5.3 AIR QUALITY

The six components of the project analyzed herein are:

1) Adoption and implementation of the General Plan;
2) Adoption and implementation of the revised Zoning Code;
3) Adoption and implementation of the revised Subdivision Code;
4) Adoption and implementation to an amendment to the Noise Code;
5) Adoption and implementation of the Magnolia Avenue Specific Plan (MASP); and
6) Adoption and implementation of the Citywide Design and Sign Guidelines.

This analysis focuses on the project's six components listed above and the subsequent potential impacts related to air quality. However, air quality impacts are only associated with the adoption and implementation of the proposed General Plan, adoption and implementation of the revised Zoning Code, and adoption and implementation of the Magnolia Avenue Specific Plan, as these actions have the potential to have air quality impacts in the Planning Area. The Subdivision Code, Noise Code Amendment and Citywide Design and Sign Guidelines only address site planning, building design, and community aesthetics and are thus not considered relevant to this analysis.

Since an initial study was not prepared with the issuance of the Notice of Preparation, the focus of the following discussion is related to the potential impacts to conflicts or obstructions to the implementation of any applicable air quality plan, violations of any air quality standard or contributions to any existing projected air quality violation, impacts resulting in a cumulative considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard, exposure of sensitive receptors to substantial pollutant concentrations and creation of objectionable odors affecting a substantial number of people.

The Air Quality Section of this EIR has been changed from the previously circulated EIR. In addition to the overall changes listed in the Project Description Section of this EIR, background information and analysis was added for the Planning Area. Specifically, this Section analyzed three density scenarios; Typical, Maximum, and Maximum with PRD. PM-2.5 analysis was also included due to the adoption of its significance threshold in October 2006. Discussion of global warming and greenhouse gases (GHG) was added since related legislation was passed in 2006. Information for all topics within this Section was verified and updated as necessary.

This analysis of air quality impacts uses the most current methodologies prescribed by the South Coast Air Quality Management District (SCAQMD), including the URBEMIS 2002 computer program, Version 8.7.0. **Appendix C** contains the worksheets and computations that document the analysis and conclusions presented in this Section.

In addition to other reference documents, the following references were used in the preparation of this Section of the EIR:

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- California Air Resources Board, *Population and Vehicle Trends Report*, April 27, 2004. (Available at http://www.arb.ca.gov/app/emsinv/trends/ems_trends.php) (CARB 2004)
- California Air Resources Board, *Proposed Methodology to Model Carbon Dioxide Emissions and Estimate Fuel Economy*, W. Wong, A. Agrawal, 1994. (Available at http://www.arb.ca.gov/msei/onroad/pubs.htm) (CARB 1994)
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- California Executive Department, *Executive Order S-3-05 by the Governor of the State of California,* June 2005. (Available at http://www.dot.ca.gov/hq/energy/Exec%20Order%20S-3-05.pdf)

- City of Riverside, *City of Riverside General Plan*, 1994. (Available at the City of Riverside.)
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- Meyer, Mohaddes Associates, *City of Riverside General Plan 2025 Program Transportation Study*, July 2004, revised April 2007 ("Transportation Study"). (Available at City of Riverside, Appendix H of the General Plan)
- South Coast Air Quality Management District, *Air Quality Management Plan*, 2003. (Available at http://www.aqmd.gov/aqmp/AQMPintro.htm)
- South Coast Air Quality Management District, *Air Quality Data*, 1996-2005. (Available at http://ozone.aqmd.gov/smog)
- South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993. (Available at http://www.aqmd.gov/ceqa/hdbk.html)
- South Coast Air Quality Management *District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, May 6, 2005. (Available at http://www.aqmd.gov/prdas/aqguide/doc/aq_guidance.pdf) (SCAQMD 2005)
- South Coast Air Quality Management District, *Final PM2.5 Calculation Methodology and PM2.5 Significance Thresholds*, October 2006. (Available at http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html)
- U.S. Environmental Protection Agency, *Six Common Air Pollutants.* (Available at www.epa.gov/air/urbanair/6poll.html) (EPA 2005)

Setting

The City of Riverside lies within the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB consists of Orange County together with the coastal and mountain portions of Los Angeles, Riverside and San Bernardino counties.

Topography, atmospheric inversions, and dominant onshore flows affect regional and local air quality within the SCAB. Topographic features such as the San Gabriel, San Bernardino, and San Jacinto Mountains form natural barriers to the horizontal dispersion of air contaminants. The presence of atmospheric inversions limits the vertical dispersion of air pollutants. With an inversion, the temperature initially follows a normal pattern of decreasing temperature with increasing altitude, however, at some elevations, the trend reverses and temperature begins to increase as altitude increases. This transition to increasing temperature establishes the effective mixing height of the atmosphere and acts as a barrier to vertical dispersion of pollutants. Dominant onshore flow provides the driving mechanism for both air pollution transport and pollutant dispersion. Air pollution generated in coastal areas is transported east to inland receptors by the onshore flow during the daytime until a natural barrier (the mountains) is confronted, limiting the horizontal dispersion of pollutants. The result is a gradual degradation of

air quality from coastal areas to inland areas, which is most evident with photochemical pollutants (formed by reactions under sunlight), such as ozone.

Climate

Climate in the SCAB is determined by terrain and geographical location. The City of Riverside lies within the terrain south of the San Bernardino Mountains, east of the Santa Ana Mountains and west of the San Jacinto Mountains. The Box Springs Mountains are northeast of the City, however, these mountains are not as relevant as the San Bernardino Mountains considering the elevation and ability to defect or funnel air. The climate in the Basin is typical of southern California's Mediterranean climate, which is characterized by dry, warm summers and mild winters. Winters typically have infrequent rainfall, light winds and frequent early morning fog and clouds that turn to hazy afternoon sunshine.

The following includes factors that govern microclimate differences among inland locations within the Basin: 1) the distance of the average air trajectory from the site to the ocean; 2) the site elevation; 3) the existence of any intervening terrain that may affect airflow or moisture content; and 4) the proximity to canyons or mountain passes. As a general rule, locations farthest inland from the ocean have the hottest summer afternoons, the lowest rainfall, and the least amount of fog and clouds. Foothill communities in the Basin have greater levels of precipitation, cooler summer afternoons and may be exposed to wind funneling through nearby canyons during Santa Ana winds. Terrain will generally steer local wind patterns. The project site is located in an open valley area toward the eastern reaches of the Basin with no intervening hills or mountains nearby to divert the prevailing winds.

Precipitation and Temperature

Annual average temperatures in the Basin typically range in the low to mid-60s (degrees Fahrenheit). Temperatures above 100 degrees in the summer are normal and can occur in all portions of the Basin, while winter month temperatures can reach the lower 30s.

The rainy season in the Basin is November to April. Rainfall averages vary over the Basin. Riverside averages 10 inches of rainfall per year, while Los Angeles averages 14 inches. Rainy days vary from 5 to 10 percent of all days in the Basin, with the most frequent occurrences of rainfall near the coast.

Winds

The interaction of land (offshore) and sea (onshore) breezes control local wind patterns in the area. Daytime winds typically flow from the coast to the inland areas, while the pattern typically reverses in the evening, flowing from the inland areas to the ocean. Air stagnation may occur in the early evening and early morning during periods of transition between day and nighttime flows.

Approximately 5 to 10 times a year, the project site vicinity experiences strong, hot, dry desert winds known as the Santa Ana winds. These winds, associated with atmospheric high pressure,

originate in the upper deserts and are channeled through the passes of the San Bernardino Mountains and into the inland valleys. Santa Ana winds can last for a period of hours or days, and gusts of over 60 miles per hour have been recorded.

High winds, such as the Santa Ana winds, affect dust generation characteristics and create the potential for off-site air quality impacts, especially with respect to airborne nuisance and particulate emissions. Local winds in the project area are also an important meteorological parameter because they control the initial rate of dilution of locally generated air pollutant emissions.

Air Pollution Constituents

Air pollutants are classified as either primary, or secondary, depending on how they are formed. Primary pollutants are generated daily and are emitted directly from a source into the atmosphere. Examples of primary pollutants include: carbon monoxide (CO), nitrogen dioxide (NO_2), nitric oxide (NO), sulfur dioxide (SO_2), particulates (PM-10 and PM-2.5) and various hydrocarbons (HC), also known as volatile organic compounds (VOC) or reactive organic gases (ROG). The predominant source of air emissions generated by the project development is expected to be vehicle emissions. Motor vehicles primarily emit CO, NO_X and ROG/HC. Air emissions could also be expected from stationary sources associated with development, such as boilers, furnaces, etc.

Secondary pollutants are created over time and occur within the atmosphere as chemical and photochemical reactions take place. An example of a secondary pollutant is ozone (O_3), which is one of the products formed when NO_X reacts with hydrocarbons (HC), in the presence of sunlight. Other secondary pollutants include photochemical aerosols. Secondary pollutants, such as oxidants, represent major air quality problems in the Basin.

The Federal Clean Air Act of 1970 established the National Ambient Air Quality Standards (NAAQS). Six "criteria" air pollutants were identified using specific medical evidence available at that time, and NAAQS were established for those chemicals. The State of California has adopted the same six criteria pollutants, but has established different allowable levels (see **Table 5.3-A**). The six criteria pollutants are: ozone, carbon monoxide, particulates less than 10 microns in size and particulate matter less than 2.5 microns in size (PM-10 and PM-2.5), nitrogen dioxide, sulfur dioxide, and lead. The following is a further discussion of the *criteria pollutants*.

- **Carbon Monoxide (CO)** – A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing substances. Concentrations of CO are generally higher during the winter months when meteorological conditions favor the build-up of primary pollutants. Automobiles are the major source of CO in the Basin, although various industrial processes also emit CO through incomplete combustion of fuels. In high concentrations, CO can cause serious health problems in humans by limiting the red blood cells' ability to carry oxygen (SCAQMD 1993).

- **Oxides of Nitrogen (NO_X)** – Those that are important in air pollution are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed by a

combination of nitrogen and oxygen when combustion takes place under high temperatures and pressures. NO_2 is a reddish-brown gas formed by the combination of NO with oxygen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations, as well as ships, railroads and aircraft, are the primary sources of NO_X. NO_2 at atmospheric concentrations is a potential irritant and can cause coughing in healthy people, can alter respiratory responsiveness and pulmonary functions in people with preexisting respiratory illness, and potentially lead to increased levels of respiratory illness in children (EPA 2005).

- **Ozone (O_3)** – A colorless toxic gas that irritates the lungs and damages materials and vegetation. During the summer's long daylight hours, plentiful sunshine provides the energy needed to fuel photochemical reactions between NO_2 and VOC, which result in the formation of O_3. Conditions that lead to high levels of O_3 are adequate sunshine, early morning stagnation in source areas, high surface temperatures, strong and low morning inversions, greatly restricted vertical mixing during the day, and daytime subsidence that strengthens the inversion layer (all of which are characteristic of Western Riverside County). Ozone represents the worst air pollution-related health threat in the SCAB as it affects people with preexisting respiratory illness as well reduces lung function in healthy people. Studies have shown that children living with the SCAB experience a 10-15% reduction in lung function (SCAQMD 1993). Sources of the pollutants that create ozone include cars, power plants, industrial boilers, refineries, chemical plants, and household and domestic chemicals.

