

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

**4.14 AIR QUALITY**

Section 4.14

**4.14.1 Introduction**

Air Quality

This section evaluates the potential impacts on air quality resulting from implementation of the proposed project, including the potential for the project to conflict with or obstruct implementation of the applicable air quality plan, to violate an air quality standard or contribute substantially to an existing or projected air quality violation, to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment, to expose sensitive receptors to substantial pollutant concentrations, or to create objectionable odors affecting a substantial number of people.

Information in this section is based on the Santa Barbara County Air Pollution Control District (SBCAPCD) *Environmental Review Guidelines for the Santa Barbara County Air Pollution Control District* and the *2001 Clean Air Plan* (CAP), as revised; the Traffic Impact Study (included as Appendix B). Full bibliographic entries for all reference materials appear in Section 4.14.5 (References) of this section

Five comment letters related to Air Quality were received in response to the Notice of Preparation (NOP) circulated for the proposed project, including a letter from Santa Barbara County Air Pollution Control District (SBCAPCD). The NOP, comments on the NOP, and a summary of issues raised during scoping are included in Appendix A. The SBCAPCD's letter requests that air quality sections of the EIR follow the SBCAPCD guidelines document scope and content of air quality sections in environmental documents and that the latest version of the URBEMIS 2002 model be used to estimate air emissions. Cumulative impacts and consistency with the 2001 Clean Air Plan should also be included. Finally, the letter states that each building involving demolition or renovation is required to complete the "Asbestos Demolition/Renovation Notification" form.

Additional written comments on the NOP and at the Public Scoping meeting included suggestions that the EIR address: (1) reactive organic gas (ROG) and nitrogen oxides (NOx) from vehicles; (2) air quality impacts in the area of the Ellwood Marine Terminal; (3) the potential hazard created by any break in the oil tanks and the release of oil into and air; (4) barbeques as long-term potential impacts from stationary sources; and (5) the hazard to Isla Vista Elementary School and Devereux School from air emissions.

**4.14.2 Existing Conditions**

**4.14.2.1 Climate and Atmospheric Conditions**

The Goleta area climate is characterized by relatively low rainfall, with warm summers and mild winters. Annual precipitation averages 16 inches, with approximately 95 percent of that falling between November and April (National Oceanic and Atmospheric Administration, 1989). Average monthly temperatures range from a high of 75 degrees Fahrenheit (°F) in September to a low of 40°F in December.

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

*Section 4.14*

*Air Quality*

Santa Barbara County's air quality is influenced by both local topography and meteorological conditions. Surface and upper-level wind flow varies both seasonally and geographically in the County, and inversion conditions common to the area can affect the vertical mixing and dispersion of pollutants. The prevailing wind flow patterns in the county are not necessarily those that cause high smog levels. In fact, high smog levels are often associated with unusual wind flow patterns. Meteorological and topographical influences that are important to air quality in the county are as follows:

- Semi-permanent high pressure that lies off the Pacific Coast leads to limited rainfall (around 18 inches per year); warm, dry summers; and relatively damp winters. Maximum summer temperatures average about 70°F near the coast and in the high 80s to low 90s inland. During winter, average minimum temperatures range from the 40s along the coast to the 30s inland. Additionally, cool, humid, marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in the late spring and early summer. The fog and low clouds can persist for several days until broken up by a change in the weather pattern.
- Santa Ana winds are northeasterly winds that occur primarily during fall and winter, but occasionally in spring. These are warm, dry winds blown from the high inland desert that descend down the slopes of a mountain range. Wind speeds associated with Santa Ana's winds are generally 15 to 20 miles per hour, though they can sometimes reach speeds in excess of 60 mph. During Santa Ana conditions, pollutants emitted in Santa Barbara County, Ventura County, and the South Coast Air Basin (the Los Angeles region) are moved out to sea. These pollutants can then be moved back onshore into Santa Barbara County in what is called a "post-Santa Ana condition." The effects of the post-Santa Ana condition can be experienced throughout the county. Not all post-Santa Ana conditions, however, lead to high pollutant concentrations in the county.
- Upper-level winds (measured at Vandenberg Air Force Base once each morning and afternoon) are generally from the north or northwest throughout the year, but occurrences of southerly and easterly winds do occur in winter, especially during the morning. Upper-level winds from the south and east are infrequent during the summer. When they do occur, they are usually associated with periods of high ozone levels. As with the surface winds, upper level winds can move pollutants that originate in other areas into the county.
- Surface temperature inversions (0 to 500 feet above ground surface) are most frequent during the winter, and subsidence inversions (1000 to 2000 feet) are most frequent during the summer. Inversions are an increase in temperature with height and are directly related to the stability of the atmosphere. Inversions act as a cap to the pollutants that are emitted below or within them, and ozone concentrations are often higher directly below the base of elevated inversions than they are at the earth's surface. For this reason, elevated monitoring sites will occasionally record higher ozone concentrations than sites at lower elevations. Generally, the lower the inversion base height and the greater the rate of temperature increase from the base to the top, the more pronounced effect the inversion will have on

## FACULTY AND FAMILY STUDENT HOUSING, OPEN SPACE PLAN, AND LRDP AMENDMENT EIR

inhibiting vertical dispersion. The subsidence inversion is very common during summer along the California coast, and is one of the principal causes of air stagnation.

Section 4.14

Air Quality

- Poor air quality is usually associated with “air stagnation” (high stability/restricted air movement). Therefore, it is reasonable to expect a higher frequency of pollution effects in the southern portion of the county where light winds are frequently observed, as opposed to the northern part of the county where the prevailing winds are usually strong and persistent.

