

3.3 AIR QUALITY

This section presents:

- changes to air quality existing conditions and applicable regulations since adoption of the GP/CLUP and certification of the Final EIR in 2006;
- an analysis of the potential air quality effects of proposed amendments to the existing GP/CLUP; and
- a discussion of potential greenhouse gas issues associated with proposed amendments to the existing GP/CLUP.

3.3.1 Existing Conditions

The climate, meteorology, and air quality within the City are essentially the same as described in the 2006 Final EIR. The City of Goleta planning area lies within the South Central Coast Air Basin (Air Basin), which encompasses all of Ventura, Santa Barbara, and San Luis Obispo Counties. The analysis of existing conditions discusses the environmental setting within the County of Santa Barbara, which also includes the City of Goleta. The majority of the information in this section was obtained from the County of Santa Barbara Air Pollution Control District (SBCAPCD 2008).

3.3.1.1 Climate and Meteorology

The climate in and around the City of Goleta, as well as most of Southern California, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. This high-pressure cell typically produces a Mediterranean climate with warm summers, mild winters, and moderate rainfall. This pattern is periodically interrupted by periods of extremely hot weather brought in by Santa Ana winds. Almost all precipitation occurs between November and April, although during these months, the weather is sunny or partly sunny a majority of the time. Cyclic land and sea breezes are the primary factors affecting the region's mild climate. The daytime winds are normally sea breezes, predominantly from the west, that flow at relatively low velocities.

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 ozone values. In fact, high ozone values are often associated with atypical 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), with warm, dry summers and relatively damp winters. Maximum summer temperatures average about 70 degrees Fahrenheit near the coast and in the high 80s to 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.

In the northern portion of the County (north of the ridgeline of the Santa Ynez Mountains), the sea breeze is typically from the southwest. During summer, these winds are stronger and persist later into the night. At night, the sea breeze weakens and is replaced by light land breezes (from land to sea). The alternation of the land-sea breeze cycle can sometimes produce a “sloshing” effect, where pollutants are swept offshore at night and subsequently carried back onshore during the day. This effect is exacerbated during periods when wind speeds are low.

The terrain around Point Conception, combined with the change in orientation of the coastline from the north-south to east-west, can cause counterclockwise-circulation (eddies) to form east of the Point. These eddies fluctuate temporally and spatially, often leading to highly variable winds along the southern coastal strip. Point Conception also marks the change in the prevailing surface winds from northwesterly to southwesterly.

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 Anas are generally 15 to 20 miles per hour (mph), though they can sometimes reach speeds in excess of 60 mph. During Santa Ana conditions, pollutants emitted in Santa Barbara, 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 Santa Barbara 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. Surface and upper-level winds can move pollutants that originate in other areas into the County.

Surface temperature inversions (0 to 500 feet) 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 inhibiting vertical dispersion. The subsidence inversion is very common during the summer along the California coast, and is one of the principal causes of air stagnation.

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 events 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.

3.3.1.2 Ambient Air Quality Standards

Air quality in the project area and surrounding regional environment, and the relevant Federal and State standards regulating this resource, are discussed in this section.

The State of California and the Federal Government have established air quality standards and emergency episode criteria for various pollutants. Generally, State regulations have stricter standards than those at the Federal level. Air quality standards are set at concentrations that provide a sufficient margin of safety to protect public health and welfare. Episode criteria define air pollution concentrations at the level where short-term exposures may begin to affect the health of a portion of the population particularly susceptible to air pollutants. The health effects are progressively more severe and widespread as pollutant concentrations increase.

Air quality at a given location can be described by the concentration of various pollutants in the atmosphere. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The significance of a pollutant concentration is determined by comparing the concentration to an appropriate Federal and/or State ambient air quality standard.

Federal standards, established by the U.S. Environmental Protection Agency (EPA), are termed the National Ambient Air Quality Standards (NAAQS). The NAAQS are defined as the maximum acceptable concentrations that, depending on the pollutant, may not be equaled or exceeded more than once per year, except the annual standards, which may never be exceeded. The State standards, established by the California Air Resources Board (CARB), are termed the California Ambient Air Quality Standards (CAAQS). The CAAQS are defined as the maximum acceptable pollutant concentrations that, depending on the pollutant, are not to be equaled or exceeded. The National and State ambient air quality standards are presented in Table 3.3-1, Ambient Air Quality Standards.

3.3.1.3 Background Air Quality

The region generally has good air quality, as it attains or is considered in maintenance status for most ambient air quality standards. The SBCAPCD is required to monitor air pollutant levels to assure that Federal and State air quality standards are being met. Air quality measurements indicate that Santa Barbara County is in attainment area for all other Federal and State air quality standards, with the exception for the State ozone and suspended particulate matter (PM_{10}) standards.

Ozone

Ozone has been monitored in the County for more than 25 years. Data collected at monitoring stations, in conjunction with the various air quality studies performed in the region, provide valuable insight into the County's ozone problem.

Ozone is formed in the atmosphere through a series of chemical reactions involving nitrogen oxides (NO_x) and reactive organic gasses (ROGs), and sunlight occurring over a period of several hours. The major source of NO_x in the County is combustion of fossil fuels for transportation, energy, and heat. ROG sources include natural seeps of oil and gas, solvents in paints, consumer and industrial products, mobile sources, natural vegetation, and processes in the petroleum industry. Since ozone is not emitted directly into the atmosphere, but is formed as a result of chemical reactions in the atmosphere, it is classified as a *secondary* pollutant and is

considered *regional* because it occurs over a wider area than that in which the pollutants are emitted. Because ozone-forming photochemical reactions take time, peak ozone levels are often found several miles or more downwind of major source areas. This is particularly true when winds are persistent from one direction.

**TABLE 3.3-1
AMBIENT AIR QUALITY STANDARDS**

Air Pollutant	State Standard	National Standards		Health Effect
		Primary	Secondary	
Ozone (O ₃)	0.09 ppm, 1-hr. avg. 0.07 ppm, 8-hr. avg.	0.08 ppm, 8-hr. avg.	Same as Primary	Aggravation of respiratory and cardiovascular diseases; Impairment of cardiopulmonary function
Carbon Monoxide (CO)	9 ppm, 8-hr. avg. 20 ppm, 1-hr. avg.	9 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.	None	Aggravation of respiratory diseases (asthma, emphysema)
Nitrogen Dioxide (NO ₂)	0.18 ppm, 1-hr. avg. 0.03 ppm AAM	0.0534 ppm, annual avg.	Same as Primary	Aggravation of respiratory illness
Sulfur Dioxide (SO ₂)	0.25 ppm 1-hr. 0.04 ppm, 24-hr. avg.	0.03 ppm, annual avg. 0.14 ppm, 24-hr. avg.	0.50 ppm, 3-hr. avg.	Aggravation of respiratory diseases (asthma, emphysema)
Respirable Particulate Matter (PM ₁₀)	50 µg/m ³ , 24-hr. avg. 20 µg/m ³ AAM	150 µg/m ³ , 24-hr. avg.	Same as Primary	Increased cough and chest discomfort; Reduced lung function; Aggravation of Respiratory and cardio-respiratory diseases
Fine Particulate Matter (PM _{2.5})	-- 12 µg/m ³ AAM	35 µg/m ³ , 24-hr. avg. 15 µg/m ³ AAM	Same as Primary	Increased cough and chest discomfort; Reduced lung function; Aggravation of Respiratory and cardio-respiratory diseases
Sulfates (SO ₄)	25 µg/m ³ , 24-hr. avg.	None	None	Increased morbidity and mortality in conjunction with other pollutants
Lead (Pb)	1.5 µg/m ³ , monthly avg.	1.5 µg/m ³ , calendar quarter	Same as Primary	Impairment of blood and nerve function; Behavioral and hearing problems in children
Hydrogen Sulfide (H ₂ S)	0.03 ppm, 1-hr. avg.	None	None	Toxic at very high concentrations
Vinyl Chloride	0.010 ppm, 24-hr. avg.			Carcinogenic
Visibility-Reducing Particles	In sufficient amount to reduce prevailing visibility to less than 10 miles at relative humidity less than 70%, 1 observation			

Notes:
 ppm = parts per million by volume µg/m³ = micrograms per cubic meter
 AAM = annual arithmetic mean AGM = annual geometric mean
 For reader's convenience in picking out standards quickly, concentrations appears first; e.g., "0.12 ppm, 1 hr. avg." means 1-hr. avg >0.12 ppm
 Source: California Air Resources Board 2008.

Elevated ozone concentrations aggravate asthma, bronchitis, and other respiratory disorders. Eye irritation, nausea, headache, coughing, and dizziness are other symptoms of ozone exposure. Ozone also interferes with photosynthesis, thereby damaging natural and ornamental vegetation and agricultural crops. Ozone concentrations are highest during the warmer months and coincide with the seasons of maximum solar radiation.

Ozone studies prepared by the SBCAPCD have shown that ozone exceedances can occur under a wide variety of meteorological conditions. Additionally, based on analyses of ozone episodes occurring during the past 10 years (1995 to 2005), there is an indication that State exceedances may be related to meteorological conditions that are conducive to high ozone formed locally combined with the transport of pollutants from outside the County.

Other Pollutants

Inert pollutant concentrations (generally, pollutants other than ozone and its precursors) tend to be the greatest during the winter and are a product of light wind conditions and surface-based temperature inversions. Maximum inert pollutant concentrations are usually found near an emission source. For example, the main source of CO emissions is motor vehicles, and the highest ambient CO concentrations are found near congested transportation arteries and intersections.

PM₁₀

PM₁₀ is generated by a wide variety of natural and man-made sources. Particulate matter is a respiratory irritant. Large particles are effectively filtered in the upper respiratory tract, but particles smaller than 10 microns can cause serious health effects. The chemical makeup of the particles is an important factor in determining the health effect.

PM₁₀ is produced either by direct emissions of particulates from a source (primary PM₁₀), or by the formation of aerosols as a result of chemical reactions in the atmosphere involving precursor pollutants (secondary PM₁₀). Based on emission data, the largest single source of PM₁₀ emissions in the County is entrained paved road dust. Other major sources include dust from construction, demolition, agricultural tilling, entrained road dust from unpaved roads, natural dust and sea salt, and particulate matter released during fuel combustion. The County violates both the State PM₁₀ 24-hour and annual standards. As a result, the County is currently designated nonattainment for the State PM₁₀ standard. The County does not exceed the Federal PM₁₀ standards.