- **Atmospheric Particulate Matter (PM)** – Made up of fine solid and liquid particles, such as soot, dust, aerosols, fumes and mists. PM-10 consists of particulate matter that is 10 microns or less in diameter, and PM-2.5 consists of particulate matter of 2.5 microns or less in size. Both PM-10 and PM-2.5 can be inhaled into the deepest part of the lung, attributing to health effects. The presence of these fine particles by themselves cause lung damage and interfere with the body's ability to clear its respiratory tract. Said particles can also act as a carrier of other toxic substances (SCAQMD 1993). The sources contributing to particulate matter pollution include road dust, windblown dust, agriculture, construction, fireplaces and wood burning stoves, and vehicle exhaust. Specifically, SCAQMD data indicates the largest component of PM-10 comes from dust (unpaved roads, unpaved yards, and vacant land that has been disked). PM-2.5 particles are mostly manmade particles resulting from combustion sources such as cars, trucks, and other vehicle exhaust, as well as other stationary combustion sources.

- **Sulfur Dioxide (SO_2)** – A colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. SO_2 can result in temporary breathing impairment in asthmatic children and adults engaged in active outdoor activities. When combined with PM, SO_2 can cause symptoms such as shortness of breath and wheezing and, with long-term exposure, lead to the exacerbation of existing cardiovascular disease and respiratory illnesses (EPA 2005). Although SO_2 concentrations have been reduced to levels well below State and Federal standards, further reductions in SO_2 emissions are needed because SO_2 is a precursor to sulfate and PM-10. Major sources of Sulfur Dioxide

include power plants and industrial boilers. The highest levels of Sulfur Dioxide emissions typically occur near large industrial complexes.

- **Lead (Pb)** – Lead concentrations once exceeded the State and Federal air quality standards by a wide margin, but have not exceeded State or Federal air quality standards at any regular monitoring station since 1982. Health effects associated with lead include neurological impairments, mental retardation, and behavioral disorders. At low levels, lead can damage the nervous systems of fetuses and result in lowered IQ levels in children (EPA 2005). Though special monitoring sites immediately downwind of lead sources recorded many localized violations of the State standard in 1994, no violations have been recorded at these stations since 1996. Unleaded gasoline has greatly contributed to the reduction in lead emissions in the SCAB. Since the proposed project will not involve leaded gasoline, or other sources of lead emissions, this criteria pollutant is not expected to be a factor with project implementation.

Toxic Air Contaminants

Toxic air contaminants (TACs) are chemicals generally referred to as those contaminants known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. There are hundreds of air toxics, and exposure to these pollutants can cause or contribute to cancer or non-cancer health effects such as birth defects, genetic damage, and other adverse health effects. Effects may be both chronic (i.e., of long duration) and acute (i.e., severe but of short duration) on human health. Acute health effects are attributable to sudden exposure to high quantities of air toxics. These effects can include nausea, skin irritation, respiratory illness, and, in some cases, death. Chronic health effects usually result from low-dose, long-term exposure from routine releases of air toxics. The effect of major concern for this type of exposure is cancer, which typically requires a latency period of 10-30 years after exposure to develop.

In 2000, the SCAQMD released the Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-II). The monitoring portion of MATES-II was designed to measure numerous air toxic compounds at different locations in the Basin in order to establish a baseline of existing air toxic ambient concentrations, as well as risk level data, and to assist in the assessment of modeling performance accuracy. Ten sites were selected and air samples were collected for up to one year. The ten locations are in Anaheim, Burbank, Compton, Fontana, Huntington Park, Long Beach, Los Angeles, Pico Rivera, Rubidoux, and Wilmington. Rubidoux is the nearest monitoring site to the proposed project.

The addition of diesel particulate toxicity dramatically increases carcinogenic risk. The modeled cancer risk for diesel particulates for this site is approximately 1000 in one million. This cancer risk is what residents are currently exposed to in the Basin.

Diesel Emissions

Diesel engines utilize compression, contrary to standard gasoline engines, which use conventional spark plugs, to ignite fuel. Engines that use compression typically run at higher

temperatures than gasoline engines, thereby causing the oxygen and nitrogen present in air during intake, to form oxides of nitrogen (NO_X). To combat NO_X production in a diesel engine, the engine temperature can be reduced, but then increased amounts of particulate matter (PM) and hydrocarbons (HC) are produced as byproducts of the now uncombusted fuel. Hydrocarbons, once in the atmosphere, react with NO_X to produce ozone (O_3), among other pollutants.

Diesel exhaust composition is dependent on many factors: fuel composition, engine type, lubricating oils, and emission control systems. Diesel exhaust is a complex mixture of thousands of gases and fine particles. The gaseous fraction of diesel exhaust is comprised of typical combustion gases such as oxygen, carbon dioxide, nitrogen, and water vapor. However, air pollutants such as carbon monoxide, sulfur oxides (SOx), nitrogen oxides (NO_X), volatile hydrocarbons and low-molecular weight polycyclic aromatic hydrocarbons (PAH) and PAH-derivatives are also components of the gaseous fraction. Additionally, some of the gaseous components, such as benzene, are known carcinogens.

The particle fraction of diesel exhaust is comprised of aggregates of carbon particles with inorganic and organic substances adhered to them. The inorganic fraction of diesel exhaust particles consists of solid carbon (or elemental carbon) particles ranging in size from 0.01 to 0.08 microns in diameter. The organic fraction consists of soluble organic compounds such as aldehydes, alkanes, alkenes, PAH and PAH derivatives. The total component of a diesel particle (inorganic + organic) is in the fine particle range of 10 microns in size or less (width of a human hair), but 92 percent of these diesel particles are even smaller, at less than 1 micron in diameter.

Diesel particles can remain airborne for up to 10 days because of their small size. Therefore, they do not fall-out or precipitate easily, and remain an air quality problem for some time after being emitted. Scientists use elemental carbon as a surrogate since there is no current technology available to monitor directly for diesel particles. It is important to understand that the cancer risks estimated by the CARB related to mobile-source diesel exhaust and health risk assessment studies represent the probability that a person develops cancer; the estimated risks do not represent mortality rates.

Greenhouse Gases and the Global Warming Effect

"Stratospheric ozone depletion" refers to the slow destruction of naturally occurring ozone, which lies in the upper atmosphere (called the stratosphere) and which protects Earth from the damaging effects of solar ultraviolet radiation. Certain compounds, including chlorofluorocarbons (CFCs,) halons, carbon tetrachloride, methyl chloroform, and other halogenated compounds, accumulate in the lower atmosphere and then gradually migrate into the stratosphere. In the stratosphere, these compounds participate in complex chemical reactions to destroy the upper ozone layer. Destruction of the ozone layer increases the penetration of ultraviolet radiation to the Earth's surface, a known risk factor that can increase the incidence of skin cancers and cataracts, contribute to crop and fish damage, and further degrade air quality (SCAQMD 2005).

Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. This layer of gases in the atmosphere functions much the same as glass in a greenhouse (i.e.,

both prevent the escape of heat). This is why global warming is also known as the "greenhouse effect." Gases responsible for global warming and their relative contribution to the overall warming effect are carbon dioxide (55 percent), CFCs (24 percent), methane (15 percent), and nitrous oxide (6 percent). It is widely accepted that continued increases in greenhouse gases (GHG) will contribute to global warming although there is uncertainty concerning the magnitude and timing of the warming trend (SCAQMD 2005). Human activities associated with industrial/manufacturing, utilities, transportation, residential, and agricultural sectors attribute to these GHG (CEC 2006a). Transportation is responsible for 41% of the State's GHG emissions, followed by electricity generation (CEC 2006a). Emissions of CO_2 and NO_X are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing associated with agricultural practices and landfills.

Global warming gases and ozone-depleting gases include, but are not limited to, the following:

Carbon dioxide – Carbon dioxide results from fossil fuel combustion in stationary and mobile sources. It contributes to the greenhouse effect, but not to stratospheric ozone depletion. In the SCAB, approximately 48 percent of carbon dioxide emissions come from transportation, residential and utility sources, which contribute approximately 13 percent each, 20 percent come from industry, and the remainder comes from a variety of other sources.

Chlorofluorocarbons – Chlorofluorocarbons (CFCs) are emitted from blowing agents used in producing foam insulation. They are also used in air conditioners and refrigerators and as solvents to clean electronic microcircuits. CFCs are primary contributors to stratospheric ozone depletion and to global warming. Sixty-three percent of CFC emissions in the SCAB come from the industrial sector. Federal regulations require service practices that maximize recycling of ozone-depleting compounds (both CFCs, hydro-chlorofluorocarbons and their blends) during the servicing and disposal of air-conditioning and refrigeration equipment. SCAQMD Rule 1415 – Reduction of Refrigerant Emissions from Stationary Refrigeration and Air Conditioning Systems requires CFC refrigerants to be reclaimed or recycled from stationary refrigeration and air conditioning systems. SCAQMD Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions From Sterilization or Fumigant Processes requires recovery of reclamation of CFCs at certain commercial facilities and eliminates the use of some CFCs in the sterilization processes. Some CFCs are classified as TACs and regulated by SCAQMD Rule 1401 – New Source Review of Toxic Air Contaminants and SCAQMD Rule 1402 Control of Toxic Air Contaminants from Existing Sources.

Halons – These compounds are used in fire extinguishers and behave as both ozone depleting and greenhouse gases. Halon production ended in the United States in 1993. SCAQMD Rule 1418 – Halon Emissions from Fire Extinguishing Equipment requires the recovery and recycling of halons used in fire extinguishing systems and prohibits the sale of halon in small fire extinguishers.

Hydro-chlorofluorocarbons – HCFCs are solvents, similar in use and chemical composition to CFCs. The hydrogen component makes HCFCs more chemically reactive than CFCs, allowing them to break down more quickly in the atmosphere. These

compounds deplete the stratospheric ozone layer, but to a much lesser extent than CFCs. HCFCs are regulated under the same SCAQMD rules as CFCs.

Methane – Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, and leaks in natural gas pipelines. It is a greenhouse gas and traps heat 40-70 times more effectively than carbon dioxide. In the SCAB, more than 50 percent of human-induced methane emissions come from natural gas pipelines, while landfills contribute 24 percent. Methane emissions from landfills are reduced by SCAQMD Rule 1150.1 – Control of Gaseous Emissions from Active Landfills. Methane emissions from petroleum sources are reduced by a number of rules in SCAQMD Regulation XI that control fugitive emissions from petroleum production, refining, and distribution.

1,1,1, -trichloroethane (TCA) – TCA (methyl chloroform) is a solvent and cleaning agent commonly used by manufacturers. It is less destructive on the environment than CFCs or HCFCs, but its continued use will contribute to global warming and ozone depletion. 1,1,1-trichloroethane (TCA) is a synthetic chemical that does not occur naturally in the environment. No TCA is supposed to be manufactured for domestic use in the United States after January 1, 2002 because it affects the ozone layer. TCA had many industrial and household uses, including use as a solvent to dissolve other substances, such as glues and paints; to remove oil or grease from manufactured metal parts; and as an ingredient of household products such as spot cleaners, glues, and aerosol sprays. SCAQMD regulates this compound as a toxic air contaminant under Rules 1401 and 1402.

