitigation measures that will reduce the impact below significance.

CAPCOA conducted an analysis of various approaches and significance thresholds, ranging from a zero threshold (all projects are cumulatively considerable) to a high of 40,000 – 50,000 metric tons CDE per year. For example, assuming a zero threshold and the AB 32 2020 targets, this approach would require all discretionary projects to achieve a 33% reduction from projected "business-as-usual" emissions to be considered less than significant. Another method based on a market capture approach that requires mitigation for greater than 90% of likely future discretionary development would use a quantitative threshold of greater than 900 metric tons CDE/year for most projects, which would generally correspond to residential projects of 50 units, office projects of approximately 35,000 square feet, retail projects of approximately 11,000 square feet, or supermarket space of approximately 6,300 square feet. Another potential threshold of 10,000 metric tons was considered by the Market Advisory Committee for inclusion in a Greenhouse Gas Cap

and Trade System in California. A 10,000 metric ton significance threshold would correspond to the GHG emissions of approximately 550 residential units, 400,000 square feet of office space, 120,000 square feet of retail, and 70,000 square feet of supermarket space (CAPCOA, January 2008). This threshold would capture roughly half of new residential or commercial development (CAPCOA, January 2008). The basic concepts for the various approaches suggested by CAPCOA are used herein to determine whether or not the proposed project's GHG emissions are "cumulatively considerable."

Calculations of carbon dioxide, methane, and nitrous oxide are provided for full disclosure of the magnitude of potential project effects. The analysis focuses on carbon dioxide (CO_2), nitrous oxide (N_2O), and methane (CH_4) as these are those GHG emissions that the project would emit in the largest quantities as compared to other GHGs (such as chlorofluorocarbons [CFCs]). Calculations were based on the methodologies discussed in the CAPCOA white paper (January 2008) and included the use of the California Climate Action Registry General Reporting Protocol (March 2007).

Indirect Emissions. Operational emissions of CO_2 associated with space heating and landscape maintenance were quantified using the California Air Resource Board's URBEMIS 2007 (version 9.2.2) computer model. N_2O and CH_4 emissions were quantified using the California Climate Action Registry General Reporting Protocol (March 2007) indirect emissions factors for electricity use (see Appendix for calculations). The calculations and emission factors contained in the General Reporting Protocol were selected based on technical advice provided to the Registry by the California Energy Commission. This methodology is considered to be reasonable and reliable for use as it has been subjected to peer review by numerous public and private stakeholders and in particular by the California Energy Commission, and is recommended by CAPCOA (January 2008).

Direct Emissions from Mobile Combustion. Emissions of CO_2 from transportation sources were quantified using the California Air Resource Board's URBEMIS 2007 (version 9.2.2) computer model. N_2O and CH_4 emissions were quantified using the California Climate Action Registry General Reporting Protocol (March 2007) direct emissions factors for mobile combustion (see Appendix for calculations). Total daily mileage was calculated in URBEMIS 2007 and extrapolated to derive total annual mileage. Emission rates were based on the vehicle mix output generated by URBEMIS and the emission factors found in the California Climate Action Registry General Reporting Protocol.

It should be noted that one of the limitations to a quantitative analysis is that emission models such as URBEMIS evaluate aggregate emissions and do not demonstrate, with respect to a global impact, how much of these emissions are "new" emissions specifically attributable to the proposed project in question. For most projects, the main contribution of GHG emissions is from motor vehicles and the total vehicle miles traveled (VMT), but the quantity of these emissions appropriately characterized as "new" is uncertain. With respect to a specific plan project, existing traffic is generated by the present uses, traffic to the retail component of the specific plan can be comprised of diverted trips from other retail stores (and depending on location, either result in an increase or decrease in VMT), pass-by trips (where the store is en route to another primary location), or an additional, fully new trip associated with consumer choice to travel to the store in addition to other retail stores. In addition, the traffic associated with the residential portion of the project may be relocated trips from other locales, and consequentially, may result in either higher or lower net VMT. In this instance, it is likely that some of the proposed project-related GHG emissions associated with traffic and energy demand would be truly "new" emissions; but, it is also likely

that some of the emissions represent diversion of emissions from other locations. Thus, although GHG emissions are associated with the project, it is not possible to discern how much diversion is occurring or what fraction of those emissions represent global increases. In the absence of information regarding the different types of trips, the VMT generated by URBEMIS is used as a reasonable and probably conservative estimate.

Estimate of GHG Emissions.