### 4.14.2.2 Air Quality Background

Air pollutant emissions within Santa Barbara County are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at an identified location and are usually associated with manufacturing and industry. Examples are refineries, boilers, or combustion equipment that produces electricity or generates heat. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products such as barbeque lighter fluid and hair spray. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, racecars, and self-propelled construction equipment. Mobile sources account for the majority of the air pollutant emissions within the air basin. Air pollutants can also be generated by the natural environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health. The national and state standards have been set at levels which concentrations could be generally harmful to human health and welfare, and to protect the most sensitive persons from illness or discomfort with a margin of safety. Applicable standards are identified below in this EIR section. The SBCAPCD is responsible for bringing air quality within the air basin into conformity with the national and state standards.

The air pollutants for which both national and state standards have been promulgated and which are most relevant to air quality planning and regulation in Santa Barbara County include ozone, carbon monoxide (CO), fine particulate matter (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), and lead. These pollutants are referred to as “criteria” pollutants because the U.S. Environmental Protection Agency (U.S. EPA) publishes criteria documents to justify the choice of standards. In addition, toxic air contaminants are of concern in the county. Each of these is briefly described below.

- *Ozone* is a gas that is formed when reactive organic compounds (ROC) and nitrogen oxides (NO<sub>x</sub>)—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. Ozone is classified as a “secondary” pollutant because it is not emitted directly into the atmosphere. The major sources of ozone

## FACULTY AND FAMILY STUDENT HOUSING, OPEN SPACE PLAN, AND LRDP AMENDMENT EIR

### Section 4.14 Air Quality

in Santa Barbara County are motor vehicles, the petroleum industry, and the use of solvents (paint, consumer products, and certain industrial processes). Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable.

- *Carbon Monoxide* is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines – unlike ozone – and motor vehicles operating at slow speeds are the primary source of CO in Santa Barbara County, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- *Respirable Particulate Matter* (PM<sub>10</sub>) and *Fine Particulate Matter* (PM<sub>2.5</sub>) consists of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. In agricultural areas such as portions of Santa Barbara County, agricultural activities are a primary source of localized and regional airborne particulate concentrations.
- *Sulfur dioxide* is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries.
- *Lead* occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the county. The use of leaded gasoline is no longer permitted for on-road motor vehicles so most such combustion emissions are associated with off-road vehicles such as racecars. Other sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.
- *Toxic Air Contaminants* refer to a diverse group of air pollutants that can affect human health, but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional.

#### **4.14.2.3 Existing Regional Air Quality**

Measurements of ambient concentrations of the criteria pollutants are used by the U.S. EPA and the California Air Resources Board (ARB) to assess and classify the air quality of each regional air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and state and federal standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in “attainment” in that area. If the pollutant exceeds the standard, the area is classified as a “nonattainment” area. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated “unclassified.”

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

*Section 4.14  
Air Quality*

Santa Barbara County is currently in attainment or unclassified for all criteria pollutants under national standards. The county is designated as a moderate nonattainment area for ozone and a nonattainment area for PM<sub>10</sub>. The county is in attainment or unclassified for all other criteria pollutants under state standards.

The SBCAPCD has a network of 20 air quality monitoring stations. Prior to July 1998, the Exxon-10 air monitoring station, located at the University West Campus, monitored a full complement of criteria air pollutants except CO. However, that monitoring station was decommissioned, and it was replaced with the “Venoco West Campus” monitoring station, which measures only sulfur dioxide, hydrogen sulfide, and total hydrocarbons.

The next closest stations to the project site are the Goleta-Fairview station and the El Capitan monitoring station. In general, the El Capitan monitoring station data are more representative of the project site due to its location next to the coast in the El Capitan State Park. The Goleta-Fairview station is in a more urban setting. Table 4.14-1 identifies the national and state ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured at the El Capitan monitoring station through the period of 2001 to 2003. Because CO is not monitored at the El Capitan monitoring station, the ambient concentrations of this pollutant monitored at the Goleta-Fairview monitoring station are also identified in Table 4.14-1.

**4.14.2.4 Existing Local Air Quality**

Existing uses surrounding the proposed project site consist of residential, educational, recreational, and open space uses. Air pollutant emissions are generated in the local vicinity by stationary sources, such as space and water heating, landscape maintenance from leaf blowers and lawn mowers, consumer products, and mobile sources, primarily automobile and truck traffic. Motor vehicles and ships are the primary source of pollutants in the local vicinity.

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed national and/or state standards for CO are termed CO “hotspots.” The SBCAPCD considers CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be sensitive receptors to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential uses are considered sensitive because people in residential areas are often at home for extended periods of time, so they could be exposed to pollutants for extended periods. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function.

FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR

Section 4.14

**Table 4.14-1. Summary of Ambient Air Quality in the Project Vicinity**

Air Quality

Air Pollutants Monitored at the El Capitan and Goleta-Fairview Monitoring Stations	2001	Year 2002	2003
<b>Ozone</b>			
Maximum 1-hour concentration measured	0.092 ppm <sup>1</sup>	0.075 ppm	0.082 ppm
Days exceeding national 0.12 ppm 1-hour standard	0	0	0
Days exceeding state 0.09 ppm 1-hour standard	0	0	0
Maximum 8-hour concentration measured	0.078 ppm	0.068 ppm	0.070 ppm
Days exceeding national 0.08 ppm 8-hour standard	0	0	0
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>			
Maximum 24-hour concentration measured	40.3 µg/m <sup>32</sup>	22.6 µg/m <sup>3</sup>	21.1 µg/m <sup>3</sup>
No. of days exceeding national 150 µg/m <sup>3</sup> 24-hour standard	0	0	0
Days exceeding state 50 µg/m <sup>3</sup> 24-hour standard	0	0	0
National annual arithmetic mean (AAM)	19.1 µg/m <sup>3</sup>	19.3 µg/m <sup>3</sup>	16.0 µg/m <sup>3</sup>
Does measured AAM exceed national 50.0 µg/m <sup>3</sup> AAM standard?	No	No	No
State AAM	19.3	20.0	NA <sup>3</sup>
Does measured AAM exceed state 20.0 µg/m <sup>3</sup> AAM standard?	No	No	NA
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>			
Maximum 1-hour concentration measured	0.046 ppm	0.045 ppm	0.042 ppm
Days exceeding state 0.25 ppm 1-hour standard	0	0	0
State AAM	0.008 ppm	0.008 ppm	NA
Does measured AAM exceed national 0.0534 ppm AAM standard?	No	No	NA
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>			
Maximum 24-hour concentration measured	0.002 ppm	0.001 ppm	0.001 ppm
Days exceeding national 0.14 ppm 24-hour standard	0	0	0
Days exceeding state 0.04 ppm 24-hour standard	0	0	0
<b>Carbon Monoxide (CO)</b>			
Maximum 8-hour concentration measured	1.94 ppm	1.13 ppm	0.91 ppm
Number of days exceeding national and state 9.0 ppm 8-hour standard	0	0	0
Notes:			
<sup>1</sup> ppm = parts by volume per million of air.			
<sup>2</sup> µg/m <sup>3</sup> = micrograms per cubic meter.			
<sup>3</sup> Data not available.			

Source: ARB 2004.

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

Section 4.14  
Air Quality

The SBCAPCD recommends the use of CALINE4, a dispersion model for predicting CO concentrations, as the preferred method of estimating pollutant concentrations at sensitive receptors near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak-hour turning volumes to ambient CO air concentrations. For this analysis, localized CO concentrations were calculated based on a simplified CALINE4 screening procedure developed by the Bay Area Air Quality Management District. The simplified model is intended as a screening analysis, which identifies a potential CO hotspot. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case CO concentrations.

Maximum existing 8-hour CO concentrations for the intersections included in the project traffic analysis that have receptors in close proximity to the roadways were evaluated. CO concentrations for the freeway on- and off-ramps evaluated in the Traffic Impact Study were not calculated since there are no potentially sensitive receptors in close proximity. The results of these calculations are presented in Table 4.14-2 for representative receptor locations at 25, 50, and 100 feet from each roadway. These distances were selected because they represent locations where a person may be living or working for more than eight hours at a time. The 8-hour national and state ambient air quality standard is 9.0 ppm.

**Table 4.14-2. Existing Localized Carbon Monoxide Concentrations**

Intersection	8-Hour CO Concentrations in Parts per Million		
	25 Feet	50 Feet	100 Feet
Hollister Avenue/Cannon Green Drive	2.5	2.4	2.2
Hollister Avenue/Pacific Oaks Road	2.5	2.4	2.2
Storke Road/Hollister Avenue	3.6	3.3	2.9
Storke Road/Phelps Road	2.6	2.4	2.3
Storke Road/Whittier Drive	2.6	2.4	2.3
Storke Road/El Colegio Road	2.5	2.4	2.3
Los Carneros Road/Hollister Avenue	2.7	2.5	2.3
Los Carneros Road/Mesa Road	2.6	2.5	2.3
Los Carneros Road/El Colegio Road	3.5	3.1	2.8
Stadium Road/El Colegio Road	2.4	2.3	2.2

Notes: National and state 8-hour ambient air quality standard is 9.0 ppm.

Source: EIP Associates, 2004. Calculation sheets are provided in Appendix C.

As shown in the table, under worst-case conditions, existing CO concentrations near all of the study-area intersections do not exceed national or state ambient air quality standards. Therefore, CO hotspots do not exist near these intersections.

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

*Section 4.14* **4.14.2.5 Existing Project Site Emissions**

*Air Quality*

The proposed project sites are generally vacant and do not support uses or activities that generate emissions on a daily basis. The undeveloped areas are presently used for recreational activities such as cycling and hiking. Some people drive their vehicles to the vicinity and park on local streets in order to access these areas. The use of motor vehicles results in the emission of criteria pollutants.

**4.14.2.6 Existing Odor Issues**

There have been a number of historical odor sources in the relative vicinity of the project area, which are summarily listed below:

- Offshore seeps are naturally occurring sources of mercaptans and hydrocarbons along the University and Ellwood-Mesa coastline. There is nothing practical that can be done to control these odors; however, these odors are not constant and are not overly strong.
- Venoco's Platform Holly has been a source of hydrogen sulfide (H<sub>2</sub>S) emissions in the region. However, according to the SBCAPCD, the frequency of H<sub>2</sub>S releases have been reduced dramatically due to the installation of a gas flare stack and an assortment of other system improvements in 1999-2000.
- Venoco's Ellwood processing plant has been a source of mercaptan releases over the years. However, similar to Platform Holly, these odorous emissions have been greatly reduced, in this case due to the installation of a thermal oxidizer, which replaced a much less efficient control system of carbon canisters.
- Water wells on the Ellwood Mesa properties have been a source of odor from sour water emanating from sewer pipes and water released in a gully. According to some sources, this water was stored and released in order for the current landowners to establish a history of water use on the site. Due to numerous complaints, improved piping was established and water is not longer released in the gully.
- Water wells with sour water in Goleta Valley/Winchester Canyon agricultural properties. This source of odors continues to be an issue on an inconsistent basis, and the SBCAPCD is working with the agricultural community to reduce these sources of odor.
- The marine terminal at Coal Oil Point has historically been a source of three different sources of odors: (1) fugitive emissions/odors from oil storage tanks; (2) odors released during the loading of barges (barges now have odor control systems); and (3) natural seeps in the area.