Other resource areas could be affected as a result of GHGs, including from incremental increases of new GHGs emissions. For example, increased global average temperature increases ocean temperatures and the Pacific Ocean strongly influences the climate within California. If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. According to a California Energy Commission report, the snowpack portion of the supply could potentially decline by 70%–90% by the end of the 21st century (CEC 2006b). This phenomenon could lead to significant challenges securing an adequate water supply for a growing population. Further, the increased ocean temperature could result in increased moisture into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential for flood events, placing more pressure on California's levee/flood control system. Sea level has risen approximately 7 inches during the last century and, according to the CEC report, it is predicted to rise an additional 22–35 inches by 2100, depending on the future GHG emissions levels (CEC 2006b). Another cause of shrinking beaches is increased erosion from winter storms. Currently, many beaches are protected from erosion through sand replacement programs, which bring in sand from outside sources to replace the diminishing natural sand. Southern California beaches that participate in these nourishment programs include Santa Monica, Venice, and Newport Beach. As global warming continues, the cost of these beach nourishment programs will rise above their current millions of dollars a year, making them no longer economically feasible (CEC 2006b). As the existing climate throughout California changes over time, mass migration of species, or worse, failure of species to migrate in time to adapt to the changes in climate, could also result.

Additionally, climate change could potentially increase fire hazards caused by decreased precipitation.

The Montreal Protocol on Substances That Deplete the Ozone Layer controls the phase-out of ozone depleting compounds (ODCs). Under this international agreement, several organizations report on the science of ozone depletion, implement projects to help move away from ODCs, and provide a forum for policy discussions. The SCAQMD supports State, Federal and international policies to reduce levels of ozone depleting gases through its Global Warming Policy and rules. Further, SCAQMD has developed ODC Replacement Guidelines to facilitate transition from ODCs to substances that are the most environmentally benign (SCAQMD 2005).

Unlike criteria air pollutants and TACs, which are pollutants of regional and local concern, global warming is a global problem and GHGs are global pollutants. Worldwide, California is the 12th to 16th largest emitter of CO_2, and is responsible for approximately 2% of the world's CO_2 emissions (CEC 2006a). In 2004, California produced 492 million gross metric tons of carbon dioxide-equivalent (CEC 2006a).

In order to reduce GHGs in California, Governor Arnold Schwarzenegger signed Executive Order S-3-05 in June of 2005. This Order requires the State of California to achieve the following GHG emission reductions: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emission levels to 1990 levels; by 2050, reduce GHG emission levels to 80 percent below 1990 levels.

In September 2006, California Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 establishes targets for regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on Statewide GHG emissions. AB 32 applies to sources or categories of sources, which are defined as any source of GHG emissions whose emissions, are at a level of significance as determined by the ARB.

At the time of writing no air districts within California, including SCAQMD, have any recommended quantitative emissions thresholds for determining significance associated with GHG from development projects. Nevertheless, this EIR analyzes potential GHG emissions in the context of the Project's cumulative impacts.

Monitored Air Quality

The City of Riverside is located within SCAQMD Source Receptor Area (SRA) 23. The most recent published data for SRA 23 is presented in Table 5.3-A, *Air Quality Monitoring Summary 1996-2005*. This data indicates that the baseline air quality conditions in the project area include occasional events of very unhealthful air. However, the frequency of smog alerts has dropped significantly in the last decade. Atmospheric concentrations of ozone and particulate matter are the two most significant air quality concerns in the project area. The yearly monitoring records document that prior to 1996, approximately one-third or more of the days each year experienced a violation of the State hourly ozone standard, with around ten days annually reaching first stage alert levels of 0.20 parts per million (ppm) for one hour. It is encouraging to note that ozone

levels have decreased in the last few years with less than one-fifth of the days each year experiencing a violation of the State hourly ozone standard since 1998. Locally, no second stage alert (0.35 ppm/hour) has been called by SCAQMD in the last ten years.

Monitoring for PM-2.5 did not begin until 1999. Since then, the annual standard has been consistently exceeded in SRA 23. The 1997 Federal annual average standard for PM-2.5 (15 μg/m3) was upheld by the U.S. Supreme Court in February 2001. The State standard annual average standard for PM-2.5 (12 μg/m3) was finalized in 2003 and became effective on July 5, 2003.

The SCAQMD revised their Air Quality Significance Thresholds in October of 2006 to now include daily thresholds for PM-2.5 during both project construction and operation. Since the current air quality models do not analyze PM-2.5 emissions, SCAQMD has provided methodology for calculating PM-2.5 emission levels (SCAQMD 2006).

The sources contributing to particulate matter pollution include road dust, windblown dust, agriculture, construction, fireplaces and wood burning stoves, vehicle exhaust, and NO_X and SO_2 reaction with ammonia (NH_3). Specifically, the largest component of PM-10 particles comes from dust (unpaved roads, unpaved yards, and vacant land that has been disked), while PM-2.5 particles are mostly manmade particles resulting from combustion sources such as cars, trucks, and other vehicle exhaust, as well as other stationary combustion sources.

**Table 5.3-A Source Receptor Area (SRA) 23,
Air Quality Monitoring Summary – 1996-2005**

	Pollutant/Standard Source: SCAQMD	Monitoring Year									
		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
No. Days Exceeded	**Ozone [a]:**										
	Health Advisory - 0.15 ppm						0	1	4	0	0
	California Standard:										
	1-Hour - 0.09 ppm	92	89	70	38	41	41	56	80	59	46
	8-Hour - 0.07 ppm [e]									75	62
	Federal Primary Standards:										
	1-Hour - 0.12 ppm	36	13	32	3	3	7	12	18	8	3
	8-Hour - 0.08 ppm [a]		55	57	27	29	34	38	62	35	33
	Max 1-Hour Conc. (ppm)	0.20	0.19	0.20	0.14	0.14	0.143	0.155	0.169	0.141	0.144
	Max 8-Hour Conc. (ppm) [a]		0.13	0.17	0.11	0.113	0.120	0.124	0.140	0.117	0.129
No. Days Exceeded	**Carbon Monoxide:**										
	California Standard:										
	1-Hour - 20 ppm	0	0	0	0	0	0	0	0	0	0
	8-Hour - 9.0 ppm	0	0	0	0	0	0	0	0	0	0
	Federal Primary Standards:										
	1-Hour - 35 ppm	0	0	0	0	0	0	0	0	0	0
	8-Hour - 9.5 ppm	0	0	0	0	0	0	0	0	0	0
	Max 1-Hour Conc. (ppm)	9.0	7.0	6.0	7.0	5.0	5.0	8.0	5.0	4.0	3.0
	Max 8-Hour Conc. (ppm)	5.0	5.8	4.6	4.4	4.3	3.4	3.0	3.7	3.0	2.5
No. Days Exceeded	**Nitrogen Dioxide:**										
	California Standard:										
	1-Hour - 0.25 ppm	0	0	0	0	0	0	0	0	0	0
	Federal Standard:										
	Annual Standard - 0.053 ppm	No	No	No	No	No	No	No	No	No	No
	Max. 1-Hour Conc. (ppm)	0.11	0.12	0.10	0.13	0.10	0.15	0.10	0.09	0.09	0.08
No. Days Exceeded	**Sulfur Dioxide:**										
	California Standards:										
	1-Hour – 0.25 ppm	0	0	0	0	0	0	0	0	0	0
	24-Hour – 0.04 ppm	0	0	0	0	0	0	0	0	0	0
	Federal Primary Standards:										
	24-Hour – 0.14 ppm	0	0	0	0	0	0	0	0	0	0
	Annual Standard – 0.03 ppm [c]	No	No	No	No	No	No	No	No	No	No
	Max. 1-Hour Conc. (ppm)	0.01	0.04	0.03	0.03	0.11	0.02	0.02	0.02	0.02	0.02
	Max. 24-Hour Conc. (ppm)	0.004	0.007	0.010	0.011	0.041	0.011	0.002	0.012	0.015	0.011
No. Days Exceeded	**Suspended Particulates:**										
	California Standards:										
	24-Hour - 50 $\mu g/m^3$	43	41	42	46	68	78	81	62	72	69
	Federal Primary Standards:										
	24-Hour – 150 $\mu g/m^3$	1	1	0	1	0	0	0	2	0	0
	Annual Arithmetic Mean	61.1	64.9	58.2	72.3	60.1	63.1	58.5	56.9	55.5	52.0
	Annual Geometric Mean	52.0	56.3	48.7	64.9	54.7	54.3	53.4	-	-	-
	Max. 24-Hour Conc. ($\mu g/m^3$)	162	163	116	153	139	136	130	164	137	123
No. Days Exceeded	**Suspended Particulates:**										
	Federal Primary Standards:										
	Annual Standard – 15$\mu g/m^3$ [c]				Yes	Yes	Yes	Yes	Yes	Yes	Yes
	24-Hour – 65 $\mu g/m^3$				9	11	19	8	8	5	4
	Annual Arithmetic Mean				30.9	28.2	31.1	27.5	24.9	22.1	21.0
	Max. 24-Hour Conc. ($\mu g/m^3$)				111.2	119.6	98.0	77.6	104.3	91.7	98.7

Note: No data available.
[a] 1997 is first year of SCAQMD records for federal 8-hour Ozone standard.
[b] 1999 is first year of SCAQMD records for federal 24-hour PM-2.5 standard and data summary
[c] Yes or No indicating whether or not the standard has been exceeded for that year.
[d] Federal PM-10 standard is annual average (AAM) > 50$\mu g/m^3$. State standard is annual average (AAM)> 20$\mu g/m^3$, effective July 5, 2003.
[e] 2004 is first year of SCAQMD records for state 8-hour Ozone standard.

Thresholds of Significance

The City of Riverside has not established local CEQA significance thresholds as described in Section 15064.7 of the State CEQA Guidelines. Therefore, significance determinations utilized in this Section are from Appendix G of the CEQA Guidelines. A significant impact will occur if implementation of the Project:

- conflicts with or obstructs implementation of the applicable air quality plan;
- violates any air quality standard or contributes substantially to an existing or projected air quality violation. In this regard, the City applies SCAQMD CEQA Regional Significance Thresholds in this EIR as follows:

Table 5.3-B
SCAQMD CEQA Regional Significance Thresholds

Emission Threshold	Units	ROG	NO_X	CO	SO_X	PM-10	PM-2.5
Construction	lbs/day	75	100	550	150	150	55
Operation	lbs/day	55	55	550	150	150	55

- results in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- exposes sensitive receptors to substantial pollutant concentrations; or
- creates objectionable odors affecting a substantial number of people.

Regarding Thresholds of Significance related to GHG, neither the SCAQMD nor any other air district in California has generated a quantitative significance threshold for GHG. California Air Resources Board (CARB), the California EPA, the U.S. EPA, nor other appropriate governmental organizations have yet developed guidelines on how to prepare an impact assessment for a community's or project's GHG contribution to global climate change. Further emissions models such as EMFAC and URBEMIS evaluate aggregate emissions and do not demonstrate, with respect to global impact, how much of these emissions are "new" emissions specifically attributable to the proposed project in question. Therefore, no numeric threshold exclusively related to GHG has been adopted by the City of Riverside. This analysis addresses GHG emissions both qualitatively and quantitatively in the context of cumulative impacts.