Operational Indirect and Stationary Direct Emissions. Buildout of the Parklands Specific Plan could generate demand for up to 782,417 kilowatt-hours [kWh] of electricity per year (see Table 4.2-5). The generation of electricity through combustion of fossil fuels typically yields carbon dioxide, and to a smaller extent nitrous oxide and methane. As discussed above, annual electricity emission can be calculated using the California Climate Action Registry General Reporting Protocol, which has developed emission factors based on the mix of fossil-fueled generation plants, hydroelectric power generation, nuclear power generation, and alternative energy sources associated with the regional grid. Carbon dioxide emission estimates using the URBEMIS model also take into account emissions from other operational sources such as natural gas use for space heating. Table 4.2-6 shows the estimated operational emissions of GHGs from the proposed Specific Plan.

Table 4.2-5
Estimated Electricity Demand

Type of Use	Units	Electricity Demand Factor	Annual Electricity Demand (kWH/Year)
Commercial/Retail[1]	31,560 sf	15.7 kWH/unit/year [2]	495,492
Residences	499	575 kWH/unit/year [3]	286,925
Total			***782,417***

sf = square feet kWH = kilowatt hour
[1] Commercial/Retail Land Use includes the Community Center due to its similar electricity needs and hours.
[2] Demand factor from Michael Brandman Associates, 2007, Panama Lane Shopping Center EIR, page 7-22
[3] CEC, 2007. California's Residential Electricity Consumption, Prices, And Bills, 1980-2005

Table 4.2-6
Estimated Annual Operational Emissions of GHG

Emission Source	Annual Emissions	
	Emissions	**CDE (metric tons)**
Carbon Dioxide (CO_2)[1]	1359.46 short tons	1,233.2
Methane (CH_4)	0.0024 metric tons	0.0 [2]
Nitrous Oxide (N_20)	0.0013 metric tons	0.4
Project Total		**1,233.6**

Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.0, April 2008, page 30-35.
[1] Includes indirect energy from electrical and area source emissions from natural gas and heating. See Appendix for GHG emission factor assumptions.
[2] Total is minimal amounts, less than 0.1 metric tons.

Transportation Emissions. Mobile source GHG emissions were estimated using the average daily trips estimate generated by the project traffic report and the total vehicle miles traveled estimated in URBEMIS 2007 (v. 9.2.2). The URBEMIS 2007 model estimates that approximately 41,451 daily VMT are associated with the project. Table 4.2-7 shows the estimated mobile emissions of GHGs based on this VMT estimate.

Table 4.2-7
Estimated Annual Mobile Emissions of Greenhouse Gases

	Annual Emissions	
Emission Source	**Emissions**	**CDE (metric tons)**
Carbon Dioxide (CO_2)[1]	6,932.5 tons (short, US)	6,289
Methane (CH_4)[2]	6.3 metric tons	132
Nitrous Oxide (N_2O)[2]	7.0 metric tons	2,161
	Project Total	**8,582**

Source:
[1] Mobile Emissions from URBEMIS 2007 (version 9.2.2).
[2] California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.0, April 2008, page 30-35.
See Appendix B for GHG emission factor assumptions.

Combined Stationary and Mobile Source Emissions. Table 4.2-8 combines the operational and mobile GHG emissions associated with the proposed project, which total approximately 9,805.6 metric tons per year in carbon dioxide equivalency units. This total represents roughly 0.0020% of California's total 2004 emissions of 492 million metric tons. These emission projections indicate the majority of the project GHG emissions are associated with vehicular travel (90%). Please note that as discussed above, that the mobile emissions are in part a redirection of existing travel to other locations, and so already a part of the total California GHG emissions.

Table 4.2-8
Combined Annual Emissions of Greenhouse Gases

Emission Source	**CDE (metric tons/year)**
Operational	1,224
Mobile	8,582
Project Total	**9,806**

Sources: Operational Emissions from URBEMIS 2007 (version 9.2.2).; California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.0, April 2008.

GHG Cumulative Significance. CAPCOA (January 2008) provided several approaches to consider potential cumulative significance of projects with respect to GHGs. A zero threshold approach can be considered based on the concept that climate change is a global phenomenon in that all GHG emissions generated throughout the earth contribute to it, and not controlling small

source emissions would potentially neglect a major portion of the GHG inventory. However, the *CEQA Guidelines* also recognize that there may be a point where a project's contribution, although above zero, would not be a considerable contribution to the cumulative impact. Therefore, a threshold of greater than zero is considered more appropriate in this air quality analysis. Based on the information provided in the CAPCOA white paper for the various emissions scenario thresholds considered, the proposed project's contribution of about 9,806 metric tons CDE/year would be considered a considerable contribution for 2 out of 5 of the scenario thresholds under the non-zero threshold approach. The thresholds it exceeds would be Threshold 2.2, which indicates a 900 tons/year level and the other (Threshold 2.5) does not include a numerical threshold but applies to residential development above 50 units and 50,000 square feet. The project does not exceed the other three non-zero thresholds (ranging from 10,000 – 40,000 megatons CDE or greater). Based on this analysis, the development facilitated by the proposed Specific Plan would not exceed three out of the five potential thresholds, therefore, the project would not be considered cumulatively considerable.