With the exception of the natural seeps, the SBCAPCD has previously or is currently addressing the sources of all these odors.

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

**4.14.3 Regulatory Framework**

Section 4.14

*Air Quality*

Air quality within Santa Barbara County is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality within the county are discussed below.

**4.14.3.1 Federal**

The U.S. Environmental Protection Agency (U.S. EPA) is responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The U.S. EPA also has jurisdiction over emissions sources outside state waters (outer continental shelf), and establishes various emissions standards for vehicles sold in states other than California.

As part of its enforcement responsibilities, the U.S. EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

**4.14.3.2 State**

The ARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and State air pollution control programs within California. In this capacity, the ARB conducts research, sets California Ambient Air Quality Standards, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The ARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hair spray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

**4.14.3.3 Regional**

The SBCAPCD is the agency principally responsible for comprehensive air pollution control in the county. To that end, the SBCAPCD, a regional agency, works directly with the Santa Barbara County Association of Governments, county transportation commissions, local governments, and cooperates actively with all state and federal government agencies. The SBCAPCD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

The SBCAPCD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a series of clean air plans. The 1998 Clean Air Plan, which was prepared in response to federal and state

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

*Section 4.14* requirements, has been adopted as part of the SIP. The 2001 Clean Air Plan is the most recent  
*Air Quality* plan for the County to be adopted by the SBCAPCD Board. This plan was revised in 2002.

**4.14.4 Project Impacts and Mitigation**

**4.14.4.1 Methodology**

The analysis in this section focuses on the nature and magnitude of the change in the air quality environment due to implementation of the proposed project. Early in the development process, emissions would be generated by construction equipment and activities, heavy trucks, construction worker vehicles, paving operations, and the application of architectural coatings. When completed and operational, emissions would be generated by both stationary and mobile sources from normal day-to-day activities at the project site. Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, and the use of consumer products. Mobile emissions would be generated by the motor vehicles traveling to and from the project site.

The emissions associated with construction and operational activities have been calculated using the URBEMIS 2002 computer model developed for the ARB. Localized CO concentrations have been calculated using the simplified CALINE4 screening procedure developed by the Bay Area Air Quality Management District.

**4.14.4.2 LRDP Policies**

The Coastal Act Element of the LRDP included a range of policies and standards (herein termed LRDP policies) to demonstrate consistency of the LRDP, and projects implemented under the LRDP, with the statutory requirements of Chapter 3 of the Coastal Act (commencing with Section 30200). The following LRDP policies are relevant to Air Quality.

**30253.14.** In order to minimize energy consumption and vehicle miles traveled, the campus shall implement the following measure to manage parking demand and supply:

- a) Implement the Transportation Demand Management Program with the goal of diverting at least 10 percent of all passenger trips to and from campus to alternatives to the single occupant automobile

**30253.15(b).** To improve traffic flow and thereby reduce auto emissions, the Campus shall:

- (a) Make pedestrian, bicycle and road improvements as generally shown in Figure 3 (North and West Campus Housing LRDP Amendment). Exact alignments and intersection geometry may change during the project design phase.

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

**4.14.4.3 Thresholds of Significance**

Section 4.14

Air Quality

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse air quality impact if it would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

As the agency principally responsible for comprehensive air pollution control in Santa Barbara County, the SBCAPCD recommends that projects should be evaluated in terms of air pollution control thresholds established by the SBCAPCD and published in the *Environmental Review Guidelines for the Santa Barbara County Air Pollution Control District*. These thresholds were developed by the SBCAPCD to provide quantifiable levels that projects can be compared to. The campus utilizes the SBCAPCD's thresholds that are recommended at the time that development projects are proposed to assess the significance of quantifiable impacts. The following quantifiable thresholds are currently recommended by the SBCAPCD and are used to determine the significance of air quality impacts associated with the proposed project.

**4.14.4.3.1 Construction Emissions Thresholds.** The SBCAPCD currently recommends that projects with construction-related emissions that exceed any of the following emissions thresholds be considered significant. These thresholds also apply to the contribution of individual development projects to cumulative impacts; they do not apply to the total emissions generated by cumulative development.

- 25 tons per year of ROC or NO<sub>x</sub>

**4.14.4.3.2 Operational Emissions Thresholds.** The SBCAPCD currently recommends that projects with operational emissions that exceed any of the following emissions thresholds be considered significant. These thresholds also apply to the contribution of individual development projects to cumulative impacts; they do not apply to the total emissions generated by cumulative development:

- 240 pounds per day of ROC or NO<sub>x</sub> from all project sources (stationary and mobile)

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

- Section 4.14 • 25 pounds per day of ROC or NO<sub>x</sub> from motor vehicle trips only

Air Quality

**4.14.4.4 Effects Not Found to be Significant**

The Initial Study did not identify any air quality impacts as Effects Not Found to Be Significant; therefore, all potential air quality impacts (identified in Appendix G of the CEQA Guidelines) are discussed in this EIR section.

**4.14.4.5 Impacts and Mitigation Measures**

**Impact 4.14-1.** Implementation of the proposed project would not conflict with or obstruct implementation of the Clean Air Plan for Santa Barbara County. This impact would be *less than significant*.