Related Regulations

Air Quality Standards

The Federal and State ambient air quality standards (AAQS) establish the context for the local air quality management plans (AQMP) and for determination of the significance of a project's contribution to local or regional pollutant concentrations. State and Federal AAQS are presented

above, in **Table 5.3-A**. The AAQS represent the level of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other diseases or illness and persons engaged in strenuous work or exercise, all referred to as "sensitive receptors." SCAQMD defines a "sensitive receptor" as a land use or facility such as residences, schools, childcare centers, athletic facilities, playgrounds, retirement homes and convalescent homes.

Energy Efficiency Standards

Title 24 regulations are statewide building design and construction standards that improve the energy efficiency of new buildings. Energy efficiency reduces the demand for electric generation, natural gas and other fuels. Energy efficient buildings also reduce the air emissions associated with electric generation and combustion of natural gas and other fuels.

Air Quality Management Plan

The California Air Resources Board (CARB) maintains records as to the attainment status of air basins throughout the state, under both State and Federal criteria. The portion of the SCAB within which the City of Riverside is located is designated as a non-attainment area for ozone and PM-10, and PM-2.5 under State standards, and as a non-attainment area for ozone, carbon monoxide, PM-10, and PM-2.5 under Federal standards. The Air Quality Management Plan (AQMP) for the SCAB establishes a program of rules and regulations directed at attainment of the State and national air quality standards based on population projections and land uses contained in local land use plans. Accordingly, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections.

Air Quality Management District Rules

SCAQMD Rule 402 states that "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

The City will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. They include the application of water or chemical stabilizers to disturbed soils at least twice a day, covering all haul vehicles before transport of materials, restricting vehicle speeds on unpaved roads to 15 mph, and sweeping loose dirt from paved site access roadways used by construction vehicles. In addition, it is required to establish a vegetative ground cover on disturbance areas that are inactive within 30 days after active operations have ceased. Alternatively, an application of dust suppressants can be applied in sufficient quantity and frequency to maintain a stable surface. Rule 403 also

requires grading and excavation activities to cease when winds exceed 25 mph. Weed abatement activities ordered by a municipal or county fire department are exempt from Rule 403 under certain conditions. (SCAQMD, Rule 403(g)(1)(J).) Specifically, weed abatement should be accomplished by mowing, or, if mowing is not feasible, disking can be used if the site is watered before the disking occurs (see Tool 43 for information on implementation).

Toxic Air Contaminants

Toxic Air Contaminants are regulated under both Federal and State laws. Federally, the 1970 Amendments to the Clean Air Act included a provision to address air toxics. California regulates toxic air contaminants through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the Health and Safety Code (H&SC § 39660, et seq.) and Part 6 Air Toxics "Hot Spots" Information and Assessment (H&SC § 44300, et seq.). The California Air Resources Board (CARB), working in conjunction with the Office of Environmental Health Hazard Assessment (OEHHA), identifies toxic air contaminants. Air toxic control measures may then be adopted to reduce ambient concentrations of the identified toxic air contaminant below a specific threshold based on its effects on health, or to the lowest concentration achievable through use of best available control technology for toxics (T-BACT). The program is administered by the CARB. Air quality control agencies, including the SCAQMD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by CARB.

Diesel Regulations

In 1990, the State of California listed diesel exhaust as a known carcinogen under its Safe Drinking Water and Toxic Enforcement Act (Proposition 65). In 1998, the California Air Resources Board listed diesel particulate as a toxic air contaminant.

The California Air Resources Board (CARB), a sub-agency of the California Environmental Protection Agency (Cal EPA), is taking the lead on addressing diesel emissions in the State of California. The first step to significantly reduce diesel emissions occurred in September 2000 when the CARB approved the "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" or Diesel Risk Reduction Plan. The two main goals of the Diesel Risk Reduction Plan are: 1) to get new diesel fueled engines to use state-of-the-art emission controls as well as low-sulfur diesel fuel and, 2) for existing diesel engines to be retrofitted with emission control features. Effects of meeting these goals set by the CARB would be reducing the health effects experienced by Californians from diesel exhaust.

Under the CARB's Diesel Risk Reduction Program, mobile diesel emissions have their own set of reduction programs, as opposed to stationary diesel sources (generators), which are addressed separately under the Reduction Plan. One of the incentive programs for mobile diesel sources is the Carl Moyer Program, which is a clean engine incentive program. This program provides money in the form of grants to cover the incremental portion of the cost to purchase cleaner burning engines or retrofitting existing ones.

Other programs include a program designed to develop and implement strategies to reduce emissions from new on-road heavy-duty diesel engines. The primary method of implementing this program will be through the development of emission control regulations and test procedures for those new engines.

Strategies for reducing diesel emissions from existing on-road heavy duty engines will mainly be implemented through three sections of this program: retrofit assessment, heavy-duty testing and field support, and retrofit implementation.

Although the CARB will formulate programs and standards by which the South Coast Air Quality Management District (SCAQMD) can manage their jurisdiction for diesel emissions, the above programs are not *regulations*. Due to interstate commerce issues, regulating diesel emissions becomes not only a State level issue, but also largely a Federal issue. The SCAQMD is not responsible for direct regulation of mobile sources, including diesel trucks, except for publicly owned fleets with 15 or more vehicles. The SCAQMD becomes involved in diesel issues because they are the permitting agency for stationary sources such as diesel generators and they are the agency responsible for implementing the Air Quality Management Plan for the South Coast Air Basin. Specifically in the case of distribution centers, the SCAQMD does not have direct regulatory control over the diesel truck emissions, but they do have the responsibility for implementing and managing air quality plans for the SCAB in which these distribution facilities will be operating.

In 2000, SCAQMD established a rule, which mandated that whenever a public fleet operator with 15 or more vehicles replaces or purchases new vehicles; they must be either low-emission or alternatively fueled. The validity of that rule was challenged by the Engine Manufacturer's Association. The case was heard by the Supreme Court on January 14, 2004 and on April 28, 2004, the Supreme Court issued an opinion that under the Clean Air Act, SCAQMD (and other local jurisdictions) are prohibited from adopting regulations that require private fleet owners to purchase clean-fueled vehicles. However, the court allowed the possibility that fleet rules can be applied to public fleets and may be valid for leased and used vehicles. SCAQMD's role in approval of distribution centers would be to provide guidance and recommendations on ways to address potential diesel emissions, but they would not have regulatory authority over the diesel trucks using the proposed facilities.

As far as regulations, the State of California is on the forefront of making an attempt to regulate mobile-source diesel emissions. On the Federal level, in December 2000, the U.S. EPA announced its "Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements" (2007 Rule). This new rule would require that new emission standards taking effect in 2007 on new heavy-duty engines and vehicles. The 2007 Rule standards are based on the use of emission control devices (much like the catalytic converters on gasoline automobiles). Coupled with the mechanical devices to control emissions, which are not effective with the current high-sulfur diesel fuels on the market, the EPA is also going to require diesel fuel to have 97% less sulfur content beginning in 2006.

On February 1, 2005, a requirement limiting the idling of diesel-fueled commercial vehicles to five minutes at any location pursuant to Section 2485 of Chapter 10 within Title 13 of California Code of Regulations was adopted.

Greenhouse Gases and Global Warming

There are currently no binding Federal regulations mandating reductions in GHG emissions. In April 2007, the U.S. Supreme Court ruled that the federal Clean Air Act grants the U.S. Environmental Protection Agency the statutory authority to regulate carbon dioxide from new vehicle emissions as a pollutant. To date, however, the EPA has not indicated whether or how it will regulate carbon dioxide.

In June 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. This Order calls for the following GHG emission reduction targets to be established: 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. The Order also requires that the Secretary of the California Environmental Protection Agency shall coordinate oversight of the efforts made to meet the targets with: the Secretary of the Business, Transportation and Housing Agency, Secretary of the Department of Food and Agriculture, Secretary of the Resources Agency, Chairperson of the Air Resources Board, Chairperson of the Energy Commission, and the President of the Public Utilities Commission.

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 directs the California Air Resources Board (ARB) to implement regulations for a cap on sources or categories of sources of GHG emissions. The bill requires that ARB develop regulations to reduce emissions with an enforcement mechanism to ensure that the reductions are achieved, and to disclose how it arrives at the cap. It also includes conditions to ensure businesses and consumers are not unfairly affected by reductions.

AB 32 requires the ARB to:

- adopt a list of discrete early action measures by July 1, 2007 that can be implemented before January 1, 2010;
- establish a statewide GHG emissions cap for 2020 based on 1990 emissions and adopt mandatory reporting rules for significant sources of GHG by January 1, 2008;
- indicate how emission reductions will be achieved from significant GHG sources via regulations, market mechanisms and other actions by January 1, 2009; and
- adopt regulations by January 1, 2011 to achieve the maximum technologically feasible and cost-effective reductions in GHG, including provisions for using both market mechanisms and alternative compliance mechanisms.

AB 32 codifies the State's goal by requiring that Statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be implemented no later than January 1, 2012. To effectively implement the cap, AB 32 directs CARB to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels.

Local Programs

Since the 1980s, the City of Riverside and its community partners have actively and aggressively adopted programs focused on improving air quality. Many of these programs also serve to reduce energy use or otherwise reduce GHG emissions.

Sustainable Riverside: Sustainable Riverside maximizes energy efficiency while demonstrating a deep regard for the value of the natural and man made environments. Sustainable Riverside is committed to continually improving the quality of both the built and natural environment resulting in a legacy of genuine value. The Environmental Relations Manager will work with all City departments to reach these goals.

Tree Power – Residential Shade Tree Program: Tree Power is a public benefit program that offers electric customers a rebate for planting selected shade trees in certain locations around their home to help save on summer cooling costs. As of 2003, more than 20,000 free shade trees were planted by the City of Riverside Public Utilities' electric customers. Studies show that well-placed trees around a structure can reduce air conditioning or cooling costs by as much as 20 percent. In addition to their energy-saving benefits, trees serve a variety of worthwhile functions that enhance air quality, including cleaning the air through pollutant uptake and storage of CO_2, and preventing soil erosion, a major source of PM-2.5 and PM-10 pollutants.

UCR IntelliShare Program: UCR IntelliShare is a shared electric vehicle demonstration project at work on the UCR campus and beyond. This experimental program allows participants to rent and test electric cars for local trips. This project has been funded from the Federal Congestion Mitigation and Air Quality Improvement Program, the Riverside County Transportation Commission and CalTrans. As of 2003, over 300 UCR employees shared 25 electric vehicles to make local trips. Plans are in place to expand the program to include 35 vehicles at five stations. UCR IntelliShare is a step toward transportation options that can help reduce congestion, improve air quality and optimize land use in major congested areas such as business centers, university campuses and tourist destinations.