The Climate Action Team, established by Executive Order S-3-05 has recommended strategies to reduce GHG emissions at a statewide level to meet the goals of the Executive Order (Table 5-5; http://www.climatechange.ca.gov/ climate_action_team/index.html). Several of these actions are already required by California regulations. Project consistency with the Climate Action Team Strategies are discussed in Table 4.2-9.

Table 4.2-9
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	Project Consistency
California Air Resources Board	
Vehicle Climate Change Standards AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.	**Consistent** The vehicles that travel to and from the project site on public roadways would be in compliance with ARB vehicle standards that are in effect at the time of vehicle purchase.
Diesel Anti-Idling The ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling in July 2004.	**Consistent** Current State law restricts diesel truck idling to five minutes or less. Diesel trucks operating from, and making deliveries to, the project site are subject to this state-wide law. Construction vehicles are also subject to this regulation.
Hydrofluorocarbon Reduction 1) Ban retail sale of HFC in small cans. 2) Require that only low GWP refrigerants be used in new vehicular systems. 3) Adopt specifications for new commercial refrigeration. 4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs. 5) Enforce federal ban on releasing HFCs.	**Consistent** This strategy applies to consumer products. All applicable products would comply with the regulations that are in effect at the time of manufacture.
Alternative Fuels: Biodiesel Blends	**Consistent**

Table 4.2-9
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	Project Consistency
ARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.	The diesel vehicles that travel to and from the project site on public roadways could utilize this fuel once it is commercially available.
Alternative Fuels: Ethanol Increased use of E-85 fuel.	**Consistent** Employees and residents of the project site could choose to purchase flex-fuel vehicles and utilize this fuel once it is commercially available in the region and local vicinity.
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy duty vehicles and an education program for the heavy duty vehicle sector.	**Consistent** The heavy-duty vehicles that travel to and from the project site on public roadways would be subject to all applicable ARB efficiency standards that are in effect at the time of vehicle manufacture.
Achieve 50% Statewide Recycling Goal Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48% has been achieved on a statewide basis. Therefore, a 2% additional reduction is needed.	**Consistent** The City of Ventura is required to achieve the 50% Statewide Recycling Goal. It is anticipated that the project would similarly divert at least 50 percent of its solid waste after the recyclable content is diverted. The project will be conditioned to provide recycling bins to promote recycling of paper, metal, glass, and other recyclable material.
Zero Waste – High Recycling Efforts to exceed the 50 percent goal would allow for additional reductions in climate change emissions.	**Consistent** It is anticipated that the project would similarly divert at least 50 percent of its solid waste after the recyclable content is diverted. The project will be conditioned to provide recycling bins to promote recycling for both residential and commercial/retail components. The project would also be subject to all applicable State and City requirements for solid waste reduction as they change in the future.
Department of Forestry	
Urban Forestry A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	**Consistent** The landscaping proposed for the project would include a natural preserve of Brown Barranca in addition to a street tree plan. The Specific Plan proposes tree types for each street included in the Specific Plan.
Department of Water Resources	
Water Use Efficiency Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	**Consistent** The project proposes to provide drought-tolerant, low water consumption plant varieties throughout the property.