Amendment of the LRDP to permit residential development on the North Campus, coastal access improvements, and open space management activities, including habitat restoration, would result the emission of additional criteria air pollutants, but would not conflict with or obstruct implementation of the Revised 2001 Clean Air Plan.

Development of 236 units of faculty housing on the North Parcel and 151 units of family student housing on the Storke-Whittier Parcel, would increase the amount of occupied building space on the North Campus, increase vehicular trips in the project vicinity and increase operational emissions due to building mechanical equipment. Implementation of the Open Space Plan would increase recreational use of undeveloped areas and contribute to increases in vehicular traffic.

The Clean Air Plan, discussed previously, was prepared to accommodate growth, to reduce the high levels of pollutants within the areas under the jurisdiction of SBCAPCD, to return clean air to the region, and to minimize the impact on the economy. Projects that are considered to be consistent with the Clean Air Plan would not interfere with attainment because this growth is included in the projections used to formulate the Clean Air Plan. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development of the Clean Air Plan would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SBCAPCD's recommended daily emissions thresholds.

The land use and population projections of each jurisdiction within Santa Barbara County form the basis of the Clean Air Plan. Therefore, projects that are either consistent with the land use and population projections of the local general plan, or do not generate emissions that exceed the amount that could otherwise be generated under the existing land use designation for the project site, would not conflict with or obstruct implementation of the Clean Air Plan. Projects that allow for greater development or population growth than envisioned under the local general plan generate more emissions and, therefore, affect the ability of the region to attain the ambient air quality standards as predicted in the Clean Air Plan.

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

Section 4.14  
Air Quality

Although the proposed project sites are now under the ownership of the University, the 1991 Clean Air Plan was developed when the sites were under the planning authority of the Goleta Community Plan. In that document, a total of 403 residential units were envisioned for the project sites and vicinity. The proposed project involves the development of 387 faculty and student family housing units. This is less than the total envisioned for the area under the Goleta Community Plan and 2001 Clean Air Plan. Therefore, the proposed project would not jeopardize attainment of state and federal ambient air quality standards in Santa Barbara County.

Another measurement tool to determine a project's consistency with the Clean Air Plan is to consider how a project accommodates the expected increase in population or employment. Generally, if a project is planned in a way that results in the minimization of vehicle miles traveled (VMT) both within the project and the community in which it is located, and consequently the minimization of air pollutant emissions, that aspect of the project would be consistent with the goals and policies of the Clean Air Plan.

Per this logic, the housing components of the proposed project represent an opportunity to contribute to the fulfillment of the Clean Air Plan goals. Through providing faculty and student housing on the North Campus, within shuttle bus, walking, or bicycling distance to classes and academic offices and laboratories, the project could result in a reduction of VMT and thus a reduction in mobile source emissions. Because VMT could be reduced as a result of this project, development of the project could result in a better air quality outcome than if the project were not to be implemented. The University encourages accommodation and use of other transit modes, including bicycles, and provides a campus shuttle bus line that will be extended to the proposed faculty housing and family student housing, to further reduce emissions. These campus policies are consistent with the goals of the Clean Air Plan for reducing the emissions associated with new development.

Implementation of the proposed project would not impair implementation of the Clean Air Plan, and this impact would be *less than significant*.

**Impact 4.14-2.** Construction activities would result in the generation of criteria pollutants, which would not contribute substantially to an existing or projected air quality violation. This impact would be *less than significant*.

Amendment of the LRDP to permit residential development on the North Campus, coastal access improvements, and open space management activities, including habitat restoration, would result in construction activities, including grading of building sites and construction of buildings that would result in the generation of criteria pollutants.

Development of 236 units of faculty housing would occur on approximately 23 acres of land on the North Parcel. Development of 151 units of family student housing would occur on approximately 13.5 acres of land (10.7 acres on the Storke-Whittier Parcel and 2.8 acres of existing lawn area adjacent to the West Campus Family Student Housing complex). Coastal access improvements would include improvement of approximately 8.175 miles of existing trails,

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

*Section 4.14* improvement of coastal access (e.g., boardwalks or stairways) at three locations, provision of a  
*Air Quality* new coastal access stairway, development of public parking at up to four locations, and replacement of the portable restroom at Coal Oil Point.

During construction, three basic types of activities would be expected to occur and generate emissions. First, the development sites would be cleared and graded to accommodate building foundations, roads and associated parking. Second, the buildings, roads and parking areas would be constructed and readied for use. Finally, the area around the new buildings would be landscaped. During each stage of development there would be a different mix of equipment operating, and emissions would vary based on the amount of equipment in operation.

Because of the construction time frame and the normal day-to-day variability in construction activities, it is difficult, to precisely quantify the annual emissions associated with the proposed construction activities. Nonetheless, the average annual emissions that are expected to occur have been calculated using the URBEMIS 2002 computer model based on observations of similar residential construction projects at other campuses in the University of California system. The results of this effort are identified in Table 4.14-3. As shown construction-related annual emissions would not exceed SBCAPCD significance thresholds during the construction phases of development.

Although construction-related impacts would not be significant, the SBCAPCD recommends that dust and equipment emissions control measures be implemented to minimize the potential impacts that could occur to the local area and region. Therefore, the following measures will be implemented, to the extent feasible, during construction of project components.