Riverside Infill Development Incentive: The City's Riverside Infill Development Incentive (RIDI) Program provides incentives for single-family residential infill developments of five parcels or less in designated low-income areas. One key program objective is to provide housing in close proximity to existing business and employment areas, reducing the need for extensive vehicle trips. Developers and owner/builders can be reimbursed up to $5,000 per lot for actual expenses incurred for grading and soft costs. This program is available in the Arlanza, Casa Blanca, Downtown, Eastside and La Sierra neighborhoods

Electric Vehicle Purchase Incentive: This program provides rebates to the City of Riverside Public Utilities electric customers who purchase or lease an electric vehicle that is used as a primary or alternate means of transportation. The vehicles must be recognized by the Department of Motor Vehicles as street legal and must comply with all State laws. Rebates are available on new electric vehicles that the City of Riverside Public Utilities deems eligible. Customers receive rebates of five percent of the vehicle's total cash price up to $5,000.

Community Energy Efficient Program (CEEP): This is a voluntary program deigned by local governments, homebuilders, utilities, and the California Energy Commission. The primary goal of the program is to encourage residential building practices that conserve energy and resources while improving government services and the economy. Each CEEP home is built to standards 15% above Title 24 energy efficient requirements. The City of Riverside's Utilities Department will offer financial incentives of up to $500 per home for the first 100 homes. As well, projects that participate in this program are allowed to postpone the payment of the Transportation Uniform Mitigation Fee (TUMF).

Smart Home Infrastructure Program (SHIP): This is another voluntary program that is intended to create an incentive for homebuilders to pre-wire homes to accommodate future technologies, which utilize coaxial cable, data cable and/or phone lines. Projects incorporating these pre-wired features will receive expedited plan review status.

Grease for Gas: The City of Riverside is turning restaurant grease into inexpensive electricity at its wholly owned wastewater treatment plant. The plant, a publicly owned treatment works (POTW), is designed to handle 40 million gallons per day (MGD). Currently it treats an average of 33 MGD using a fully tertiary treatment process utilizing anaerobic digestion. Starting in April 2005, the City began adding collected grease wastewater to the existing anaerobic digesters to generate methane gas. The methane gas is then fed into an on-site cogeneration facility that produces electricity for the plant. The "grease-to-gas" program has created more than enough cost savings to pay for itself in the first year of operation and provide additional revenue for the City. As methane is also a GHG emissions component, capture and use of methane is a benefit in this regard also.

Business and Commercial Programs: The following are examples of programs offered by the City of Riverside to increase energy efficiency: air conditioning rebates, energy efficiency incentives for lighting, motors, and construction, and Energy Star® rebates for appliances as well as online resources available on the Riverside Public Utilities homepage. For more information on these and other programs, please visit **http://www.riversideca.gov/utilities/business.asp.**

Residential Programs: The City of Riverside also offers similar energy efficiency programs for its residential customers including: rebates for high-efficiency air conditioners, free recycling of older refrigerators and freezers, rebates on Energy Star® appliances, and rebates for improving insulation. For more information on these and other programs, please visit **http://www.riversideca.gov/utilities/residents.asp.** The production of electricity through the burning of fossil fuels contributes to GHGs. Electricity use is one of the largest ways individual households contribute to the global warming problem.

Best Available Control Technologies: The City is currently following Best Available Control Technologies and Best Available Retrofit Control Technology, as defined by SCAQMD, in the City's practices for the maintenance of its fleet, including but not limited to retrofitting 60% of the City fleet vehicles (which is separate from vehicles maintained on behalf of RPU) to alternative fuels by 2008.

Fuel Cell Power Plant: The City's Regional Water Quality Control Plant (the "Plant") produces methane gas from the anaerobic digestion process when treating and disposing of the sewer effluent. The City's award winning Grease to Gas to Power project uses restaurant grease wastewater to significantly increase the methane gas production at the Plant. This source of methane has been deemed a renewable fuel for electrical power generation and is used in three one-megawatt internal combustion (IC) generators at the Plant for electric generation.

In February of 2007, the City was awarded a grant to construct a fuel cell power plant at the Plant. Fuel cells are a relatively new, innovative way to produce energy with reduced impact to the environment since there is no combustion. The use of the Plant's methane gas in the fuel cell power plant will produce one-half of the carbon dioxide that the IC engines would to produce the same amount of power, thereby further reducing the City's emissions of greenhouse gases.

The fuel cell and the IC engines have been submitted to the California Energy Commission for recognition of renewable energy credits. Currently the IC engines use 5-12% natural gas and the fuel cell is designed to use 100% methane gas and no natural gas.

With the addition of the fuel cell power plant, the internal power generation capacity at the Plant will increase to 2.5 megawatts per day. This will provide 83% of the plant's electrical needs. This is the equivalent of providing the monthly electrical needs of 38,067 homes in Riverside.

Related General Plan Policies

Because the City of Riverside is within a nonattainment area, the City has identified numerous General Plan policies intended to reduce air pollutant emissions. The General Plan Air Quality Element contains the following policies related to land use strategies, transportation, stationary pollution sources, particulate matter, energy conservation, public education and multi-jurisdictional cooperation. Implementation of these policies will help reduce air pollutant emissions over the long term and protect the health of the City's residents:

Land Use Strategies

Environmental Justice

Policy AQ-1.1: Ensure that all land use decisions, including enforcement actions, are made in an equitable fashion to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status or geographic location, from the health effects of air pollution.

Policy AQ-1.2: Consider potential environmental justice issues in reviewing impacts (including cumulative impacts for each project proposed).

Sensitive Receptors

Policy AQ-1.3: Separate, buffer and protect sensitive receptors from significant sources of pollution to the greatest extent possible.

Policy AQ-1.4: Facilitate communication between residents and businesses on nuisance issues related to air quality.

Housing Strategies

Policy AQ-1.5: Encourage infill development projects within urbanized areas that include job centers and transportation nodes.

Policy AQ-1.6: Provide a mechanism to create opportunities for mixed-use development that allows the integration of retail, office, institutional and residential uses for the purpose of reducing costs of infrastructure construction and maximizing the use of land.

Policy AQ-1.7: Support appropriate planned residential development and infill housing, which reduce vehicle trips.

Policy AQ-1.8: Promote "Job/Housing Opportunity Zones" and incentives to support housing in job-rich areas and jobs in housing-rich areas, where the jobs are located at non-polluting or extremely low-polluting entities.

Policy AQ-1.9: Adhere to the adopted Master Plan for open spaces, trails, and bikeways.

Business Near Transit

Policy AQ-1.10: Encourage job creation in job-poor areas as a means of reducing vehicle miles traveled.

Policy AQ-1.11: Locate public facilities and services so that they further enhance job creation opportunities.

Policy AQ-1.12: Support mixed-use land use patterns, but avoid placing residential and other sensitive receptors in close proximity to businesses that emit toxic air contaminants to the greatest extent possible. Encourage community centers that promote community self-sufficiency and containment and discourage automobile dependency.

Policy AQ-1.13: Encourage employment centers that are non-polluting or extremely low-polluting and do not draw large numbers of vehicles in proximity to residential uses.

Policy AQ-1.14: Encourage community work centers, telecommuting and home-based businesses.

Policy AQ-1.15: Establish land use patterns that reduce the number and length of motor vehicle trips and promote alternative modes of travel.

Policy AQ-1.16: Design safe and efficient vehicular access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.

Policy AQ-1.17: Avoid locating multiple-family developments close to commercial areas that emit harmful air contaminants.

Policy AQ-1.18: New residential subdivisions shall be designed to encourage "walkable" neighborhoods with pedestrian walkways and bicycle paths to facilitate pedestrian travel.

Policy AQ-1.19: Require future commercial areas to foster pedestrian circulation through the land use entitlement process and/or business regulation.

Policy AQ-1.20: Create the maximum possible opportunities for bicycles as an alternative work transportation mode.

Policy AQ-1.21: Cooperate and participate in regional air quality management plans, programs and enforcement measures.

Policy AQ-1.22: Implement the required components of the Congestion Management Plan (CMP) and continue to work with Riverside County Transportation Commission on annual updates to the CMP.

Land Densities

Policy AQ-1.23: Increase residential and commercial densities around rail and bus transit stations.

Policy AQ-1.24: Support programs to provide "station cars" for short trips to and from transit nodes (e.g., Neighborhood Electric Vehicles).

Policy AQ-1.25: Serve as an advocate for the City's residents regarding location/expansion of facilities/uses (e.g., freeways, busy roadways), which are not within the City's authority to regulate, to ensure that the health impacts of such projects are thoroughly investigated and mitigated.

Policy AQ-1.26: Require neighborhood parks and recreational centers near concentrations of residential areas to include pedestrian walkways and bicycle paths to encourage non-motorized travel.

Transportation

Reducing Vehicle Miles Traveled

Policy AQ-2.1: Support Transportation Management Associations between large employers and commercial/ industrial complexes.

Policy AQ-2.2: Support programs and educate employers about employee rideshare and transit incentives for employers with more than 250 employees at a single location. The City will provide incentives and programs to encourage alternative methods of transit.

Policy AQ-2.3: Cooperate with local, regional, State, and Federal jurisdictions to reduce vehicle miles traveled (VMT) and motor vehicle emissions through job creation in job-poor areas.

Policy AQ-2.4: Monitor and strive to achieve performance goals and/or VMT reduction, which are consistent with SCAG's goals.

Policy AQ-2.5: Consult with the California Air Resources Board to identify ways that it may assist the City (e.g., providing funding, sponsoring programs) with its goal to reduce air pollution by reducing emissions from mobile sources.

Policy AQ-2.6: Develop trip reduction plans that promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking.

Policy AQ-2.7: Use incentives, regulations, and Transportation Demand Management in cooperation with surrounding jurisdictions to eliminate vehicle trips that would otherwise be made.

Policy AQ-2.8: Work with Riverside Transit Authority (RTA) to establish mass transit mechanisms for the reduction of work-related and non-work-related vehicle trips.

Policy AQ-2.9: Encourage local transit agencies to promote ridership though careful planning of routes, headways, origins and destinations, types of vehicles.

Policy AQ-2.10: Identify and develop non-motorized transportation corridors.

Policy AQ-2.11: Develop ways to incorporate the "Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities" into the Development Review process and citywide air quality education programs.

Reducing Traffic at Special Event Centers

Policy AQ-2.12: Promote the use of peripheral parking by increasing on-site parking rates and offering reduced rates to peripheral parking.

Policy AQ-2.13: Encourage special event center operators to advertise and offer discounted transit passes with event tickets.

Policy AQ-2.14: Encourage special event center operators to advertise and offer discount-parking incentives to carpooling patrons, with four or more persons per vehicle for on-site parking.

Utilizing Transportation System Management

Policy AQ-2.15: Manage traffic flow through signal synchronization, while coordinating with and permitting the free flow of mass transit vehicles, as a way to achieve mobility.

Policy AQ-2.16: Minimize traffic hazards and delays through highway maintenance, rapid emergency response, debris removal, and elimination of at-grade railroad crossings.

Policy AQ-2.17: Encourage, and to the extent possible, require through the land use entitlement or business regulation process, business owners to schedule deliveries at off-peak traffic periods.

Transportation System Management Improvements

Policy AQ-2.18: Manage the City's transportation fleet fueling standards to achieve the best alternate fuel fleet mix possible.