To investigate the County's PM₁₀ problem, the SBCAPCD started a specialized sampling and analysis study in 1989 called the Santa Barbara County Particulate Matter Emission Reduction Study. The study collected and analyzed ambient samples of PM₁₀ at sites located throughout the County to identify chemical constituents, and it identified potential source characteristics and assessed control strategies for reducing PM₁₀ concentrations. The major findings of the study include: (1) background sources (primarily sea salt) are a major contributors to PM₁₀ concentrations; (2) on average, 70 percent of the locally generated primary PM₁₀ and locally generated geological dust and motor vehicle exhaust are the most significant sources of primary PM₁₀ in the County; and (3) potential control measures should concentrate on these primary sources of PM₁₀.

3.3.1.4 Attainment Pollutants

The Federal Clean Air Act established air quality standards for the following “criteria” air pollutants: ozone, NO₂, SO₂, CO, PM₁₀, and lead. State standards also exist for each of these criteria pollutants. In addition, State standards are in place for visibility-reducing particles, SO₄, H₂S, and vinyl chloride. With the exception of ozone and PM₁₀, the County complies with all State and Federal air quality standards.

3.3.1.5 Pollutants That Violate Standards

The County currently violates the State 8-hour ozone and PM₁₀ standards. The County is in attainment of the Federal 8-hour ozone standard. The following sections discuss these pollutants.

The SBCAPCD has a network of 17 air quality monitoring stations. The nearest stations to the City of Goleta are the Goleta-Fairview station and the El Capitan monitoring station. Table 3.3-2 presents the maximum pollutant levels monitored at these two monitoring stations during the period from 2001 to 2007. The 2001 smog season was the first in which the County did not exceed the Federal one-hour ozone standard (0.12 ppm) since monitoring began in 1971. However, the State 1-hour ozone standard was exceeded one time in 2003, one time in 2007, and was almost exceeded in 2004 at the Goleta station. The Federal 8-hour ozone standard was exceeded one time in 2004. It was estimated that the State 24-hour PM₁₀ standard was exceeded one day in 2004 and two days in 2007. It was estimated that the Federal 24-hour PM₁₀ standard was exceeded one day in 2007.

3.3.1.6 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. Some people are particularly sensitive to some pollutants. These sensitive individuals include persons with respiratory illnesses or impaired lung function because of other illnesses, the elderly, and children. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. SBCAPCD defines land uses considered to be sensitive receptors as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities.

3.3.1.7 Pre-Existing Odor Issues in the Area

There have been a number of historical odor sources in the vicinity of the City, 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.

**TABLE 3.3-2
SUMMARY OF AIR QUALITY DATA AT GOLETA AND EL CAPITAN MONITORING
STATIONS**

Pollutant Standards	2001	2002	2003	2004	2005	2006	2007
Ozone (O₃)							
State standard (1-hr. avg. 0.09 ppm)	—	—	—	—	—	—	—
National standard (1-hr avg. 0.12 ppm)	—	—	—	—	—	—	—
Maximum 1-hr concentration (in ppm)	0.082	0.070	0.097	0.092	0.080	0.083	0.095
Days State 1-hr standard exceeded	0	0	1	0	0	0	1
Days National 1-hr standard exceeded	0	0	0	0	0	0	0
State standard (8-hr avg. 0.07 ppm)	—	—	—	—	—	—	—
Days state 8-hr standard exceeded	3	0	3	5	0	0	1
National standard (8-hr avg. 0.08 ppm)	—	—	—	—	—	—	—
Maximum 8-hr concentration (in ppm)	0.066	0.060	0.071	0.087	0.066	0.069	0.080
Days National 8-hr standard exceeded	0	0	0	1	0	0	0
Suspended Particulates (PM₁₀)							
State standard (24-hr. avg. 50 µg/m ³)	—	—	—	—	—	—	—
National standard (24-hr avg. 150 µg/m ³)	—	—	—	—	—	—	—
Maximum 24-hr concentration	41.1	39.4	39.3	51.3	40.7	39.9	233.7
Measured days exceeding State standard	0	0	0	1	0	0	2
Measured days exceeding National standard	0	0	0	0	0	0	1
Suspended Particulates (PM_{2.5})							
National standard (24-hr avg. 65 µg/m ³)	—	—	—	—	—	—	—
Maximum 24-hr concentration	ND	ND	24.0	27.5	28.3	27.9	23.5
Est days exceeding National standard	—	—	0	0	0	0	0
Notes: ppm = parts per million µg/m ³ = micrograms per cubic meter NM = Not Monitored ND = No Data Sources: SBCAPCD Air Quality Data, 2001–2007; California Air Resources Board Yearly Air Quality Summaries, 2008.							

Venoco's Platform Holly has been a source of hydrogen sulfide (H₂S) emissions in the region. However, according to the SBCAPCD, the frequency of H₂S releases have been reduced dramatically due to the installation of gas flare stack and an assortment of other system improvements in 1999 through 2000 (Ellenberger pers. comm.).

Venoco's Ellwood processing plant has been a source of mercaptan release over the years. However, similar to Platform Holly, these odorous emissions have been greatly reduced by 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 this site. Due to numerous complaints, improved piping was established, and water is no longer released in the gully.

Water wells with sour water in Goleta Valley/Winchester Canyon agricultural properties continue to be an issue on an inconsistent basis. The SBCAPCD is working with the agricultural community to reduce these sources of odor.

The Ellwood Marine Terminal at Coal Oil Point has historically been a source of two different sources of odors: (1) fugitive emissions/odors from oil storage tanks, and (2) odors released during the loading of barges (barges now have odor control systems).

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

3.3.1.8 Greenhouse Gases

Activities such as fossil fuel combustion, deforestation, and other changes in land use result in the accumulation of greenhouse gases (GHGs) such as carbon dioxide (CO₂) in the Earth's atmosphere. An increase in GHG emissions results in an increase in the Earth's average surface temperature, which is commonly referred to as global warming. Global warming is expected, in turn, to affect weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates in a manner commonly referred to as climate change.

Since the industrial revolution, concentrations of GHGs in the Earth's atmosphere have been gradually increasing. Recently recorded increases in the Earth's average temperature are the result of increased concentrations of GHGs in the atmosphere. (Intergovernmental Panel on Climate Change 2007.)

The Intergovernmental Panel on Climate Change (IPCC) has been established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC's best estimates are that the average global temperature rise between years 2000 and 2100 could range from 0.6 degrees Celsius (1.08 degrees Fahrenheit) (with no increase in GHG emissions above year 2000 levels) to 4.0 degrees Celsius (7.2 degrees Fahrenheit) (with a substantial increase in GHG emissions) (Intergovernmental Panel on Climate Change 2007). Large increases in global temperatures could have massive deleterious impacts on the natural and human environments.

According to the EPA, a GHG is any gas that absorbs infrared radiation in the atmosphere. This absorption traps heat within the atmosphere creating a *greenhouse effect* that is slowly raising global temperatures. GHGs include water vapor, CO₂, methane (CH₄), nitrous oxide (N₂O), halogenated chlorofluorocarbons (HCFCs), O₃, perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs). Naturally occurring GHGs include water vapor, CO₂, CH₄, N₂O, and O₃. Many human activities add to the levels of most of these naturally occurring gases. CO₂ is released to the atmosphere when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned. N₂O is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels. CO₂ and N₂O are the two GHGs released in greatest quantities from mobile sources burning gasoline and diesel fuel. Methane, a highly potent GHG, results from off-gassing associated with agricultural practices and landfills, among other sources.

Sinks of CO₂ (which absorb, rather than produce, CO₂), include uptake by vegetation and dissolution into the ocean. Worldwide GHG production greatly exceeds the absorption capacity

of natural sinks. As a result, concentrations of GHG in the atmosphere are increasing. (California Energy Commission [CEC] 2006.)

Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors) and toxic air contaminants (TACs), which are pollutants of regional and local concern.

3.3.1.9 Climate Change Impacts in California

Climate change could impact the natural environment in California in the following ways, among others:

- rising sea levels along the California coastline;
- extreme-heat conditions, such as heat waves and very high temperatures, which could last longer and become more frequent;
- an increase in heat-related human deaths, an increase in infectious diseases, and a higher risk of respiratory problems caused by deteriorating air quality;
- reduced snow pack and stream flow in the Sierra Nevada mountains, affecting winter recreation and water supplies;
- potential increase in the severity of winter storms, affecting peak stream flows and flooding;
- changes in growing season conditions that could affect California agriculture, causing variations in crop quality and yield; and
- changes in distribution of plant and wildlife species due to changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

These changes in California's climate and ecosystems could occur at a time when California's population is expected to increase from 34 million to 59 million by the year 2040 (CEC 2005). As such, the number of people potentially affected by climate change, as well as the amount of anthropogenic (i.e., man-made) GHG emissions, is expected to significantly increase. Similar changes as those noted above for California also would occur in other parts of the world, with regional variations in resources affected and vulnerability to adverse effects.

3.3.1.10 Emissions Summary

California Emissions

Worldwide, California is estimated to be the 12th to 16th largest emitter of CO₂ and is responsible for approximately 2 percent of the world's CO₂ emissions (CEC 2006).

The California Energy Commission's *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004* estimates that California is the second largest emitter of GHG emissions of the United States (only Texas emits more GHGs). The CEC estimates that in 2004, California's gross GHG emissions were 492 million metric tons (MMT) of CO₂ equivalent (CO₂E). The transportation sector produced approximately 41 percent of California's GHG emissions in 2004. Electric power production accounted for approximately 22 percent of emissions (including estimated emissions from out-of-state coal-fired power plants); the industrial sector contributed

21 percent of the total; agriculture and forestry contributed 8 percent; and other sectors contributed 8 percent (CEC 2006).

3.3.2 Changes in Regulatory Framework

3.3.2.1 Federal and State

Since adoption of the GP/CLUP in 2006, there have been no changes to the following regulations that are relevant to the proposed amendments categorized as Track 3 revisions to the GP/CLUP:

- Clean Air Act,
- California Clean Air Act,
- California Coastal Act,
- California Environmental Quality Act,
- State of California General Plan Law and General Plan Guidelines, and
- State Implementation Plan (SIP).

Recent State legislation relating to the analysis of GHGs is relevant to this Supplemental EIR. A summary of that legislation is as follows.