**Table 4.14-3. Estimated Annual Construction Emissions**

Emission Source	Emissions in Tons per Year				
	ROC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>
<b>2005</b>					
Site Grading Emissions	0.27	2.16	2.30	0.00	10.83
Building Construction	1.58	4.83	6.72	0.00	1.28
Total Emissions	1.85	6.99	9.02	0.00	12.11
SBCAPCD Thresholds	25.00	25.00	NT	NT	NT
Significant Impact?	No	No	No	No	No
<b>2006</b>					
Building Construction	6.24	8.04	12.48	0.00	1.92
SBCAPCD Thresholds	25.00	25.00	NT	NT	NT
Significant Impact?	No	No	No	No	No
<b>2007</b>					
Building Construction	3.64	4.69	7.28	0.00	1.12
SBCAPCD Thresholds	25.00	25.00	NT	NT	NT
Significant Impact?	No	No	No	No	No

NT No threshold.

Source: EIP Associates, 2004. Calculation sheets are provided in Appendix C.

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

**MM 4.14-2(a).** The campus shall implement, to the extent feasible, dust control measures throughout the construction phases of new project development:

Section 4.14  
Air Quality

- Active grading sites shall be watered at least twice daily to prevent dust from leaving the site
- Vehicle movement areas shall be watered at least three times daily to prevent dust from leaving the site
- Soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation
- After clearing, grading, earthmoving, or excavation is completed, the areas of exposed soil shall be treated by watering, revegetating, or by spreading soil binders until the area is paved or otherwise developed
- Excavation and grading operations shall be suspended when wind speeds (as instantaneous gusts) exceed 25 mph over a 30-minute period
- Traffic speed limits of 15 mph or less shall be posted and enforced on all unpaved roads
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered or maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code
- Gravel pads shall be located at all vehicle access points to minimize the tracking of dust onto public roads
- Adjacent roadways shall be swept at the end of the construction work day if visible soil is transported into the street by construction activities
- Construction contractors shall designate a monitor for the dust control program. The name, telephone number, and work schedule of such person(s) shall be provided to the campus and SBCAPCD prior to the issuance of grading permits.
- All required dust control measures shall be shown on project grading and building plans

**MM 4.14-2(b).** The campus shall implement, to the extent feasible, measures to reduce the amount of emissions generated by off-road construction equipment throughout the construction phases of new project development:

- Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated “clean” diesel engines) shall be used to wherever feasible
- The engine size of construction equipment shall be the minimum practical size
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

Section 4.14

Air Quality

- Construction equipment shall be maintained in proper tune per the manufacturer's specifications
- Construction equipment operating at the site shall be adjusted with two to four degree engine timing retard or equipped with precombustion chamber engines
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible
- Diesel catalytic converters, diesel oxidation catalysts, and diesel particulate filters as certified and/or verified by the U.S. EPA or ARB shall be installed, if available and cost-effective
- Diesel-powered equipment shall be replaced by electric equipment whenever feasible

Construction of the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and this impact would be *less than significant*.

**Impact 4.14-3.** Operation of the proposed project would generate operational emissions from motor vehicles that exceed SBCAPCD thresholds. This impact would be *significant and unavoidable*.

Amendment of the LRDP to permit residential development on the North Campus, coastal access improvements, and open space management activities, including habitat restoration, would result the emission of additional criteria air pollutants associated with additional vehicle trips and building mechanical equipment.

Development of 236 units of faculty housing on the North Parcel and 151 units of family student housing on the Storke-Whittier Parcel, would increase vehicular trips in the project vicinity and increase operational emissions due to building mechanical equipment. Implementation of the Open Space Plan would increase recreational use of undeveloped areas and contribute to increases in vehicular traffic.

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities at the project sites after occupation. Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, and the use of consumer products. Mobile emissions would be generated by the motor vehicles traveling to and from the project sites.

The analysis of daily operational emissions has been prepared utilizing the URBEMIS 2002 computer model and traffic data from the project traffic report. The results of these calculations are presented in Table 4.14-4.

FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR

**Table 4.14-4. Estimated Daily Operational Emissions**

Section 4.14

Air Quality

Emission Source	Emissions in Tons per Year				
	ROC	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>
<b>All Project Sources</b>					
Water and Space Heating	0.23	2.98	1.27	0.00	0.01
Landscape Maintenance	0.18	0.02	1.40	0.00	0.00
Consumer Products	18.93	--	--	--	--
Motor Vehicles	39.46	41.40	447.86	0.27	49.55
Total Emissions	58.81	44.39	450.52	0.27	49.56
SBCAPCD Thresholds	240.00	240.00	NT	NT	NT
<i>Significant Impact?</i>	No	No	No	No	No
<b>Mobile Sources Only</b>					
Motor Vehicles	39.46	41.40	447.86	0.27	49.55
SBCAPCD Thresholds	25.00	25.00	NT	NT	NT
<i>Significant Impact?</i>	Yes	Yes	No	No	No

NT: No threshold.

Source: EIP Associates, 2004. Calculation sheets are provided in Appendix C.

As shown in Table 4.14-4, the operational emissions from all project sources do not exceed the thresholds of significance recommended by the SBCAPCD. However, the emissions generated by motor vehicles would exceed the thresholds recommended for this source. Most of the vehicle trips that would otherwise be generated by faculty and students commuting to the campus are eliminated or substantially reduced by locating the proposed uses close to the campus. The other trips are primarily associated with shopping, spouses commuting to and from work, driving children to and from school, and other miscellaneous trips. Because the daily

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

campus. The other trips are primarily associated with shopping, spouses commuting to and from work, driving children to and from school, and other miscellaneous trips. Because the daily emissions associated with these trips would exceed the thresholds recommended by the SBCAPCD, this is a significant impact.

Section 4.14  
Air Quality

Although the provision of pedestrian paths and bike lanes and the availability of public transit may encourage many residential occupants to forego use of personal automobiles, the University cannot otherwise restrict the use of private vehicles, and thus no feasible options are available to reduce the potential generation of vehicle trips associated with residents of the proposed project.