Policy AQ-2.19: Cooperate with local, regional, state and federal jurisdictions to better manage transportation facilities and fleets.

Transportation Facility Development

Policy AQ-2.20: Encourage the construction of high-occupancy vehicle (HOV) lanes or similar mechanisms whenever necessary to relieve congestion, safety hazards, and air pollution, as described in the most recently approved Air Quality Management Plan.

Policy AQ-2.21: Emphasize the use of high-occupancy vehicle lanes, light rail and bus routes, and pedestrian and bicycle facilities when using transportation facility development to improve mobility and air quality.

Policy AQ-2.22: Monitor traffic and congestion to determine when and where the City needs new transportation facilities to achieve increased mobility efficiency.

Encouraging the Use of Alternative Fuels

Policy AQ-2.23: Preserve transportation corridors with the potential of high demand or of regional significance for future expansion to meet project demand.

Policy AQ-2.24: Support full compliance with the SCAQMD's Clean Fleet Rules.

Policy AQ-2.25: Support the development of alternative fuel infrastructure that is publicly accessible.

Policy AQ-2.26: Allow or encourage programs for priority parking or free parking in City parking lots for alternative fuel vehicles, especially zero and super ultra low emission vehicles (ZEVs and SULEVs).

Funding

Policy AQ-2.27: Develop and coordinate a plan for effective use of AB 2766 (Motor Vehicle Fee Program) funds so that such funds are used for projects and programs identified in the most recently approved Air Quality Management Plan.

Advocacy

Policy AQ-2.28: Advocate to the State and Federal governments the need for increased regulation of diesel vehicles (e.g., trucks, trains and ships), an expedited schedule for fuel improvement and exhaust filtering and other emissions standards.

Policy AQ-2.29: Advocate to the state for the use of smog checks for diesel vehicles similar to those required of gas-powered vehicles.

Policy AQ-2.30: Continue our membership in the Western Riverside County Clean Cities Coalition.

Stationary Pollution Sources

Policy AQ-3.1: Continue the City's program to offer audits to show how to reduce energy including programmable thermostats, etc.

Policy AQ-3.2: Deleted.

Policy AQ-3.3: Support SCAQMD's efforts to require stationary air pollution sources, such as gasoline stations, restaurants with charbroilers and deep fat fryers, to comply with or exceed applicable SCAQMD rules and control measures.

Policy AQ-3.4: Require projects to mitigate, to the extent feasible, anticipated emissions, which exceed AQMP Guidelines.

Policy AQ-3.5: Consider ordinances and/or voluntary incentive programs that encourage residential builders to go above and beyond state codes to conserve energy and reduce air pollution.

Policy AQ-3.6: Support "green" building codes that require air conditioning/filtration installation, upgrades, or improvements for all buildings, but particularly for those associated with sensitive receptors.

Policy AQ-3.7: Require use of pollution control measures for stationary and area sources through the use of best available control technologies, fuel/material substitution, cleaner fuel alternatives, product reformulation, change in work practices, and of control measures identified in the latest AQMP.

Reduction of Particulate Matter

Monitoring For Particulate Matter

Policy AQ-4.1: Identify and monitor sources, enforce existing regulations and promote stronger controls to reduce particulate matter (e.g., require clean fuels for street sweepers and trash trucks, exceed the AQMD requirements for fleet rules).

Control Measures

Policy AQ-4.2: Reduce particulate matter from agriculture (e.g., require use of clean non-diesel equipment and particulate traps), construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way and off-road vehicles to the extent possible as provided in SCAQMD Rule 403.

Policy AQ-4.3: Support the reduction of all particulates potential sources.

Policy AQ-4.4: Support programs that reduce emissions from building materials and methods that generate excessive pollutants through incentives and/or regulations.

Policy AQ-4.5: Require the suspension of all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hours).

Cooperation Among Agencies

Policy AQ-4.6: Cooperate with local, regional, state and federal jurisdictions to better control particulate matter.

Policy AQ-4.7: Support legislation or other negotiations, which would prevent the idling of trains within the City's boundaries (e.g., institute nuisance actions).

Energy Conservation

Policy AQ-5.1: Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

Policy AQ-5.2: Develop incentives and/or regulations regarding energy conservation requirements for private and public developments.

Policy AQ-5.3: Continue and expand use of renewable energy resources such as wind, solar, water, landfill gas and geothermal sources.

Policy AQ-5.4: Continue and expand the creation of locally based solar photovoltaic power stations in Riverside.

Policy AQ-5.5: Continue and expand Riverside Public Utilities' rebate programs to promote energy efficiency.

Policy AQ-5.6: Support the use of automated equipment for conditioned facilities to control heating and air conditioning.

Policy AQ-5.7: Require residential building construction to meet or exceed energy use guidelines in Title 24 of the California Administrative Code.

Public Education

Policy AQ-6.1: Provide air quality information through the City's website, including links to AQMD, CARB and other environmental-based sites.

Policy AQ-6.2: Organize a City-sponsored event on a topic that improves air quality, including alternative fuel vehicle forums and clean household product events.

Policy AQ-6.3: Work with school districts to develop air quality curriculum for students, and continue Riverside Public Utilities' Energy Education Program.

Policy AQ-6.4: Encourage, publicly recognize and reward innovative approaches that improve air quality.

Policy AQ-6.5: Involve environmental groups, the business community, special interests and the general public in the formulation and implementation of programs that effectively reduce airborne pollutants.

Policy AQ-6.6: Provide public education to encourage use of low- or zero-emission vehicles.

Policy AQ-6.7: Provide public education to encourage ecologic responsibility when purchasing products for home improvement household and personal care.

Policy AQ-6.8: Continue Riverside Public Utilities' Energy Innovation Grant (EIG) program to fund research, development and demonstration projects aimed at advancement and accelerating new technology.

Policy AQ-6.9: Continue Riverside Public Utilities' Green Power Public information program to increase awareness of renewable energy resources.

Multi-Jurisdictional Cooperation

Policy AQ-7.1: Promote and participate with regional and local agencies, both public and private, to protect and improve air quality.

Policy AQ-7.2: Support SCAG's *Regional Growth Management Plan* by developing intergovernmental agreements with appropriate governmental entities such as the Western Riverside Council of Governments, sanitation districts, water districts and those subregional entities identified in the *Regional Growth Management Plan.*

Policy AQ-7.3: Participate in the development and update of those regional air quality management plans required under federal and state law and meet all standards established for clean air in these plans.

Policy AQ-7.4: Coordinate with the SCAQMD to ensure that the City's air quality plans regarding reduction of air pollutant emissions are being enforced.

Policy AQ-7.5: Establish and implement air quality, land use and circulation measures that improve not only the City's environment but that of the entire region.

Policy AQ-7.6: Establish a level playing field by working with local jurisdictions to simultaneously adopt policies similar to those in this Air Quality Element.

Policy AQ-7.7: Support legislation that promotes cleaner industry, clean fuel vehicles and more efficient burning engines and fuels.

Policy AQ-7.8: Support the introduction of Federal, State, or regional enabling legislation to promote inventive air quality programs which otherwise could not be implemented.

Policy AQ-7.9: Adhere with Federal, State, and regional air quality laws, specifically with Government Code Section 65850.2, which requires that each owner or authorized agent of a project indicate, on the development or building permit for the project, whether he/she will need to comply with the requirements for a permit for construction or modification from the SCAQMD.

Policy AQ-7.10: Incorporate, to the extent applicable and permitted by law, current and proposed AQMP measures.

Policy AQ-7.11: Seek opportunities to pool AB 2766 (Motor Vehicle Fee Program) funds with neighboring cities to fund programs (e.g., traffic synchronization, fueling station infrastructure, etc.) that will mitigate mobile source emissions.

Sustainable Riverside and Global Warming

Policy AQ-8.1: Support the Sustainable Riverside Policy Statement by developing a Green Plan of Action.

Policy AQ-8.2: Support appropriate initiatives, legislation, and actions for reducing and responding to climate change.

Policy AQ-8.3: Encourage community involvement and public-private partnerships to reduce and respond to global warming.

Policy AQ-8.4: Develop a Climate Action Plan that sets a schedule to complete an inventory of municipal and private greenhouse gas (GHG) emissions, sets targets for reductions and methodologies to reach targets.

Implementation of the above policies will reduce identified air quality impacts, but the degree to which these policies will reduce impacts cannot be quantified precisely. The implementation of the following Implementation Plan tools will also assist in minimizing adverse conditions for the benefit of the City.

Tool -36: In addition to complying with any applicable rules and regulations, the City, working through its Environmental Relations Manager or any other similarly qualified staff, will consult with the California Air Resources Board (CARB) and any other appropriate agencies to identify any additional ways the City can assist CARB and other appropriate agencies in reducing statewide greenhouse gas emissions as provided in AB 32, including but not limited to, measures identified in the U.S.

Mayors Climate Protection Agreement such as study and recommendation on participating in an emissions inventory and reduction program.

Tool -43: The City's Code Enforcement Division will work with South Coast Air Quality Management District SCAQMD, City Attorney's Office and the Fire Department regarding updating and codifying our practices and requirements regarding weed abatement. Through this process the City will evaluate ways to educate landowners about the SCAQMD's Rule 403 requirements.

Environmental Impacts Before Mitigation

***Threshold**: Conflicts with or obstructs implementation of the applicable air quality plan.*

General Plan

The Air Quality Management Plan (AQMP) for the South Coast Air Basin (SCAB) sets forth a comprehensive program that will lead the SCAB into compliance with all Federal and State air quality standards. The AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered to be consistent with the AQMP would not interfere with attainment because this growth is included in the projections utilized in the formulation of the AQMP. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended daily emissions thresholds. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments.

Projects that are consistent with the projections of employment and population forecasts identified by the Southern California Association of Governments (SCAG) are considered consistent with the AQMP growth projections, since these forecast numbers were used by SCAG's Modeling section to forecast travel demand and air quality for planning activities such as the Regional Transportation Plan (RTP), the SCAQMD's AQMP, Regional Transportation Improvement Program (RTIP), and the Regional Housing Plan.

Although not required by State law, the City of Riverside General Plan includes an Air Quality Element, patterned largely after SCAQMD's *Model Air Quality Element*. The City of Riverside's Air Quality Element sets forth a series of objectives and policies directed at not only reducing air pollutant emissions resulting from implementation of the Project, but also improving existing air quality. For instance, General Plan Air Quality Element Policy 7.4 directs the City to coordinate with SCAQMD to ensure enforcement of the City's air quality programs aimed at reducing emissions.

The City of Riverside is located within the Riverside County subregion of the SCAG projections. As discussed in Section 5.12, Population and Housing of this EIR, implementation of the

proposed General Plan would induce substantial population growth through increased residential development within the City. The following comparison is made between SCAG's population projections for the City of Riverside and the proposed General Plan's projected populations for the City only. This provides a more accurate comparison since data for the entire Planning Area is dispersed throughout SCAG's data.

As shown on **Table 5.3-C, 2025 General Plan and SCAG Comparisons**, the build-out of the General Plan Typical population projections are fairly consistent (within 2 percent) with SCAG's population projections for the year 2025. Build-out of the General Plan Maximum with PRD population projections exceeds SCAG population projections by about 33 percent. For comparison purposes under CEQA, this "worst case" scenario, Maximum with PRD, is presented.