Table 4.2-9
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	Project Consistency
Energy Commission (CEC)	
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	**Consistent** The project will need to comply with the standards of Title 24 that are in effect at the time of development. In addition if adopted, Mitigation Measure AQ-1 requires an increase in efficiency to 20% more than Title 24.
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	**Consistent** Under State law, appliances that are purchased for the project - both pre- and post-development – would be consistent with energy efficiency standards that are in effect at the time of manufacture.
Fuel-Efficient Replacement Tires & Inflation Programs State legislation established a statewide program to encourage the production and use of more efficient tires.	**Consistent** Residents of the Project site could purchase tires for their vehicles that comply with state programs for increased fuel efficiency.
Municipal Utility Energy Efficiency Programs/Demand Response Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	*Not applicable*, but the project would not preclude the implementation of this strategy by municipal utility providers.
Municipal Utility Renewable Portfolio Standard California's Renewable Portfolio Standard (RPS), established in 2002, requires that all load serving entities achieve a goal of 20 percent of retail electricity sales from renewable energy sources by 2017, within certain cost constraints.	*Not applicable*, but the project would not preclude the implementation of this strategy by Southern California Edison.
Municipal Utility Combined Heat and Power Cost effective reduction from fossil fuel consumption in the commercial and industrial sector through the application of on-site power production to meet both heat and electricity loads.	*Not applicable* since this strategy addresses incentives that could be provided by utility providers such as Southern California Edison and The Gas Company. In addition, the commercial facility at the site are too small for efficient combined heat and power production.
Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	**Consistent** Residents of the project site could purchase alternative fuel vehicles and utilize these fuels once they are commercially available in the region and local vicinity.
Business, Transportation and Housing	
Measures to Improve Transportation Energy Efficiency Builds on current efforts to provide a framework for expanded and new initiatives including incentives, tools and information	**Consistent** The proposed project is an urban infill development; the proposed land uses would have readily available access to SR 126, which

Table 4.2-9
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	Project Consistency
that advance cleaner transportation and reduce climate change emissions.	could reduce the lengths of regional vehicle trips. Additionally, the project promotes walkability and bicycling as a mode of transportation and participates in the CIDS improvements of the Wells Saticoy Community.
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services. The Governor is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through state investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity and a quality environment. Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include: promoting jobs/housing proximity and transit-oriented development; encouraging high density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	**Consistent** The Specific Plan locates new residences in a relatively close proximity to commercial areas within the Wells Saticoy Community. The project also proposes a mix of residential and retail uses including some live-work opportunities that would cut down on vehicular trips. The project site would have readily available access to SR 126, thereby improving the efficiency of goods movement.
State and Consumer Services Agency	
Green Buildings Initiative Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. The Executive Order and related action plan spell out specific actions state agencies are to take with state-owned and -leased buildings. The order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20 percent target.	**Consistent** As discussed previously, the project is required to be constructed in compliance with the standards of Title 24 that are in effect at the time of development. The 2005 Title 24 standards are approximately 8.5 percent more efficient than those of the 2001 standards. In addition if adopted, Mitigation Measure AQ-1 requires an increase in efficiency to 20% more than Title 24.
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33 percent renewable in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33 percent goal.	*Not applicable*, but the project would not preclude the implementation of this strategy by energy providers.

Table 4.2-9
Project Consistency with Applicable Climate Action Team Greenhouse Gas Emission Reduction Strategies

Strategy	Project Consistency
California Solar Initiative The solar initiative includes installation of 1 million solar roofs or an equivalent 3,000 MW by 2017 on homes and businesses, increased use of solar thermal systems to offset the increasing demand for natural gas, use of advanced metering in solar applications, and creation of a funding source that can provide rebates over 10 years through a declining incentive schedule.	**Consistent** Although solar roofs are not proposed as part of the project, it is recommended that the Developer consider the installation and use of solar equipment.

The proposed Specific Plan would be consistent with the measures indicated in the 2006 CAT Report. Consistency with this report illustrates that the project would coincide with the State's greenhouse legislations and would not contribute to its inability to meet said goals.

It is noted that the proposed specific plan would be required to increase energy efficiency by 20% beyond Title 24 requirements pursuant to Mitigation Measure AQ-2(a). In addition, the proposed project includes potential for live/work development and mixed use development in the Urban General Corridor, which would contribute to reductions in VMT, thereby further reducing GHG emissions. Moreover, improvements to Telegraph Road and Wells Road to reduce future vehicle lanes from four to two and increase pedestrian and bike connectivity through development of a 24-foot wide parkway along the north side of Telegraph Road, landscaped medians on both Telegraph Road and Wells Road, Class I bike path extension through the plan area and Class II bike lanes along Wells Road and Telegraph Road will contribute towards reducing VMT by creating an environment that facilitates walking and bicycling. These improvements are not quantifiable, but could have beneficial effects on surrounding existing residential and commercial development if people are more likely to walk or bike to nearby commercial uses along Wells Road rather than driving. Lastly, the applicant's payment of fees to a transportation demand management fund per mitigation measure AQ-2(b) would fund areawide improvements to reduce VMT such as enhanced public transit service, vanpool programs/subsidies, rideshare assistance programs, clean fuel programs, improved pedestrian and bicycle facilities, and park-and-ride facilities and/or rideshare programs. With implementation of these features and mitigation measures, the project's effects on global climate change are further reduced. Therefore the proposed specific plan does not have cumulatively considerable effects in regards to GHG emissions.

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