Executive Order S-3-05—Greenhouse Gas Emission Reduction Targets

In 2005, Governor Arnold Schwarzenegger issued California Executive Order S-3-05 establishing the following GHG emission reduction targets for California:

- reduce GHG emissions to 2000 levels by 2010;
- reduce GHG emissions to 1990 levels by 2020; and
- reduce GHG emissions to 80 percent below 1990 levels by 2050.

Executive Orders are binding only on State agencies. Accordingly, S-3-05 will guide State agencies' efforts to control and regulate GHG emissions but will have no direct binding effect on local efforts.

Assembly Bill 32—The Global Warming Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the Climate Change Solutions Act of 2006, into law. AB 32 codifies the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. Key AB 32 milestones for CARB are as follows:

- June 30, 2007—Identification of "discrete early action GHG emissions reduction measures." *This has been completed and is discussed below.*
- January 1, 2008—Identification of the 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level. Adoption of reporting and verification requirements concerning GHG emissions. *This has been completed. In December 2007, CARB approved the 2020 emission limit of 427 MMT of CO₂E of GHG emissions.*

- January 1, 2009—Adoption of a scoping plan for achieving GHG emission reductions. *A draft scoping plan was released in June 2008 and is summarized below.*
- January 1, 2010—Adoption and enforcement of regulations to implement the discrete actions.
- January 1, 2011—Adoption of GHG emission limits and reduction measures by regulation.
- January 1, 2012—GHG emission limits and reduction measures adopted in 2011 become enforceable.

AB 32 Early Actions Adopted in 2007

CARB adopted the following early actions on June 21, 2007:

- Action 1—Three new GHG-only regulations are proposed to meet the narrow legal definition of “discrete early action greenhouse gas reduction measures” in Section 38560.5 of the Health and Safety Code. These include the Governor’s Low Carbon Fuel Standard, reduction of refrigerant losses from motor vehicle air conditioning maintenance, and increased methane capture from landfills. These actions are estimated to reduce GHG emissions between 13 and 26 MMT CO₂E annually by 2020 relative to projected levels. If approved for listing by the Governing Board, these measures will be brought to hearing in the next 12 to 18 months and take legal effect by January 1, 2010.
- Action 2—CARB is initiating work on another 23 GHG emission reduction measures in the 2007–2009 time period, with rulemaking to occur as soon as possible where applicable. These GHG measures relate to the following sectors: agriculture, commercial, education, energy efficiency, fire suppression, forestry, oil and gas, and transportation.
- Action 3—CARB staff has identified 10 conventional air pollution control measures that are scheduled for rulemaking in the 2007–2009 period. These control measures are aimed at criteria and toxic air pollutants but will have concurrent climate co-benefits through reductions in CO₂ or non-Kyoto pollutants (i.e., diesel particulate matter, other light-absorbing compounds, and/or ozone precursors) that contribute to global warming.

In October 2007, CARB expanded the early actions to include the following measures.

- Action 1: Discrete Early Actions—Sulfur hexafluoride (SF₆) reductions from nonelectricity sector; reduction of emissions from consumer products; Smartway Truck Efficiency (require existing trucks and trailers to be retrofitted with devices that reduce aerodynamic drag); tire inflation (require tune-up and oil change technicians to ensure proper tire inflation as part of overall service); reduction of PFCs from semiconductor industry; and Green ports (allow docked ships to shut off their auxiliary engines by plugging into shoreside electrical outlets or other technologies).
- Action 2: Other Early Actions—refrigerant tracking; reporting and recovery program; energy efficiency of California cement facilities; blended cements; anti-idling enforcement; and research regarding nitrogen land application efficiency.

AB 32 Scoping Plan

In December 2008, CARB approved its Scoping Plan which outlined an approach to meet AB 32’s goal. The plan identified measures to reduce GHG emissions to 1990 levels, which is approximately 30 percent below business-as-usual emission levels projected for 2020, or about 15 percent from today’s (2008) levels. On a per-capita basis, that means reducing annual emissions of 14 tons of CO₂ per person in California down to about 10 tons per person by 2020

(CARB 2008b). The measures in the Scoping Plan must be adopted through the normal rulemaking process with the necessary public input. Below is a summary of the recommended reduction strategies.

TABLE 3.3-3. SUMMARY OF AB 32 SCOPING PLAN RECOMMENDATIONS

Recommended Reduction Strategies	Reductions Counted Towards 2020 Target (MMT CO₂E)
Estimated Reduction Resulting From the Combination of Cap-and-Trade Program and Complementary Measures	146.7
California Light-Duty Vehicle GHG Standards <ul style="list-style-type: none"> - Implement Pavley standards - Develop Pavley II light-duty vehicle standards 	31.7
Energy Efficiency <ul style="list-style-type: none"> - Building/appliance efficiency, new programs, etc - Increase Combined Heat and Power (CHP) generation by 30,000 GWh - Solar Water Heating (AB 1470 goal) 	26.3
Renewables Portfolio Standard (33% by 2020)	21.3
Low Carbon Fuel Standard	15
Regional Transportation-Related GHG Targets (local land uses changes, not SB 375 target)	5
Vehicle Efficiency Measures	4.5
Goods Movement <ul style="list-style-type: none"> - Ship Electrification at Ports - System-Wide Efficiency Improvements 	3.7
Million Solar Roofs	2.1
Medium/Heavy Duty Vehicles <ul style="list-style-type: none"> - Heavy- Duty Vehicle GHG Emission Reduction (Aerodynamic Efficiency) - Medium-and Heavy-Duty Vehicle Hybridization 	1.4
High Speed Rail	1.0
Industrial Measures <ul style="list-style-type: none"> - Refinery Measures - Energy Efficiency & Co-Benefits Audits 	0.3
Additional Reductions Necessary to Achieve the Cap	34.4
Estimated Reduction From Uncapped Sources/Sectors	27.3
High Global Warming Potential Gas Measures	20.2
Sustainable Forests	5.0
Industrial Measures <ul style="list-style-type: none"> - Oil and Gas Extraction and Transmission 	1.1
Recycling and Waste (landfill methane capture)	1.0
Total Reductions Counted Towards 2020 Target	174
Other Recommended Measures	Estimated 2020 Reductions (MMT CO₂E)
State Government Operations	1-2
Local Government Operations	TBD
Green Buildings	26
Recycling and Waste (other measures)	9
Water Sector Measures	4.8
Methane Capture at Large Dairies	1.0
Source: California Air Resources Board 2008b.	

Senate Bill 1078/SB 107—Renewable Portfolio Standard (RPS)

Established in 2002 under Senate Bill (SB) 1078 and accelerated in 2006 under Senate Bill 107, California's Renewable Portfolio Standard (RPS) obligates investor-owned utilities (IOUs), energy service providers (ESPs), and Community Choice Aggregations (CCAs) to procure an additional 1 percent of retail sales per year from eligible renewable sources until 20 percent is reached, no later than 2010. The California Public Utilities Commission (CPUC) and CEC are jointly responsible for implementing the program.

AB 1493—Greenhouse Gas Emission Standards for Automobiles

California AB 1493 in 2002 required CARB to develop and adopt the nation's first GHG emission standards for automobiles. The legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in the state. It cited several risks that California faces from climate change, including reduction in the state's water supply; increased air pollution creation by higher temperatures; harm to agriculture; and increase in wildfires, damage to the coastline, and economic losses caused by higher food, water energy, and insurance prices. Further, the legislature stated that technological solutions to reduce GHG emissions would stimulate California economy and provide jobs.

The State of California in 2004 submitted a request for a waiver from Federal clean air regulations (as the State is authorized to do under the Clean Air Act) to allow the State to require reduced tailpipe emissions of CO₂. In late 2007, the EPA denied California's waiver request and declined to promulgate adequate Federal regulations limiting GHG emissions. In early 2008, the State brought suit against EPA related to this denial.

A recent CARB study (CARB 2008a) showed that in calendar year 2016, AB 1493 (also referred to as the Pavley standard or the Pavley rules) would reduce California's GHG annual emissions by 16.4 MMT CO₂E. This is almost 50 percent more than the 11.1 MMT CO₂E reduction produced by currently proposed Federal fleet average standards for model years 2011–2015.

Further, by 2020, California is committed to implement revised, more stringent GHG emission limits, the Pavley Phase II rules (see discussion of scoping plan below). California's requirements would reduce California GHG emissions by 31.7 MMT CO₂E in calendar year 2020, 45 percent more than the 21.9 MMT CO₂E reductions under the proposed Federal rules in that year. Since the California rules are significantly more effective at reducing GHGs than the Federal CAFE (fuel economy) program, they also result in better fuel efficiency—roughly 43 miles per gallon (mpg) in 2020 for the California vehicle fleet as compared to the new CAFE standard of 35 mpg.

California Energy Efficiency Standards

Title 24, Part 6 (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) of the California Code of Regulations was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and incorporation of new energy efficiency technologies and methods. The current standards were adopted by the Commission in October 2005; more stringent 2008 standards were adopted and become effective August 1, 2009.

These standards are mandatory and, thus, new building permitted by City and County governments must comply with the standards in effect at the time. These standards also promote cost-effective means to reduce energy use and thus GHG emissions for new development relative to business as usual conditions. In addition, amendments to Title 24 called

the “Green Building” standards are currently in the rulemaking process. These largely voluntary standards would encourage building techniques that would substantially reduce energy consumption and water use below Title 24 standards.

California Low Carbon Fuel Standards

In the January 2007 State of the State address, Governor Schwarzenegger asserted California's leadership in clean energy and environmental policy by establishing a Low-Carbon Fuel Standard (LCFS) by Executive Order. This first-in-the-world GHG standard for transportation fuels is intended to spark research in alternatives to oil and reduce GHG emissions.

The Governor's Executive Order directs the Secretary for Environmental Protection to coordinate the actions of the CEC, CARB, the University of California, and other agencies to develop the protocols for measuring the *life-cycle carbon intensity* of transportation fuels. This analysis will become part of the State Implementation Plan for alternative fuels as required by AB 1007 (Pavley, Chapter 371, Statutes of 2005) and will be submitted to CARB for consideration as an early action item under AB 32. CARB was tasked to complete its review of the LCFS protocols for adoption as an early action no later than June 2007. Upon adoption as an early action by CARB, the regulatory process at CARB will begin to put the new standard into effect. It is expected that the regulatory process at CARB to implement the new standard will be completed no later than December 2008.