Table 5.3-C
2025 General Plan and SCAG Comparisons

	GP City Projections	SCAG Projections	Difference
Population			
Maximum (w/PRD)	528,429	353,397	175,032 (33%)
Typical	346,867	353,397	-6,530 (-2%)

Since the AQMP growth projections are based on SCAG population levels, the General Plan build-out at the expected Typical development levels is consistent with the AQMP. Therefore, implementation of the proposed General Plan would generally meet attainment forecasts, and attainment of the standards would be achieved.

The Maximum and Maximum w/PRD projections are included and evaluated in the air quality analysis for comparison, but, although theoretically possible, that level of development is not reasonably foreseeable due in part to proposed development projects having to comply with roadway level of service standards, City codes (Zoning Code Chapter 19.780.040) and regulations, and site constraints such as topography.

Another measurement tool in determining consistency with the AQMP is to determine how a project accommodates the expected increase in population or employment. Generally, if a project is planned in a way that results in the minimization of vehicle miles traveled (VMT), both within the project area and the surrounding area in which it is located, and consequently the minimization of air pollutant emissions, that aspect of the project is consistent with the AQMP.

Policies contained in the General Plan would serve to promote a mixed use, pedestrian-friendly communities and serve to reduce air pollutant emissions over time. Specifically, Policy AQ-1.7 continues to promote planned residential development and infill housing, which reduces vehicle trips, and Policy AQ-1.10 which encourages job creation in job-poor areas as a means of reducing vehicle miles traveled. Other similar policies include Policies AQ-1.5, 1.6, 1.8, 1.12, 1.14, 1.15, and 1.18.

The proposed General Plan also includes specific policies aimed at providing alternative methods of transportation, encouraging the use of alternative fuel vehicles, as well as land uses that encourage pedestrian use through placement and design. Policy AQ-1.24 supports programs to provide "station cars" for short trips to and from "transit nodes" (e.g., Neighborhood Electric Vehicles). Policy AQ-1.26 encourages neighborhood parks and community centers near concentrations of residential areas and include pedestrian walkways and bicycle paths to encourage non-motorized travel. Other related policies include but are not limited to Policies AQ-1.19, 1.20, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, and 2.8.

Based on the above information and similar policies listed in the Related General Plan Policy Section of this document, the proposed General Plan would be consistent with the 2003 AQMP policy guidance in the reduction of vehicle miles traveled. The General Plan proactively addresses regional air quality in a manner consistent with policies and measures outlined in the 2003 Air Quality Management Plan (AQMP) established by the SCAQMD to achieve Federal and State standards for healthful air quality in the Basin. Therefore, the General Plan would not conflict with or obstruct implementation of the AQMP but will facilitate AQMP implementation. In addition, the population projections upon which the General Plan are consistent with SCAG projections. **Therefore, because the proposed General Plan is consistent with the implementation of the 2003 AQMP; the impact is considered less than significant.** As explained above, the Typical growth scenario is reasonably foreseeable; however, to provide a worst-case analysis, this EIR also analyzed growth under the Maximum and Maximum w/PRD growth scenarios. Because growth under those scenarios would not be consistent with SCAG's projections, such development would not be consistent with the 2003 AQMP, and under those scenarios **this impact would be significant and unavoidable**.

Zoning Code

The Zoning Code update is consistent with the General Plan. **Therefore, since the General Plan is consistent with the above-mentioned policies and plans, less than significant impacts are anticipated with the Zoning Code Update.**

Magnolia Avenue Specific Plan (MASP)

Development under the proposed General Plan takes into account all projected future growth and development within the MASP. The goal of the MASP to focus development to take advantage of public transit and to encourage mixed-use development is in keeping with AQMP intent. **Since the General Plan is not in conflict with the AQMP and since the MASP promotes the intent of the AQMP, the MASP is not in conflict with the AQMP and less than significant impacts are anticipated.**

***Threshold**: Violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation.*

General Plan

Air quality impacts from future development facilitated by the General Plan can be divided into two types: short-term impacts and long-term impacts. Short-term impacts are associated with

construction activities, and long-term impacts are those resulting from the continued operation of developed land uses and the associated increase in vehicular trips from existing and future development. **Table 5.3-B, SCAQMD CEQA Regional Significance Thresholds** (repeated here for convenience), shows the thresholds, which the City of Riverside recognizes when evaluating potential significant air quality impacts. It is appropriate for the City to use SCAQMD thresholds since the City is located within the SCAB.

Short-Term Impacts

Short-term impacts associated with construction from General Plan buildout will result in increased air emissions from grading, earthmoving, and construction activities. The common air emission sources from construction that can be mitigated effectively are mostly PM-10 (air borne dust). Mitigation measures **MM Air- 1 and 2** address ways future sources of PM-10 can be lessened. Construction-related air quality impacts will occur continuously through 2025 as individual development projects located within the Planning Area are constructed. Construction activity will also generate CO and NO_X. Architectural coatings, exterior paints, and asphalt may release reactive organic gases (ROG). Because the General Plan only sets forth broad parameters for new development and does not identify specific development projects, construction-related emissions of individual future developments cannot be quantified at this time. Other than potential development projects that are found to be exempt from CEQA, all development is subject to analysis for air quality impacts under SCAQMD requirements. In the past, SCAQMD had screening tables based on the size of a project, with smaller projects being released from further analysis for air impacts. That is no longer the case, so this EIR assumes relatively robust economic conditions over the next 20 years, and that construction activity will be a constant throughout the Planning Area.

While individual development projects will be required to employ construction approaches that minimize pollutant emissions (**MM Air 1- MM Air 5**, e.g., watering for dust control, tuning of equipment, limiting truck idling times), over the next 20 years substantial pollutant emissions associated with construction activity will be expected to occur. According to the 2003 existing land use inventory, which is summarized in the Land Use and Planning section of the EIR, approximately 36 percent of the Planning Area constitutes vacant land. Therefore, of approximately 78,000 acres in the Planning Area, approximately 28,000 acres are vacant. Of that, approximately 12,000 acres are in open space or habitat conservation areas, leaving about 16,000 vacant developable acres. In addition, some existing uses and underutilized areas will be demolished and redeveloped in the future, adding to the pollution resulting from construction. **Although, MM Air 1 requires that future development projects be analyzed for their short-term impacts, it is likely that some will not meet SCAQMD standards, therefore even at the General Plan level, impacts related to short-term (construction) air emissions are considered significant under all development scenarios.**

Long-Term Impacts

The General Plan land use assumptions utilized in this analysis are generated from the land use assumptions in LU-3 of the General Plan, and represented in the Conceptual Land Use plan (Figure 3-3)**.** Details can be found in Appendix C. The development envisioned in the General

Plan will generate additional emissions over time from both stationary sources and vehicular trips. **Table 5.3-D** and **Table 5.3-E** summarize estimated existing daily operational emissions for both the summer and winter.

Operational and area source emissions were computed using the URBEMIS 2002 for Windows Version 8.7.0 computer program which use default factors and each projects' land use assumptions. Operational emissions refer to on-road motor vehicle emissions from project build-out. Area Source emissions include stationary combustion emissions of natural gas used for space and water heating, yard and landscape maintenance (assumed to occur throughout the year in southern California), and consumer use of solvents and personal care products. Appendix C contains the worksheets documenting the calculations used to derive the data in the all of the following tables.

Table 5.3-D
Existing Daily Operational Emissions (Summer)

Activity	Daily Emissions (lbs/day)					
	ROG	NOX	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Natural Gas	106.21	1,414.17	871.60	0.00	2.63	2.63
Hearth	-	-	-	-	-	-
Landscaping	100.73	3.61	641.80	8.08	2.62	1.98
Consumer Products	4,428.08	-	-	-	-	-
Architectural Coatings	3,163.49	-	-	-	-	-
Vehicle Operation	48,212.54	57,351.16	633,349.87	490.20	45,050.77	43,428.94
Total	**56,011.05**	**58,768.94**	**634,863.27**	**498.28**	**45,056.02**	**43,433.55**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Table 5.3-E Existing Daily Operational Emissions (Winter)						
Activity	**Daily Emissions (lbs/day)**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
SCAQMD Daily Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Natural Gas	106.21	1,414.17	871.60	0.00	2.63	2.63
Hearth	16,077.03	693.84	21,476.80	43.48	3,060.39	2,947.16
Landscaping	100.73	3.61	641.80	8.08	2.62	1.98
Consumer Products	4,428.08	-	-	-	-	-
Architectural Coatings	3,163.49	-	-	-	-	-
Vehicle Operation	49,356.11	83,918.41	610,164.35	442.16	45,050.77	43,428.94
Total	**73,231.65**	**86,030.03**	**633,154.55**	**493.72**	**48,116.41**	**46,380.71**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Currently, emissions from the existing land uses in the City of Riverside exceed all SCAQMD thresholds for the criteria pollutants.

Long-term emissions for the General Plan in year 2025 are generally related to the operational emissions resulting from on-road motor vehicle emissions. As the City continues to develop pursuant to the land uses proposed in the General Plan, vehicle trips are expected to increase, thereby increasing mobile air pollution sources.

The proposed General Plan land uses in 2025 used for the long term emission analysis are from LU-3 and shown in Appendix C. Three scenarios were analyzed to show the range of emissions that can be expected from the three levels of density assumptions. The first scenario (**Table 5.3-F** and **Table 5.3-G**) used in the analysis herein represents "Typical" densities for residential and non-residential uses. This represents expected Project build-out. The second scenario (**Table 5.3-H** and **Table 5.3-I**) represents the Maximum densities for residential and non-residential uses, while the last scenario (**Table 5.3-J** and **Table 5.3-K**) represents a "worst-case" analysis with maximum densities for both residential and non-residential uses with planned residential developments (Maximum w/PRD) which allow for even higher residential densities in certain areas. See the worksheets in Appendix C for the assumptions used to calculate the following long-term emissions as a result of the proposed project.