All other motor vehicle trips that would occur in association with the proposed project are beyond the control of the University. Besides the existing public transit, shuttle bus, walking, and bicycling services and facilities provided in the vicinity, there are no other feasible measures available that could reduce the emissions from project-generated motor vehicles to below applicable thresholds, and this impact would be *significant and unavoidable*.

**Impact 4.14-4.** Implementation of the proposed project would result in a cumulatively considerable net increase of a criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. This impact would be *significant and unavoidable*.

As identified in the thresholds of significance discussions, construction-related or operational emissions that exceed the thresholds of significance for an individual project would also cause a cumulatively considerable net increase in pollutants in Santa Barbara County. Table 4.14-3 indicates that the construction-related annual emissions would not exceed SBCAPCD significance thresholds during the construction phases of development. Likewise, Table 4.14-4 indicates that the operational emissions from all project sources not exceed the thresholds of significance recommended by the SBCAPCD. However, the emissions generated by motor vehicles would exceed the thresholds recommended for this source. Because the daily emissions associated with these trips would exceed the thresholds recommended by the SBCAPCD, the proposed project would cause a cumulatively considerable net increase in emissions that are the precursors to ozone. This is a significant impact.

As no feasible mitigation measures are available to reduce mobile source emissions below applicable thresholds, this impact would be *significant and unavoidable*.

**Impact 4.14-5.** Implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations. This impact would be *less than significant*.

As was done to assess existing CO concentrations, the simplified CALINE4 screening procedure was used to predict future CO concentrations at the study-area intersections in the vicinity of the project sites in the year 2007 with cumulative development projects. The results of these calculations are provided in Table 4.14-5. As shown, future CO concentrations near these intersections would not exceed the national and state 9.0 ppm 8-hour ambient air quality

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

Section 4.14 Air Quality standard for CO. (It should be noted that the CO concentrations shown in Table 4.14-5 are lower than the existing CO concentrations shown in Table 4.14-2 for some locations due to anticipated state-wide annual improvements in vehicle emission rates projected by the ARB.)

**Table 4.14-5. Future With Project Localized Carbon Monoxide Concentrations**

Intersection	8-Hour CO Concentrations in Parts per Million		
	25 Feet	50 Feet	100 Feet
Hollister Avenue/Cannon Green Drive	2.4	2.3	2.2
Hollister Avenue/Pacific Oaks Road	2.4	2.3	2.2
Storke Road/Hollister Avenue	3.6	3.3	2.9
Storke Road/Phelps Road	2.5	2.4	2.3
Storke Road/Whittier Drive	2.5	2.4	2.2
Storke Road/El Colegio Road	2.4	2.3	2.2
Los Carneros Road/Hollister Avenue	2.6	2.5	2.3
Los Carneros Road/Mesa Road	3.0	2.8	2.5
Los Carneros Road/El Colegio Road	3.4	3.0	2.7
Stadium Road/El Colegio Road	2.4	2.3	2.1

Notes:

National and state 8-hour ambient air quality standard is 9.0 ppm.

Source: EIP Associates, 2004. Calculation sheets are provided in Appendix C.

Implementation of the proposed project would not expose any sensitive receptors located in close proximity to these intersections to substantial pollutant concentrations, and this impact would be *less than significant*.

**Impact 4.14-6.** Implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations of toxic air emissions. This impact would be *less than significant*.

Development of 236 units of faculty housing on the North Parcel and 151 units of family student housing on the Storke-Whittier Parcel, coastal access improvements and management of undeveloped areas, including restoration of degraded habitat would not result in the generation of toxic air contaminants.

Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses within the project site. Only small quantities of common forms of hazardous or toxic substances, such as cleaning agents, which are typically used or stored in conjunction with residential uses, would be present. Most uses of such substances would occur indoors. Based on the common uses expected on the site, any emission would be minor.

Implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations of toxic air contaminants and this impact would be *less than significant*.

## FACULTY AND FAMILY STUDENT HOUSING, OPEN SPACE PLAN, AND LRDP AMENDMENT EIR

**Impact 4.14-7.** Implementation of the proposed project would not create objectionable odors affecting a substantial number of people. This impact would be *less than significant*.

Section 4.14

Air Quality

Development of 236 units of faculty housing would occur on approximately 23 acres of land on the North Parcel. Development of 151 units of family student housing would occur on approximately 13.5 acres of land (10.7 acres on the Storke-Whittier Parcel and 2.8 acres of existing lawn area adjacent to the West Campus Family Student Housing complex). Coastal access improvements would include improvement of approximately 8.175 miles of existing trails, improvement of coastal access (e.g., boardwalks or stairways) at three locations, provision of a new coastal access stairway, development of public parking at up to four locations, and replacement of the portable restroom at Coal Oil Point.

Construction activities occurring in association with the proposed project would generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings. These emissions would occur during daytime hours only and would be isolated to the immediate vicinity of the construction site and activity. As such, they would not affect a substantial number of people.

Potential operational airborne odors could result from cooking activities associated with the new residential buildings. These odors would be similar to existing residential uses in the vicinity and would be confined to the immediate vicinity of the new buildings. The other potential source of odors would be new trash receptacles within the multi-family developments. The receptacles would have lids and be emptied on a regular basis, before potentially substantial odors have a chance to develop.

Implementation of the proposed project would not create objectionable odors affecting a substantial number of people, and this impact would be *less than significant*.