The Executive Order states that the process for meeting the 2020 target shall be as follows:

1. The Secretary of the California Environmental Protection Agency (Cal/EPA) shall coordinate activities between the University of California, the CEC, and other agencies as required to develop and propose by June 30, 2007, a draft compliance schedule to meet the 2020 target.
2. The CEC shall incorporate as appropriate the LCFS draft compliance schedule into the State Alternative Fuels Plan (SAFP) per AB 1007 (Chapter 371, Statutes of 2005), and upon adoption, shall submit the SAFP to the CARB for consideration.
3. Upon submission of the SAFP, the CARB shall consider initiating a regulatory proceeding to establish and implement the LCFS.

AB 118 Alternative and Renewable Fuel & Vehicle Technology Program

AB 118 (Chapter 750, Statutes of 2007) created the CEC's Alternative and Renewable Fuel and Vehicle Technology Program (Health and Safety Code, Section 44270 et seq.). The program is intended to increase the use of alternative and renewable fuels and innovative technologies that will transform California's fuel and vehicle types to help attain the State's climate change policies.

AB 118 authorizes the CEC to provide, upon appropriation by the Legislature, approximately \$120 million annually as incentives to public agencies, vehicle and technology consortia, businesses, public-private partnerships, workforce training partnerships and collaboratives, fleet owners, consumers, recreational boaters, and academic institutions for projects that:

- develop and improve alternative and renewable low-carbon fuels;
- optimize alternative and renewable fuels for existing and developing engine technologies;
- produce alternative and renewable low-carbon fuels in California;

- decrease the overall impact of an alternative and renewable fuel's life-cycle carbon footprint and increase sustainability;
- expand fuel infrastructure, fueling stations, and equipment;
- improve light-, medium-, and heavy-duty vehicle technologies;
- retrofit medium-and heavy-duty on-road and non-road vehicle fleets;
- expand infrastructure connected with existing fleets, public transit, and transportation corridors; and
- establish workforce training programs, conduct public education and promotion, and create technology centers.

Senate Bill 97 Chapter 185, Statutes of 2007

SB 97 requires Office of Planning and Research (OPR) to prepare guidelines to submit to the California Resources Agency regarding feasible mitigation of GHG emissions or the effects of GHG emissions as required by CEQA. The California Resources Agency is required to certify and adopt these revisions to the State CEQA Guidelines by January 1, 2010. The Guidelines will apply retroactively to any incomplete environmental impact report, negative declaration, mitigated negative declaration, or other related document.

Executive Order S-01-07

Executive Order S-01-07 was enacted by Governor Schwarzenegger on January 18, 2007. The order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a LCFS for transportation fuels be established in California.

Draft Local Government Operations Protocol

In June, 2008, CARB, California Climate Action Registry, ICLEI - Local Governments for Sustainability, and the Climate Registry released a draft protocol for the preparation of GHG emissions inventories for local government municipal operations. The draft protocol does not contain recommendations for GHG reductions by local governments (CARB 2008c).

Senate Bill 375

SB 375 was enacted by Governor Schwarzenegger on September 30, 2008. SB 375 combines regional transportation planning with sustainability strategies in order to reduce GHG emissions in California's urbanized areas. It also establishes new streamlining opportunities for compatible projects under CEQA. SB 375 will likely take several years to become fully implemented due to the complex relationship between state, regional, and local agencies. First, the state must develop the modeling guidelines and the GHG regional reduction targets, then regional agencies must develop their sustainable communities strategies. Only after the state and regional agencies accomplish their SB 375 responsibilities will cities and counties be required to bring their housing elements into conformity and be able to take advantage of the new CEQA streamlining tools.

3.3.2.2 Local

Since adoption of the GP/CLUP in 2006, there have been no changes to the following regulation that is relevant to the proposed amendments categorized as Track 3 revisions to the GP/CLUP:

- Santa Barbara County Air Pollution Control District Rule 303—Nuisance

Regional Clean Air Plan

SBCAPCD adopted previous clean air plans (CAPs) in 1989 to meet National standards and in 1991 to meet State standards. SBCAPCD revised these CAPs in 2001, 2004, and 2007.

The 2001 Clean Air Plan (i.e., SIP Update for Federal Clean Air Act) was adopted by the SBCAPCD Board of Directors and approved by both the USEPA and the CARB. This plan is in effect for Federal standards. This plan shows how the County will maintain attainment with the Federal 1-hour ozone standard through 2015. It also includes a three-year plan revision required by the State to show how the County will work toward meeting the State 1-hour ozone standard.

The 2004 Clean Air Plan (i.e., Three-Year Update for California Clean Air Act) was adopted by the SBCAPCD Board in December 2004, and has been submitted to CARB. This plan shows how the County will make progress towards meeting the State 1-hour ozone standard (the 2001 Plan remains in effect for Federal requirements).

The 2007 Clean Air Plan was adopted by the SBCAPCD Board in August 2007. The Federal requirements pertain to provisions of the Federal Clean Air Act that apply to SBAPCD's current designation as an attainment area for the Federal 8-hour ozone standard. Areas that are designated as attainment for the Federal 8-hour ozone standard and attainment for the previous Federal 1-hour ozone standard with an approved maintenance plan must submit an 8-hour maintenance plan.

Table 3.3-4 summarizes the estimated stationary, area-wide, and mobile source daily air emissions for Santa Barbara County in the year 2008. The County emissions inventory is periodically updated for planning purposes to: (1) forecast future emissions inventories; (2) analyze emission control measures; and (3) use as input data for regional air quality modeling. CARB's Almanac Emission Projection Data provides annual average emissions for the County. The data in Table 3.3-4 show that the largest contributors to air pollutants are on-road vehicles and other mobile sources such as aircraft, trains, sea vessels, off-road vehicles, and farm equipment. The mobile source category account for approximately 18 percent of ROG, 73 percent of CO, 89 percent of NO_x, 87 percent of SO_x, and 20 percent of PM₁₀ emitted in the region.

City of Goleta Ordinances

Since adoption of the GP/CLUP and certification of the Final EIR, the City adopted three General Plan amendments. First, the City adopted an amendment to Subpolicy CE 10.3 as part of the approval of the Village at Los Carneros. The amendment changed prohibitions against post-development stormwater discharge rates and was adopted on February 19, 2008. Second, the City adopted various clarifying amendments as part of the City-sponsored Track 2 amendments. The Track 2 amendments were adopted and the related CEQA Addendum was certified by the City Council on June 17, 2008. Third, the City adopted a land use designation re-classification (General Industrial to General Commercial) as part of the approval of the Harwin Family Trust project. All amendments are reflected in the text of the GP/CLUP cited in the Supplemental EIR.

**TABLE 3.3-4
ESTIMATE OF AVERAGE DAILY EMISSIONS BY MAJOR SOURCE CATEGORY
FOR SANTA BARBARA COUNTY—YEAR 2006 (TONS/DAY)**

Source Category	ROG	CO	NO _x	SO _x	PM ₁₀
Stationary Sources					
Fuel Combustion	0.5	6.5	7.2	0.2	0.4
Waste Combustion	0.1	0.1	0.0	0.0	0.0
Cleaning and Surface Coating	5.0	—	—	—	—
Petroleum Production & Marketing	4.2	0.3	0.1	0.3	0.0
Industrial Processes	0.3	0.1	0.0	3.7	0.5
Total Stationary Sources	10.0	6.9	7.3	4.2	1.0
Areawide Sources					
Solvent Evaporation	6.4	—	—	—	—
Miscellaneous Processes	4.2	32.0	2.1	0.0	20.7
Total Areawide Sources	10.6	32.0	2.1	0.0	20.7
Mobile Sources					
On-road Vehicles	9.2	93.9	15.7	0.1	0.6
Other Mobile Sources	8.5	42.7	64.8	29.3	5.0
Total Mobile Sources	17.6	136.6	80.6	29.4	5.6
Natural Sources					
Total Natural Sources	61.6	12.1	0.4	0.1	1.2
Santa Barbara County Total	99.8	187.5	90.4	33.7	28.5

Source: California Air Resources Board Almanac Emission Projection Data 2008.

The City has also established a new ordinance to the municipal code, Chapter 25b, titled “Change of Owner, Operator, or Guarantor for Certain Oil and Gas Facilities.” No other changes to the GP/CLUP and no new ordinances relative to land use designations and densities have been enacted by the City since October 2006. There have been modifications to enabling ordinances and resolutions related to the Design Review Board’s review of projects and process. Moreover, in fall 2008, the City modified the Goleta Growth Management Ordinance to exempt from its consideration the Goleta Valley Cottage Hospital Replacement Projects, along with associated medical office space and parking.

3.3.3 Project Impacts and Mitigation

As in the 2006 Final EIR, the evaluation in this Supplemental EIR concerns the potential effects on air quality that would result from implementation of the GP/CLUP policies and, in this case, from alternate versions of those policies in the form of GP/CLUP amendments.

3.3.3.1 Thresholds of Significance

The thresholds of significance applied in this Supplemental EIR are the same as those in the 2006 Final EIR. Additional information regarding GHGs is provided at the end of this subsection.

City of Goleta Environmental Thresholds Manual

This analysis follows the guidance and methodologies recommended in the SBCAPCD’s *Scope and Content of Air Quality Sections in Environmental Documents* (2008), and the City’s adopted

Environmental Thresholds and Guidelines Manual. The EMFAC2002 computer model, developed by CARB, was used in the 2006 GP/CLUP EIR to estimate regional vehicle miles traveled emissions associated with each alternative. The air quality analysis presented in the 2009 GP/CLUP DSEIR relies upon a qualitative assessment of potential air quality impacts associated with proposed amendments to the GP/CLUP.

Per the City's Environmental Thresholds and Guidelines Manual, a significant adverse air quality impact may occur when a project, individually or cumulatively, triggers either of the following:

- interferes with progress toward the attainment of the ozone standard by releasing emissions which equal or exceed the established long-term quantitative thresholds for NO_x and ROG; or
- equals or exceeds the State or Federal ambient air quality standards for any criteria pollutant (as determined by modeling).

The project is deemed to have a significant impact on regional air quality if emissions (specified in pounds of pollution emitted per day) of specific pollutants related to project operation exceed the significant threshold established by SBCAPCD, currently at a threshold of 25 pounds per day for ROG and NO_x emissions for motor vehicle trips. Furthermore, per the Manual and due to the fact that Santa Barbara County is in nonattainment for ozone and the regional nature of this pollutant, if a project's (e.g., buildout of the GP/CLUP) total emissions of ozone precursors NO_x and ROG exceed the long-term threshold of 25 pounds/day, then the project's cumulative impacts would also be considered significant.

Long-term impacts are also considered potentially significant if the growth in traffic accommodated under the GP/CLUP would have the potential to create CO "hot spots" where CO concentrations exceed State or Federal standards. Such hot spots typically occur at severely congested intersections where a level of service (LOS) E or F is projected.

SBCAPCD no longer has quantitative emission significance thresholds for short-term construction activities because construction emissions from land development projects have been accounted for in the 2008 CAP. In any event, construction-related emissions are not relevant at the general plan level because such emissions are dependent on the characteristics of individual development projects. Nevertheless, because the region does not meet the State standards for ozone and PM₁₀, the City of Goleta requires implementation of standard emission and dust control techniques for all construction (as outlined under GP/CLUP policy subsection CE 12.3) to ensure that these emissions remain less than significant.

CEQA Thresholds

Per Appendix G of the CEQA Guidelines, a project would pose a significant air quality impact if any of the following were to occur as a result of the project:

- 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 in a state of non-attainment under applicable Federal or State ambient air

quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

- expose sensitive receptors to substantial pollutant concentrations; or
- create objectionable odors affecting a substantial number of people.

Greenhouse Gas Emissions Thresholds

AB 32 states, in part, that “Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.” Because global warming is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, global climate change is clearly a significant cumulative impact. However, the global increase in GHG emissions that has occurred and will occur in the future are the result of the actions and choices of individuals, businesses, local governments, states, and nations. Thus, the analysis below should be understood as an analysis of cumulative contributions (attributable to the proposed Track 3 changes) to a significant global impact.

Currently, the State of California has not established CEQA significance thresholds for GHG emissions. The Governor’s OPR is developing and the California Resources Agency (Resources Agency) will certify and adopt amendments to the CEQA Guidelines on or before January 1, 2010, pursuant to Senate Bill 97 (Dutton 2007). These new CEQA Guidelines will provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents.

In the interim, OPR has released a technical advisory (*CEQA and Climate Change: Addressing Climate Change through CEQA Review*, Office of Planning and Research, June 19, 2008). OPR offers informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents. This guidance was developed in cooperation with the Resources Agency, the Cal/EPA, and the CARB. The technical advisory provides the following guidance regarding significance determination:

- When assessing a project’s GHG emissions, lead agencies must describe the existing environmental conditions or setting, without the project, which normally constitutes the baseline physical conditions for determining whether a project’s impacts are significant.
- As with any environmental impact, lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a “significant impact”, individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.
- The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project’s direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence. Documentation of available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts).
- Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less-than-significant level as a means to avoid or substantially reduce the cumulative impact of a project.

To date, the City of Goleta has not formalized GHG thresholds within its Environmental Thresholds and Guidelines Manual, but may elect to consider such thresholds in the future as additional Federal and State legislation is passed regarding climate change. The City has reviewed much of the available subject analysis including the OPR technical advisory discussed above. Based upon this review, and until thresholds are established by the State, the City has relied upon a threshold of 25,000 metric tons of CO₂ per calendar year for individual projects, consistent with State of California mandatory reporting requirements (see Title 17 CCR, Section 95101) and ARB Resolution 07-54 (which establishes such a threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions). Projects below this level remain unclassifiable until more evidence becomes available. For a program-level CEQA analysis such as applicable to this GP/CLUP Supplemental EIR, GHG emissions are inherently evaluated as a cumulative impact.

3.3.3.2 Discussion of Relevant GP/CLUP Policies

The action under consideration by the City is to amend the existing GP/CLUP to approve the changes in Alternatives 2a, 2b, or 3, combine or eliminate changes proposed in Alternatives 2a, 2b, and 3, or choose not to change the GP/CLUP at this time (Alternative 1).

The Conservation, Land Use, Public Facilities, Safety, and Transportation Elements of the GP/CLUP contain policies that protect air quality resources or minimize the risk to humans and environmental from toxic air contaminants. The following GP/CLUP policies are relevant to air quality.

Conservation Element

The Conservation Element of the GP/CLUP identifies policies designed to preserve and protect environmental resources such as air quality to the maximum extent feasible while allowing reasonable development in conformance with the provisions of the Land Use Element. Specific air quality related policies in the Conservation Element include measures to minimize emissions from new developments and transportation sources. These measures protect air quality through activity/use restrictions, emission reduction measures (especially related to new development), and transportation management measures. To prevent degradation of air quality, the Conservation Element mandates that the City will promote clean air initiatives by coordinating with the SBCAPCD and requiring specific emission control measures for new development and City facilities.

- Policy CE 12: Protection of Air Quality
- Policy CE 13: Energy Conservation

Land Use Element

The Land Use Element contains air quality-related policies that serve to protect environmental resources and public health. These policies require adherence by new development to high environmental standards consistent with the standards in the Conservation Element, adequate infrastructure and services, measures to protect air quality, and management of the amount and timing of nonresidential growth.

- Policy LU 1: Land Use Plan Map and General Policies
- Policy LU 10: Energy-Related On- and Off-Shore Uses

- Policy LU 11: Nonresidential Growth Management

Safety Element

Policies in the Safety Element focus on protecting humans and structures from potential hazards. Air resource-related hazards include harmful smog, accidental release of harmful gases, inhalation of smoke and other poisonous gases, and other nuisance air emissions. Educational materials regarding emergency air quality episodes and air quality violations will also be provided as part of these policies.

- Policy SE 1: Safety in General
- Policy SE 7: Urban and Wildland Fire Hazards
- Policy SE 8: Oil and Gas Industry Hazards
- Policy SE 9: Airport-Related Hazards
- Policy SE 10: Hazardous Materials and Facilities
- Policy SE 11: Emergency Preparedness

Public Facilities Element

The purpose of the Public Facilities Element's air resource-related policy is to ensure that public facilities are designed and located to minimize energy consumption and air emissions to the extent feasible. A key policy in the Public Facilities Element related to air resources includes coordination between the City and the SBCAPCD regarding new development, energy demands, and supplies, and monitoring and evaluation of the potential emission sources.

- Policy PF 8: General Standards for Public Facilities

Transportation Element

The Transportation Element, also known in State law as the Circulation Element, guides the continued development and improvement of the transportation system to support land uses planned in the Land Use Element. Adherence to the requirements of the State Implementation Plan and the provisions of the Clean Air Plan along with implementation of the following GP/CLUP policies would reduce air quality impacts resulting from Plan implementation.

- Policy TE 1: Integrated Multi-Modal Transportation System
- Policy TE 2: Transportation Demand Management
- Policy TE 7: Public Transit (Bus Transportation)
- Policy TE 8: Rail Transportation
- Policy TE 10: Pedestrian Circulation
- Policy TE 11: Bikeways Plan
- Policy TE 12: Transportation Systems Management
- Policy TE 13: Mitigating Traffic Impacts of Development
- Policy TE 14: Financing Transportation Improvements
- Policy TE 15: Regional Transportation

3.3.3.3 Project Impacts

In this Supplemental EIR, the evaluation of the potential air quality impacts of proposed amendments considers the potential effects of individual changes on air quality in the City and on the mitigation provided by the LU and TE policies for the impacts of GP/CLUP implementation.

For purposes of the analysis, the source of direct and indirect impacts remain as identified in the 2006 Final EIR, with the exception of new information provided in this Supplemental EIR regarding GHG emissions. Identified impacts were evaluated in terms of their potential significance based on the thresholds indicated in Subsection 3.3.3.1 and the classes of impacts (I through IV) used by the City for CEQA analyses. Cumulative impacts were examined in terms of the combined effects of the impacts associated with GP/CLUP implementation and foreseeable projects in areas adjacent to the City. Residual impacts were examined in terms of the potential for significant effects to occur after mitigation of any Class I, Class II, or significant cumulative impacts.

Methodology

The analysis in this Supplemental EIR is intended to determine how impacts of GP/CLUP implementation and the mitigating effect of the policies in the GP/CLUP would change if some or all of the proposed amendments were adopted. To determine this, each policy change proposed in Alternatives 2a, 2b, and 3 was evaluated in terms of three questions:

1. Is the change to a policy cited as mitigation for a Class II impact of the existing GP/CLUP?
2. If the change were accepted, would implementation of the amended GP/CLUP result in greater or different impacts than those analyzed in the 2006 Final EIR?
3. Does the change have the potential to result in potentially significant impacts? If yes, is there feasible mitigation to reduce the effects?

In response to Question 1, Table 3.3-5 provides a tabular summary of those policies cited as mitigation for a Class II air quality impact identified in the existing GP/CLUP. Responses to Questions 2 and 3 are addressed in the analyses for each impact, as follows. A tabular summary of this analysis is presented in the alternative screening tables in Appendix B.

**TABLE 3.3-5
POLICIES PROPOSED FOR AMENDMENT THAT ARE
CITED AS MITIGATION FOR CLASS II AIR QUALITY IMPACTS IN 2006 FINAL EIR**

Proposed Policy Change (ID #)	Potential Impact Identified with One or More Action Alternative
LU 11	Impact 3.3-2. GP/CLUP Growth Projections Are Not Consistent with the Clean Air Plan
TE 13	Impact 3.3-2. GP/CLUP Growth Projections Are Not Consistent with the Clean Air Plan

Class I Impacts—None

- Alternative 1: No Changes (No Project). As indicated in the 2006 Final EIR, there are no short- or long-term significant and unavoidable impacts to air quality associated with implementation of the City's adopted GP/CLUP.
- Alternative 2a: City-Initiated Revisions. Same as Alternative 1.

- Alternative 2b: Options Associated with City-Initiated Revisions. Same as Alternative 1.
- Alternative 3: SEIR Recommended Revisions. Same as Alternative 1.