### 4.14.5 Cumulative Impacts

The geographic context for cumulative air quality impacts is the coastal area of Santa Barbara County that is monitored by the Goleta-Fairview and El Capitan monitoring station. The analysis accounts for all anticipated cumulative growth within this geographic area, as represented by full implementation of the local city and county general plans. However, determination of the significance of cumulative air quality impacts is typically according to the methodology employed by the SBCAPCD, as the regional body with authority in this area, and which has taken growth envisioned by countywide general plans into consideration.

With regard to impacts relating to the exposure of sensitive receptors to substantial pollutant concentrations of Co or toxic air emissions, or to objectionable odors, the geographic context for this analysis is the area around the UCSB campus and City of Goleta.

Cumulative development is not expected to result in a significant impact in terms of conflicting with, or obstructing implementation of, the Revised 2001 Clean Air Plan for Santa Barbara County. The Clean Air Plan was prepared to accommodate growth, to reduce the high levels of

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

**Section 4.14**  
**Air Quality**

pollutants within the areas under the jurisdiction of SBCAPCD, to return clean air to the region, and to minimize the impact on the economy. Growth considered to be consistent with the Clean Air Plan would not interfere with attainment because this growth is included in the projections utilized in the formulation of the Clean Air Plan. Consequently, as long as growth in the County is within the projections for growth predicted by the Santa Barbara County Association of Governments, implementation of the Clean Air Plan will not be obstructed by such growth. As growth in the County has not exceeded these projections, this is considered to be a less-than-significant cumulative impact. Additionally, since growth under the proposed project is consistent with growth under the Goleta Community Plan (see Impact 4.14-1), and because of the continuing implementation of campus policies, the impact of the proposed project is not cumulatively considerable.

Because Santa Barbara County is currently designated as a moderate nonattainment area for ozone and a nonattainment area for PM<sub>10</sub> under state ambient air quality standards, cumulative development could violate an air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, this is considered to be a significant cumulative impact. With regard to determining the significance of the proposed project contribution, the SBCAPCD neither recommends quantified analyses of cumulative construction or operational emissions nor provides methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Instead, the *Environmental Review Guidelines for the Santa Barbara County Air Pollution Control District* recommends that a project's potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project specific impacts. Therefore, this EIR assumes that individual development projects that generate construction or operational emissions that exceed the SBCAPCD's recommended thresholds of significance would also generate cumulatively considerable impacts. As discussed previously under Impact 4.14-2, construction-related annual emissions would not exceed SBCAPCD significance thresholds during the construction phases of development. Therefore, the emissions generated by project construction operations would not be cumulatively considerable. Operation of the proposed project would, however, generate emissions from motor vehicles that exceed the SBCAPCD's recommended thresholds. These emissions, discussed under Impact 4.14-3 and 4.14-4 would, therefore, be cumulatively considerable.

Cumulative development is not expected to expose sensitive receptors to substantial pollutant concentrations from CO. Impact 4.14-5 analyzed future exposure of sensitive receptors to substantial pollutant concentrations due to future growth in the project area. Table 4.14-5 shows that projected future localized CO levels, including future off-campus projects, would not exceed the national and state 9.0 ppm 8-hour ambient air quality standard for CO. Consequently, no significant cumulative impact will occur. As Impact 4.14-5 took into account emissions from the proposed project as well as those of off-campus projects, the contribution of the proposed project to this cumulative impact is not considerable. It is also unlikely that projects in addition to those listed as related projects would result in future exposure of sensitive receptors to

**FACULTY AND FAMILY STUDENT HOUSING,  
OPEN SPACE PLAN, AND LRDP AMENDMENT EIR**

substantial pollutant concentrations, because CO levels are projected to be lower in the future due to improvements in vehicle emission rates predicted by the ARB.

*Section 4.14*

*Air Quality*

With regard to operations of future development resulting in the exposure of sensitive receptors to substantial toxic pollutant concentrations, it is not expected that there would be a cumulatively significant impact. Cumulative development expected in the area around the UCSB campus and City of Goleta is expected to mainly consist of residential, commercial, and office uses, which do not result in toxic emissions at levels that can be considered substantial. In addition, regulations and laws relating to toxic air pollutants will also protect sensitive receptors from substantial concentrations. Consequently, it is expected that future operations would result in a less-than-significant cumulative impact. Based on the discussion in Impact 4.14-6, the contribution of the proposed project would not be cumulatively considerable.

Cumulative development would not have a significant impact in terms of the creation of objectionable odors affecting a substantial number of people. Projects projected to be built in the area around the UCSB campus and City of Goleta include residential and commercial developments, and could include restaurants. Odors resulting from the construction of these projects are not likely to affect a substantial number of people, due to the fact that construction activities do not usually emit offensive odors. Other odor impacts resulting from these projects are also not expected to affect a substantial amount of people, as garbage from these projects would be stored in areas and in containers as required by City and County Health Department regulations, and restaurants are typically required to have ventilation systems that avoid substantial adverse odor impacts. Cumulative odor impacts would thus be less than significant. As analyzed in Impact 4.14-7, above, the project's contribution to odor impacts would not be cumulatively considerable.

#### **4.14.6 References**

California Air Resources Board. 2004.

<<http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/start>> Accessed March 4, 2004.

National Oceanic and Atmospheric Administration. 1989. Climatological Data Annual Summary. Asheville, North Carolina.

Santa Barbara County Air Pollution Control District & Santa Barbara County Association of Governments. 2002. Revised 2001 Clean Air Plan.

Santa Barbara County Air Pollution Control District. 2000. Environmental Review Guidelines for the Santa Barbara County Air Pollution Control District.