Class II Impacts

Short-Term Impacts

Impact 3.3-1. Construction Emissions

Alternative 1: No Changes (No Project). As indicated in the 2006 Final EIR, construction activity that would be accommodated over the next 20 years under the GP/CLUP land use scenario would cause temporary emissions of criteria pollutants. Criteria pollutants such as NO_x, CO, VOC (Volatile organic compounds), SO_x, and PM₁₀ would be emitted by the operation of construction equipment, while fugitive dust (PM₁₀) would be emitted by activities that disturb the ground, such as grading and excavation, road construction, and building construction. Information regarding specific development projects, soil types, and the locations of receptors would be needed in order to quantify the level of impact associated with construction activity.

Impacts associated with individual construction projects are not generally considered significant because of their temporary, short-term nature. Nevertheless, given the amount of development that the GP/CLUP would accommodate over the next 20 years, it is reasonable to conclude that some major construction activity could be occurring at any given time. Such impacts could also be complicated by the fact that multiple construction projects could occur simultaneously in any portion of the City.

Impacts to air quality from construction are directly associated with the amount of land disturbance and development that will take place. As discussed in Chapter 2.0 of the 2006 Final EIR, "Project Description," the GP/CLUP would accommodate an estimated 3,880 new residential units and 2.081 million square feet of nonresidential development through 2030.

The GP/CLUP could accommodate the demolition of existing older structures that were constructed with asbestos-containing materials. Demolition activity that disturbs friable asbestos could potentially create health hazards for receptors in the vicinity of individual demolition sites. However, demolition activity involving asbestos is required to be conducted in accordance with SBCAPCD Rule 1001, which requires SBCAPCD notification and use of licensed asbestos contractors to remove all asbestos prior to demolition. Compliance with Rule 1001 on all future demolition and construction activity with asbestos-containing materials would reduce impacts to less-than-significant level.

The impact of construction-related emissions upon sensitive receptors such as residences, schools, and hospitals depends upon the location of individual construction projects relative to sensitive receptors. Some new development within the City may occur adjacent to or near sensitive receptors. As mentioned above, the SBCAPCD has not adopted significance thresholds for construction-related emissions since such emissions are short-term and temporary. Nevertheless, the SBCAPCD's Scope and Content of Air Quality Sections in Environmental Documents (updated June 2008) recommend various techniques to reduce construction-related emissions associated with individual developments. These include techniques to limit emissions of both ozone precursors (NO_x and VOC) and fugitive dust (PM₁₀) and are identified below.

- Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) should be utilized wherever feasible.

- The engine size of construction equipment operating simultaneously shall be the minimum practical size.
- The amount of construction equipment operating simultaneously shall be minimized through efficient construction management practices to ensure that the smallest practical number is operating at any one time.
- Construction equipment shall be maintained per the manufacturer's specifications.
- Construction equipment operating on site shall be equipped with two or four degree engine timing retard or precombustion chamber engines.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All diesel-powered equipment shall use ultra low sulfur diesel fuel.
- Diesel catalytic converters, diesel oxidation catalysts, and diesel particulate filters, as certified and/or verified by EPA or California, shall be installed, if available.
- Diesel-powered equipment should be replaced by electric equipment whenever feasible.
- Idling of heavy-duty diesel trucks during loading and unloading should be limited to five minutes; auxiliary power units should be used whenever possible.
- Construction worker's trips should be minimized by requiring carpooling and by providing for lunch on site.

Prior implementation of all of the following measures, as necessary, is assumed to reduce fugitive dust emissions to a less-than-significant level and is strongly recommended for all discretionary projects involving earthmoving.

- During construction, water trucks or sprinkler systems should be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible.
- Minimize the amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.
- Gravel pads must be installed at all access points to prevent tracking of mud on to public roads.
- If importation, exportation, and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be covered with a tarp from the point of origin.
- After clearing, grading, earthmoving, or excavation is completed, the disturbed area should be treated by watering, revegetating, or spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.
- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off site. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the SBCAPCD prior to land use clearance for map recordation and land use clearance for finish grading for the structure.

- Prior to land clearance, the applicant shall include, as a note on a separate informational sheet to be recorded with map, these dust control requirements. All requirements shall be shown on grading and building plans.

Although construction-related impacts are not considered individually significant, the measures listed above are recommended to reduce construction-related emissions to the maximum degree feasible. These protective measures have been included in the GP/CLUP to address air quality impacts of future construction projects on a case-by-case basis.

Alternative 2a: City-Initiated Revisions. Alternative 2a has the same potential for short-term Class II impacts to air quality as the existing GP/CLUP (Alternative 1). Accordingly, Alternative 2a would have no new or modified impacts to Impact 3.3-1.

Alternative 2b: Options Associated with City-Initiated Revisions. Alternative 2b has the same potential for short-term Class II impacts to air quality as the existing GP/CLUP (Alternative 1). Accordingly, Alternative 2a would have no new or modified impacts to Impact 3.3-1.

Alternative 3: SEIR Recommended Revisions. Alternative 3 has the same potential for short-term Class II impacts to air quality as the existing GP/CLUP (Alternative 1). Accordingly, Alternative 2a would have no new or modified impacts to Impact 3.3-1.

Long-Term Impacts

- Alternative 1: No Changes (No Project). As indicated in the 2006 Final EIR, there are no long-term Class II impacts to air quality associated with implementation of the City's adopted GP/CLUP.
- Alternative 2a: City-Initiated Revisions. Same as Alternative 1.
- Alternative 2b: Options Associated with City-Initiated Revisions. Same as Alternative 1.
- Alternative 3: SEIR Recommended Revisions. Same as Alternative 1.

Class III Impacts

Short-Term Impacts

- Alternative 1: No Changes (No Project). As indicated in the 2006 Final EIR, there are no short-term Class III impacts to air quality associated with implementation of the City's adopted GP/CLUP.
- Alternative 2a: City-Initiated Revisions. Same as Alternative 1.
- Alternative 2b: Options Associated with City-Initiated Revisions. Same as Alternative 1.
- Alternative 3: SEIR Recommended Revisions. Same as Alternative 1.

Long-Term Impacts

Impact 3.3-2. GP/CLUP Growth Projections Are Consistent with the Clean Air Plan
Alternative 1: No Changes (No Project). As indicated in the 2006 Final EIR, vehicle use, energy consumption, and associated air pollutant emissions are directly related to households and population growth. The Santa Barbara County CAP relies on the most recent households/population estimates developed by SBCAG, which acts as the Metropolitan Planning Organization (MPO) for Santa Barbara County. The household/population forecasts

upon which the Santa Barbara County CAP are based are then used to estimate future emissions and devise appropriate strategies to attain State and Federal air quality standards. When household/population growth exceeds those forecasts, emissions inventories could be surpassed, which could adversely affect attainment of air quality standards.

The emission planning inventory is used to forecast Countywide emissions in order to determine whether the County's 2007 CAP will reduce emissions enough to attain the State 1-hour ozone standard while accounting for the growth that is expected in Santa Barbara County. To forecast future year emissions, estimates of the changes in the level of pollution-producing activities, known as activity indicators, are used. Examples of activity indicators include population, housing, employment, daily vehicle miles traveled, and daily vehicle hours.

SBCAG's 2002 Regional Growth Forecast (RGF), which was used in preparation of the 2007 CAP, projected a population of 34,300 for Goleta in 2030. In August 2007, after adoption of the City of Goleta GP/CLUP EIR but prior to issuance of the GP/CLUP Draft SEIR, SBCAG issued its 2005–2040 RGF, which projected a population of 37,300 for the City of Goleta in 2030. The proposed GP/CLUP projects an estimated population of 38,097 for the year 2030, which is within 2% of SBCAG's 2005-2040 RGF forecast.

Since the 2005–2040 RGF represents the most current population forecast published by SBCAG, and will presumably be relied upon by the APCD in its 2010 CAP, the City of Goleta believes that it is the most reasonable forecast to use in determining consistency with the CAP. Because the GP/CLUP buildout population forecast of 38,097 is generally consistent with that forecasted by SBCAG, the proposed GP/CLUP plan is considered within the SBCAG regional growth forecasts and therefore consistent with the in-progress CAP (note: the APCD website advises that APCD is currently working on the 2010 CAP). It is anticipated that the proposed GP/CLUP growth projections would not hinder attainment of State or Federal air quality standards. This impact is considered a Class III, less than significant, impact.

Plans or Policies That Would Further Reduce Impact 3.3-2. Adherence to the requirements of the State Implementation Plan and the provisions under the County's CAP will reduce these impacts.

In addition, implementation of the following GP/CLUP policies would further reduce impacts resulting from buildout under the Plan. Policies proposed for amendment are indicated in bold type:

- o Policy CE 12: Protection of Air Quality
- o Policy CE 13: Energy Conservation
- o Policy LU 1: Land Use Plan Map and General Policies
- o Policy LU 10: Energy-Related On- and Off-Shore Uses
- o **Policy LU 11: Nonresidential Growth Management**
- o Policy SE 1: Safety in General
- o Policy SE 7: Urban and Wildland Fire Hazards
- o Policy SE 8: Oil and Gas Industry Hazards
- o Policy SE 9: Airport-Related Hazards
- o Policy SE 10: Hazardous Materials and Facilities

- Policy SE 11: Emergency Preparedness
 - Policy PF 8: General Standards for Public Facilities
 - Policy TE 1: Integrated Multi-Modal Transportation System
 - Policy TE 2: Transportation Demand Management
 - Policy TE 7: Public Transit (Bus Transportation)
 - Policy TE 8: Rail Transportation
 - Policy TE 10: Pedestrian Circulation
 - Policy TE 11: Bikeways Plan
 - Policy TE 12: Transportation Systems Management
 - **Policy TE 13: Mitigating Traffic Impacts of Development**
 - Policy TE 14: Financing Transportation Improvements
 - Policy TE 15: Regional Transportation
- Alternative 2a: City-Initiated Revisions. Alternative 2a has the same potential for long-term significant adverse indirect impacts to air quality as the existing GP/CLUP (Alternative 1). The proposed amendment to Policy LU 11 and LU-IA-2 would remove nonresidential growth management policies from the GP/CLUP. The impacts of the removal of Policies LU 11 and LU-1A-2 are analyzed in Section 3.8.3.3. In summary, all growth within the City (commercial, industrial, residential, etc.) is currently regulated by GP/CLUP Figure 2-1 (Land Use Plan Map), adopted as part of the GP/CLUP in 2006. Given the small amount of developable vacant land left remaining in the City, GP/CLUP Figure 2-1 is an appropriate growth management tool, and the currently specified land use designations have accounted for an acceptable ratio of development. While removal of the nonresidential growth policies from the GP/CLUP and elimination of the GGMO may affect the pacing of nonresidential growth within the city, removal of those specific regulations would not alter the amount, type, or location of nonresidential growth in the City as previously analyzed in the 2006 Final EIR. Accordingly, the proposed amendments to Policy LU 11 and LU-IA-2 could affect the distribution, but likely not the quantity, of air pollutant emissions from land uses within the City. GP/CLUP population forecasts under this alternative would be similar to those assumed above for Alternative 1, would be generally consistent with SBCAG's published 2005-2040 Regional Growth Forecast, and therefore consistent with the in-progress CAP.

Changes to Policy TE 13 would clarify the City's commitment to minimizing traffic impacts for projects where traffic mitigations are not fully funded and would have no practical effect on traffic at a programmatic general plan level. Accordingly, revisions to the LU and TE policies under Alternative 2a would have no new or modified impacts to air quality.

Although not listed as mitigation for Impact 3.3-2, proposed policy amendment LU 3.2 would allow consideration of new areas for regional commercial development as appropriate through project review. Although this policy amendment could potentially introduce air emissions impacts to, or adjacent to, areas currently zoned or developed with residential uses, such impacts are highly project-specific and would be addressed through the project review required under the amended policy. That review would include considering the project's consistency with overall GP/CLUP goals and policies, as well as the air quality permitting requirements of applicable jurisdictional agencies. The necessity for agency permit compliance would not be affected. Accordingly, revisions to the Land Use Element policies under Alternative 2a would have no new or modified impacts to air quality.

- Alternative 2b: Options Associated with City-Initiated Revisions. Alternative 2b has the same potential for long-term Class III impacts as Alternative 2a. The text of the proposed amendment to Policy LU 11 and TE 13 is identical among these alternatives. Accordingly, revisions to the LU and TE policies under Alternative 2b would have no new or modified impacts to air quality. GP/CLUP population forecasts under this alternative would be similar to those assumed above for Alternative 1, would be generally consistent with SBCAG's published 2005-2040 Regional Growth Forecast, and therefore consistent with the in-progress CAP.
- Alternative 3: SEIR Recommended Revisions. For Policy LU 11, Alternative 3 has the same potential for long-term Class III impacts as Alternative 2a. The text of the proposed amendment to Policy LU 11 is identical among these alternatives. Accordingly, revisions to the Policy LU 11 under Alternative 3 would have no new or modified impacts to air quality. GP/CLUP population forecasts under this alternative would be similar to those assumed above for Alternative 1, would be generally consistent with SBCAG's published 2005-2040 Regional Growth Forecast, and therefore consistent with the in-progress CAP.

For Policy TE 13, Alternative 3 proposes no change to the policy, as the original purpose of the policy was to support alternative transportation. CEQA Guidelines Section 15370 provides that "mitigation" includes...."(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation"....and "(e) Compensating for the impact by replacing or providing substitute resources or environments." Moreover, CEQA Guidelines Section 15126.4 defines mitigation measures in general as "feasible measures which could minimize significant adverse impacts...." Based upon CEQA's inclusive definition of "mitigate," the current wording of Policy TE 13.4 (d) effectively authorizes alternative transportation as a strategy to mitigate (i.e., compensate) for traffic impacts, and therefore no changes to the policy are proposed.

Impact 3.3-3. The GP/CLUP Rate of Increase in Vehicle Miles Traveled is Greater Than the Rate of Population Growth for the Same Area

As indicated in the 2006 Final EIR, the Santa Barbara County 2030 Travel Forecast model used the population forecast and other socio-economic inputs (such as employment and households) to generate the regional vehicle miles traveled (VMT). Table 3.3-6 compares the 2030 VMT projections for the GP/CLUP land use scenario to the County forecasts. Because motor vehicles are the largest source of air emissions in the area, consistency can be assessed by reviewing the SBCAG 2030 Travel Forecast VMT data with respect to the VMT data from the proposed GP/CLUP. The General Plan would result in 185,346 VMT in the year 2030. Based on a year 2005 VMT of 143,978, this represents an average increase of 1.15 percent per year. The regional VMT forecasts under the 2030 Travel Forecast for Santa Barbara County show an increase of about 1.96 percent per year. The increase of VMT is attributable to an increase in the number of average trips per households, longer average trip length, and the average trip distance (SBCAG 2004). As such, VMT growth projected under the GP/CLUP is less than that forecast under the 2030 Travel Forecast for Santa Barbara County, and the project is therefore consistent.

**TABLE 3.3-6
COMPARISON OF 2030 VMT PROJECTIONS**

City / County	VMT Baseline (Year)	VMT Forecast (Year)	Increase	Average Annual Increase (%)
City of Goleta	143,978 (2005)	185,346 (2030)	41,368	1.15%
SBCAG Countywide	9,746,100 (2000)	15,468,600 (2030)	5,722,500	1.96%

Sources: City of Goleta General Plan Comprehensive Land Use Plan 2006, Santa Barbara County Association of Governments 2030 Travel Forecast, Section V, pages 22 – 27.

Although implementation of development consistent with the proposed GP/CLUP will result in an annual average VMT growth rate of 1.15 percent, which is greater than the rate of population growth for the Goleta region, the proposed project is consistent with the 2004 CAP and other regional plan strategies to reduce the number of trips and the length of trips in the region and to improve the balance between jobs and housing at the subregional level. The 2007 CAP recognizes that emissions due to trips and mode choices are not only a function of the transportation system but also relate to the proximity of housing and job-generating land uses and the proximity of jobs to transportation infrastructure and transit. The proposed GP/CLUP facilitates the development of housing opportunities in close proximity with the regional employment and transportation centers. Therefore, the proposed project is considered consistent with the goals and policies of SBCAG's Regional Transportation Plan and the SBCAPCD's 2007 CAP. This impact is considered a Class III, adverse but less than significant impact.

Plans or Policies That Would Further Reduce Impact 3.3-3. Adherence to the requirements of the State Implementation Plan, the provisions under the CAP, and the air quality elements addressed under the land use and conservation policies in the GP/CLUP would ensure impacts remain less than significant. No additional mitigation is required.

None of the proposed GP/CLUP amendments are provided in the 2006 Final EIR as measures to further reduce impacts. Accordingly, the proposed GP/CLUP amendments would not affect the analysis presented in Section 3.3.3.3 of the 2006 Final EIR for this impact, and no further discussion need be presented in this Supplemental EIR.

Impact 3.3-4. Long-Term Operational Contributions to Air Pollutant Emissions as a Result of GP/CLUP Buildout

As indicated in the 2006 Final EIR, operational emissions would be created from vehicle emissions, as well as stationary sources including the use of natural gas, the use of landscape maintenance equipment, the use of consumer products such as aerosol sprays, and other emission processes. Various industrial and commercial processes (e.g., dry cleaning) allowed under the proposed GP/CLUP would also be expected to release emissions; some of which could be of a hazardous nature. These emissions are controlled at the local and regional level through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits. Because the nature of these emissions cannot be determined at this time and these emissions are subject to further regulation and permitting, are not addressed further in this analysis.

Non-vehicular operational emissions resulting from activities associated with new residential and nonresidential development under the GP/CLUP operations would incrementally add to

total air emissions. Increased operational emissions would be considered a Class III (adverse but less-than-significant) impact on air quality.

Such potential adverse stationary operational impacts would be regulated and permitted on a project-by-project basis. No other mitigation is considered feasible to address the stationary operational air quality impacts.

None of the proposed GP/CLUP amendments are provided in the 2006 Final EIR as measures to further reduce impacts. Accordingly, the proposed GP/CLUP amendments would not affect the analysis presented in Section 3.3.3.3 of the 2006 Final EIR for this impact, and no further discussion need be presented in this Supplemental EIR.

Plans or Policies That Would Further Reduce Impact 3.3-4. Adherence to the requirements of the State Implementation Plan and the provisions under the County's CAP will reduce these impacts. CARB recommends various techniques to reduce land use-related emissions associated with individual developments within the GP/CLUP. These include techniques to limit emissions of toxic air contaminant's exposure to sensitive land uses. Based on the Land Use Siting Recommendations in CARB's *Air Quality and Land Use Handbook: A Community Health Perspective*, CARB's advisory recommendations are identified in Table 3.3-7 below.

**TABLE 3.3-7
RECOMMENDATIONS ON SITING NEW SENSITIVE LAND USES**

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000+ vehicles per day, or rural roads with 50,000+ vehicles per day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU units operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting new sensitive land uses immediately downwind of ports in the most heavily impact zones. Consult with Santa Barbara County Air Pollution Control District or CARB on the status of pending analysis of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with Santa Barbara County Air Pollution Control District to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operation with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with Santa Barbara County Air Pollution Control District. Do not site new sensitive land uses in the same building with dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

The analysis of potential long-term operational emissions for Alternatives 2a, 2b, and 3 under Impact 3.3-4 would be similar to that presented above for Impact 3.3-2.

Class IV Impacts

- Alternative 1: No Changes (No Project). As indicated in the 2006 Final EIR, there are no short- or long-term beneficial (Class IV) impacts to air quality associated with implementation of the City's adopted GP/CLUP.
- Alternative 2a: City-Initiated Revisions. Same as Alternative 1.
- Alternative 2b: Options Associated with City-Initiated Revisions. Same as Alternative 1.
- Alternative 3: SEIR Recommended Revisions. Same as Alternative 1.

3.3.3.4 Cumulative Impacts

Class I Impact

Impact 3.3-5. Cumulative ROG and NO_x Emissions

Emissions of ROG and NO_x from Citywide vehicle and nonvehicle operations resulting from buildout under the GP/CLUP, and the cumulative projects listed in Table 3-1 (to include the UCSB Long Range Development Plan (LRDP) and the Isla Vista Master Plan), would result in a significant contribution to cumulative increases in air emissions within the South Central Coast Air Basin, thereby adversely affecting the ability of all the various local agencies to achieve the goals and objectives of the 2007 County CAP. Santa Barbara County is currently in nonattainment of State standards for ozone emissions, and any project-generated new ozone precursor (ROG and NO_x) emissions could exacerbate such nonattainment. As such, the project's contribution to cumulative levels of ozone emission would be significant and unavoidable (Class I).

Class II Impacts

Impact 3.3-6. Cumulative PM₁₀ Emissions

PM₁₀ emissions from cumulative project construction activities within South Central Coast Air Basin are considered a Class II air quality impact. The City's adopted *Environmental Thresholds and Guidelines Manual* states that a project's contribution to cumulative air quality impacts, either regional or localized, should be evaluated based on existing programs and plans, including the County's Air Quality Attainment Plan (AQAP). Although Santa Barbara County is currently in nonattainment of State standards for PM₁₀ emissions, and any project-generated PM₁₀ emissions could exacerbate such nonattainment, implementation of standard City Grading Ordinance and SBCAPCD dust-control measures based on the County's AQAP would ensure that the project's contribution to cumulative levels of PM₁₀ emission would be adverse but less than significant.

Impact 3.3-7. Long-Term Cumulative Operational Contributions to Greenhouse Gas Emissions as a Result of GP/CLUP Implementation

Cumulative GHG emissions associated with implementation of the 2006 Goleta GP/CLUP, and the cumulative projects listed in Table 3-2, are considered a Class II air quality impact. Given the continued rapid evolution of climate change analyses, the City of Goleta has not formalized GHG thresholds within its *Environmental Thresholds and Guidelines Manual*. To address this topic consistent with current and future Federal and State legislation, Mitigation Measure AQ-1

regarding a GHG emissions reduction plan is recommended for inclusion in the GP/CLUP, and would reduce this impact to a less-than-significant level.

Alternative 1: No Changes (No Project). The 2006 Final EIR indicated that there are no long-term Class II impacts to air quality associated with implementation of the City's adopted GP/CLUP. However, the 2006 Final EIR did not address GHG emissions associated with implementation of the 2006 GP/CLUP. Implementation of the 2006 GP/CLUP would contribute to GHG emissions as follows:

Transportation Emissions

New vehicle carbon dioxide emissions would result from new residential, commercial, industrial, and public service development.

Direct Energy Consumption Emissions

New buildings allowed by the 2006 GP/CLUP would consume natural gas for heating, cooking, and other processes and other area sources.

Indirect Electricity GHG Emissions

New buildings allowed by the 2006 GP/CLUP would consume electricity.

Industrial Emissions

New industries would also consume fossil fuels and other GHGs for industrial processes.

Emissions Associated With Landfills

Development allowed by the 2006 GP/CLUP would result in increased generation of waste which would require disposal in a landfill, which would increase methane emissions. Given the current and planned implementation of landfill gas capture and use of waste to energy technology in the future, future waste disposal may not contribute substantial amounts of methane. However, until full capture and reuse of landfill gas is achieved, there would be increased emissions associated with additional waste disposal.

Agricultural Emissions

Based on trends in agricultural employment, no net expansion in agricultural development is projected for 2030 or buildout. Therefore, it is expected that there would not be substantial changes on overall agricultural emissions.

Emissions Associated With Land Use Changes

Development allowed by the 2006 GP/CLUP would result in the conversion of natural vegetation and agricultural lands that would result in the loss of carbon sinks. Given the uncertainties associated with estimated GHG fluxes associated with natural vegetation and agricultural lands, the potential loss of carbon sinks was not quantified, but would nevertheless contribute GHG emissions along with other sources. As discussed below, a number of 2006 GP/CLUP policies seek to limit the amount of natural land conversion due to urban growth.

2006 GP/CLUP Policies and Proposed 2008 Amendments

The policies in the 2006 GP/CLUP that relate to reduction of GHGs are referenced below by element and concern six different subjects: land use, transportation, water efficiency, energy, open space/conservation, and waste reduction.

Policy CE 12.4, Minimizing Air Pollution from Transportation Sources, address focusing growth in a limited number of communities that can provide services, jobs, and housing. This is

intended to result in a reduction in VMT. This policy also would result in a limitation on the conversion of agricultural land to residential and commercial development.

Furthermore, implementation of the following GP/CLUP policies could reduce impacts resulting from buildout under the Plan:

- Policy CE 13: Energy Conservation
- Policy HE 3: Linkage of Housing and Jobs
- Policy TE 7: Public Transit (Bus Transportation)
- Policy TE 8: Rail Transportation
- Policy TE 10: Pedestrian Circulation
- Policy TE 11: Bikeways Plan
- Policy TE 15: Regional Transportation

There is no current preparation of a GHG emission reduction plan or other comprehensive framework for reducing GHG emissions in the City for discretionary development, and thus without the articulation of specific requirements for GHG reductions, the 2006 GP/CLUP would result in a considerable contribution to cumulative GHG emissions and global climate change. Although existing GP/CLUP policies would reduce GHG emissions, the proposed GP/CLUP amendments are not sufficient measures to reduce GHG emissions impacts to levels less than significant. Therefore, Mitigation Measure AQ-1, below, is proposed to augment existing 2006 GP/CLUP policies. Implementation of this mitigation measure would reduce impacts to less than significant for the 2030 planning horizon.

Alternative 2a: City-Initiated Revisions. Alternative 2a has the same potential for long-term significant adverse GHG emissions impacts as the existing GP/CLUP (Alternative 1). Alternative 2a's impacts would also be mitigated to less than significant levels for the 2030 planning horizon with implementation of the aforementioned mitigation measure.

The policies identified in the 2006 GP/CLUP for land use would contribute to GHG emissions. In particular, Policy LU 3.2 provides for a wide range of retail commercial uses including, but not limited to, larger scale uses that are typically land-extensive. This policy as it currently stands limits lands designated in this category to existing locations of similar large-box uses and states that no additional areas shall be designated. Proposed amendments to this policy would change this language to allow regional commercial development as determined appropriate through project review. This proposed amendment could affect the distribution, but likely not the quantity, of GHG emissions from land uses within the City because the locations of future retail commercial uses would be determined on a case-by-case basis, rather than being limited to existing locations defined by existing Policy LU 3.2.

In addition, as described previously, the proposed amendment to Policy LU 11 and LU-IA-2 would remove nonresidential growth management policies from the GP/CLUP. As evaluated in this Supplemental EIR under Section 3.8, Impact 3.8-2, Policy LU 11, LU-IA-2, and its subordinate policies were initiated for removal because those growth policies were considered redundant and would result in no additional impacts due to the previously adopted GGMO. Based upon further analysis, it was determined that nonresidential cumulative growth (through buildout) within the City is already regulated by Figure 2-3 (Land Use Plan Map), which determines the type, location, and extent of land uses located within the City. Additionally, jobs/housing balance impacts associated with LU Figure 2-1 were evaluated in the 2006 Final

EIR. In sum, while removal of the nonresidential growth policies from the GP/CLUP and elimination of the GGMO may affect the pacing of such growth within the City, removal of those specific regulations would not alter the amount, type, or location of nonresidential growth in the City as previously analyzed in the 2006 Final EIR. Accordingly, the proposed amendments to Policy LU 11 could affect the distribution, but likely not the quantity, of GHG emissions from land uses within the City.

The policies identified in the 2006 GP/CLUP for open space and tree protection will help reduce GHG emissions. In particular, Policy OS 7.3 requires preservation of natural resources including, but not limited to, native grasslands, streams and associated riparian areas, wetlands, lakes, and ponds. In addition, Policy CE 9.4 requires that impacts to native trees and woodlands be avoided in the design of projects, except where no feasible alternative exists. These policies could help with preserving natural CO₂ sinks within the City. Proposed amendments to these policies would not occur in a manner that would weaken the preservation of associated CO₂ sinks.

Alternative 2b: Options Associated with City-Initiated Revisions. Alternative 2b has the same potential for long-term significant adverse GHG emissions impacts as the existing GP/CLUP (Alternative 1). Impacts from Alternative 2b would also be mitigated to less than significant for the 2030 planning horizon with implementation of the aforementioned mitigation measure.

Alternative 3: SEIR Recommended Revisions. Alternative 3 has the same potential for long-term significant adverse GHG emissions impacts as the existing GP/CLUP (Alternative 1). Alternative 3's impacts would also be mitigated to less than significant for the 2030 planning horizon with implementation of the aforementioned mitigation measure.

3.3.3.5 Mitigation

Modifications to Proposed GP/CLUP Policies

Proposed modifications to selected GP/CLUP policies are presented in Chapter 2.0 as amendments to the GP/CLUP. However, the following mitigation measure is proposed as a new policy beyond amendments to existing policies which are identified as alternatives in this Supplemental EIR.

Mitigation Measure AQ-1: Add a Policy that Requires Development of a Greenhouse Gas Reduction Plan

Within 24 months of the adoption of the General Plan Amendments, the City of Goleta will develop a GHG Reduction Plan with implementation to commence 12 months thereafter. The Plan is intended to address City activities, as well as activities and projects subject to ministerial and/or discretionary approval by the City.

At a minimum, the Plan will:

- a. Establish an inventory of current GHG emissions in the City of Goleta including, but not limited to, residential, commercial, industrial, and agricultural emissions.
- b. Forecast GHG emissions for 2020 for City operations.
- c. Forecast GHG emissions for areas within the jurisdictional control of the City for business-as-usual conditions.
- d. Identify methods to reduce GHG emissions.

- e. Quantify the reductions in GHG emissions from the identified methods.
- f. Establish requirements for monitoring and reporting of GHG emissions.
- g. Establish a schedule of actions for implementation.
- h. Identify funding sources for implementation.
- i. Identify a reduction goal for the 2030 Planning Horizon.
- j. Consider a biological resource component.

During preparation of the GHG Reduction Plan, the City will also continue to implement City policies regarding land use and circulation as necessary to further achieve the 2020 and 2030 reduction goals and measures to promote urban forestry and public awareness concerning climate change.

In addition to the above, the GHG Reduction Plan will include a plan for City Operations that will address, but is not limited to, the following measures: an energy tracking and management system; energy-efficient lighting; lights-out-at-night policy; occupancy sensors; heating, cooling, and ventilation system retrofits; ENERGY STAR appliances; green or reflective roofing; improved water pumping energy efficiency; central irrigation control system; energy-efficient vending machines; preference for recycled materials in purchasing; use of low or zero-emission vehicles and equipment and recycling of construction materials in new city construction; conversion of fleets (as feasible) to electric and hybrid vehicles; and solar roofs.

Other Mitigation

No additional mitigation is identified.

3.3.3.6 Residual Impacts

Implementation of the GP/CLUP policies, as amended under any of the alternatives under consideration herein, would reduce all Class II air quality impacts to less-than-significant levels.

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