Table 5.3-F
General Plan Typical Densities-Estimated Daily Operational Emissions (Summer) at Buildout

Activity	Daily Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Natural Gas	240.88	3,228.94	2,134.33	0.00	5.97	5.97
Hearth	-	-	-	-	-	-
Landscaping	332.67	43.73	2,668.64	17.43	8.74	6.61
Consumer Products	6,225.53	-	-	-	-	-
Architectural Coatings	7,568.34	-	-	-	-	-
Vehicle Operation	14,684.53	13,237.97	154,824.69	342.16	59,060.05	56,933.89
Total	**29,051.95**	**16,510.64**	**159,627.66**	**359.59**	**59,074.76**	**56,946.47**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Table 5.3-G
General Plan Typical Densities-Estimated Daily Operational Emissions (Winter) at Buildout

Activity	Daily Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Natural Gas	240.88	3,228.94	2,134.33	0.00	5.97	5.97
Hearth	22,611.37	1,118.06	30,255.35	62.04	4,314.19	4,154.56
Landscaping	332.67	43.73	2,668.64	17.43	8.74	6.61
Consumer Products	6,225.53	-	-	-	-	-
Architectural Coatings	7,568.34	-	-	-	-	-
Vehicle Operation	12,891.35	18,951.10	142,172.30	307.47	59,060.05	56,933.89
Total	**49,870.14**	**23,341.83**	**177,230.62**	**386.94**	**63,388.95**	**61,101.03**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Based on the data in **Table 5.3-F and 5.3-G**, implementation of the Typical densities within the General Plan will result in exceedances of all the SCAQMD's daily thresholds of significance for criteria pollutants. **This is considered a significant impact.**

Table 5.3-H
General Plan Maximum Densities-Estimated Daily Operational Emissions (Summer) at Buildout

Activity	Daily Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Natural Gas	314.47	4,221.52	2,831.47	0.00	7.80	7.80
Hearth	-	-	-	-	-	-
Landscaping	384.41	50.54	3,083.91	20.16	10.10	7.64
Consumer Products	7,923.30	-	-	-	-	-
Architectural Coatings	9,822.54	-	-	-	-	-
Vehicle Operation	15,562.86	13,173.58	155,781.55	344.11	59,230.87	57,098.56
Total	**34,007.58**	**17,445.64**	**161,696.93**	**364.27**	**59,248.77**	**57,114.00**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Table 5.3-I
General Plan Maximum Densities-Estimated Daily Operational Emissions (Winter) at Buildout

Activity	Daily Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Natural Gas	314.47	4,221.52	2,831.47	0.00	7.80	7.80
Hearth	28,776.42	1,400.51	38,496.76	78.82	5,488.91	5,285.82
Landscaping	384.41	50.54	3,083.91	20.16	10.10	7.64
Consumer Products	7,923.30	-	-	-	-	-
Architectural Coatings	9,822.54	-	-	-	-	-
Vehicle Operation	12,880.66	18,882.89	141,670.57	309.13	59,230.87	57,098.56
Total	**60,101.80**	**24,555.46**	**186,082.71**	**408.11**	**64,737.68**	**62,399.81**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Based on the data in **Table 5.3-H and 5.3-I**, implementation of the Maximum densities within the General Plan will result in exceedances of all the SCAQMD's daily thresholds of significance for all criteria pollutants. **This is considered a significant impact.**

Table 5.3-J General Plan Max. w/ PRD)-Estimated Daily Operational Emissions (Summer) at Buildout						
Activity	**Daily Emissions (lbs/day)**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
SCAQMD Daily Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Natural Gas	346.08	4,630.75	3,005.61	0.00	8.58	8.58
Hearth	-	-	-	-	-	-
Landscaping	508.51	66.87	4,080.03	26.69	13.36	10.10
Consumer Products	9,521.10	-	-	-	-	-
Architectural Coatings	10,934.82	-	-	-	-	-
Vehicle Operation	20,967.79	19,020.17	221,753.81	490.07	84,689.76	81,640.93
Total	**42,278.30**	**23,717.79**	**228,839.45**	**516.76**	**84,711.70**	**81,659.61**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Table 5.3-K General Plan Max. w/ PRD)-Estimated Daily Operational Emissions (Winter) at Buildout						
Activity	**Daily Emissions (lbs/day)**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
SCAQMD Daily Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Natural Gas	346.08	4,630.75	3,005.61	0.00	8.58	8.58
Hearth	34,581.03	1,710.22	46,271.57	94.88	6,598.00	6,353.87
Landscaping	508.51	66.87	4,080.03	26.69	13.36	10.10
Consumer Products	9,521.10	-	-	-	-	-
Architectural Coatings	10,934.82	-	-	-	-	-
Vehicle Operation	18,507.51	27,219.87	204,135.35	440.47	84,689.76	81,640.93
Total	**74,399.05**	**33,627.71**	**257,492.56**	**562.04**	**91,309.70**	**88,013.48**
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Based on the data in **Table 5.3-J and 5.3-K**, implementation of the Maximum w/PRD densities within the General Plan will result in exceedence of the SCAQMD's daily thresholds of significance for all criteria pollutants. **This is considered a significant impact**.

In order to better understand the actual increase in air quality emissions at buildout (year 2025) for all three scenarios from the existing conditions, it is also useful to compare the existing and future emissions as shown in **Table 5.3-L and Table 5.3-M** below.

Table 5.3-L
Comparison of Existing and Future Emissions (Summer)

Activity	Daily Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
Existing (2004)	56,011.05	58,768.94	634,863.27	498.28	45,056.02	43,433.55
Typical (2025)	29,051.95	16,510.64	159,627.66	359.59	59,074.76	56,946.47
Difference[1]	**-26,959.10**	**-41,323.30**	**-475,235.61**	**-138.69**	**+14,018.74**	**+13,512.92**
Maximum (2025)	34,007.58	17,445.64	161,696.93	364.27	59,248.77	57,114.00
Difference[1]	**-22,003.47**	**-46,654.63**	**-473,166.34**	**-134.01**	**+14,192.75**	**+13,680.45**
Max. w/PRD (2025)	42,278.30	23,717.79	228,839.45	516.76	84,711.70	81,659.61
Difference[1]	**-13,732.75**	**-35,051.15**	**-406,023.82**	**+18.48**	**+39,655.68**	**+38,226.06**

Note: [1] The comparison is made against the existing (2004) emissions.

Table 5.3-M
Comparison of Existing and Future Emissions (Winter)

Activity	Daily Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
Existing (2004)	73,231.65	86,030.03	633,154.55	493.72	48,116.41	46,380.71
Typical (2025)	49,870.14	23,341.83	177,230.62	386.94	63,388.95	61,101.03
Difference[1]	**-23,361.51**	**-62,688.20**	**-455,923.93**	**-106.78**	**+15,272.54**	**+14,720.32**
Maximum (2025)	60,101.80	24,555.46	186,082.71	408.11	64,737.68	62,399.81
Difference[1]	**-13,129.85**	**-61,474.57**	**-447,071.84**	**-85.61**	**+16,621.27**	**+16,019.10**
Max. w/PRD (2025)	74,399.05	33,627.71	257,492.56	562.04	91,309.70	88,013.48
Difference[1]	**+1,167.40**	**-52,402.32**	**-375,661.99**	**+68.32**	**+43,193.29**	**+41,632.77**

Note: [1] The comparison is made against the existing (2004) emissions.

Evaluation of the tables above reveals that future summer emissions of ROG, NO_X, and CO, are projected to decrease (or improve) relative to existing conditions in all three modeled scenarios. Summer emissions of SO_2 in the Max. w/PRD scenario and emissions of PM-10 and PM-2.5 in all three scenarios are projected to increase (or worsen) relative to existing conditions. Future winter emissions are also projected to decrease (or improve) under all three scenarios for both NO_X and CO. Future winter emissions of PM-10 and PM-2.5 are projected to increase (worsen) in all three scenarios relative to existing conditions. Additionally, winter emissions of ROG and SO_2 in Max. w/PRD only are projected to increase (or worsen) relative to existing conditions.

This can be explained by several factors and most specifically, the anticipated effective efforts of the SCAQMD to control and to reduce pollutant emissions through regulations and policies such as the phasing-out of older vehicles, improvement of vehicle emission-control technologies (particularly that of diesel vehicles), and better emissions-control technologies for commercial and industrial operations. SCAQMD's expectations regarding future decreases are reflected in its air quality models, which are the recommended methodology for analyzing air quality impacts. **Although air quality emissions may improve over time compared to existing conditions, all three density scenarios are projected to exceed SCAQMD standards, and, therefore, impacts are considered significant.**

CO Hot Spots

In order to ensure that the State and Federal ambient air quality standards for CO are not violated, the SCAQMD recommends that projects with a potential to generate heavy volumes of traffic, and which can lead to high levels of CO, use hot spot modeling to determine the potential to create a CO "Hot Spot". A CO "Hot Spot" is a localized concentration of CO that is above the State or Federal 1-hour or 8-hour ambient air standards. A localized high CO level is associated with traffic congestion and idling or slow-moving vehicles and requires additional analysis beyond total project emissions quantification. Since the General Plan identifies future land uses and does not include information regarding the specific development projects, it is not possible to determine the traffic movement generated by each project and the corresponding localized CO impact on intersections within the City. Therefore, projects within the City with a potential to generate heavy traffic volumes should perform CO hot spot modeling using project-specific traffic data. **By incorporating mitigation measure MM Air-7 below, implementation of the General Plan will reduce impacts specifically to CO hot spots to less than significant levels.**

Summary of Operational General Plan Emissions

The operational (long-term) emissions at build-out of the City of Riverside's General Plan are above the SCAQMD thresholds and will have a significant impact on air quality in the Planning Area. Additionally, the City of Riverside is in non-attainment for ozone, carbon monoxide, PM-10, and PM-2.5. **Thus, the evaluation of build-out generated emissions in relation to the thresholds of significance demonstrates that impacts to air quality from General Plan implementation are considered significant, even with mitigation incorporated.**

The discussion of air pollution constituents at the beginning of this section noted that high concentrations of various constituents may result in impacts to human health. The following health risks are associated with high concentrations of all the criteria pollutants: restricted oxygen absorption in the blood stream; coughing, altered respiratory responsiveness and pulmonary functions, and increased respiratory illness in children; reduced lung function in healthy people as well as increased sensitivity in people with preexisting respiratory illness; lung damage and interference with the body's ability to clear its respiratory tract; shortness of breath and wheezing and, with long-term exposure, exacerbate existing cardiovascular disease and respiratory illnesses. Impacts from ozone and atmospheric PM (as cited in the Setting section) would largely result from regional air quality issues, and not just from the City's Project alone. However, at the programmatic level of analysis, it is too speculative to determine what other

health impacts could result from the implementation of the City's General Plan. The reasons for this include unknown location, frequency, and quantities of the remaining pollutants to be emitted, the nearest sensitive receptor distances, etc. As noted above, however, by implementing the mitigation measures at the end of this chapter the City will reduce the health impacts related to air quality to the extent feasible. For example, **MM Air 7** requires the City to analyze the air quality impacts of most development projects and to reduce potential impacts to the extent feasible using methods identified in the General Plan's Air Quality Element Policies, the most recent Air Quality Management Plan, and the most recent CEQA Air Quality Handbook. Despite the implementation of all feasible mitigation measures, however, the health impacts associated with background levels of ozone and atmospheric PM (PM-10 and PM-2.5) are currently considered significant.

Zoning Code

The Zoning Code update is consistent with the General Plan. **Therefore, since the implementation of the General Plan is considered significant, the Zoning Code can also be considered to result in significant impacts.**

Magnolia Avenue Specific Plan (MASP)

Development under the proposed General Plan takes into account all projected future growth and development within the MASP. **Since the General Plan was found to be significant, the MASP also results in significant impacts**.

Threshold: *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard, or result in a cumulatively considerable increase in greenhouse gas emissions.*

General Plan

The portion of the Basin within which the City is located is designated as a non-attainment area for ozone, PM-10 and PM-2.5 under State standards, and as a non-attainment area for ozone, carbon monoxide, PM-10, and PM-2.5 under Federal standards.

In evaluating the cumulative effects of the project, Section 21100(e) of CEQA states that "previously approved land use documents including, but not limited to, general plans, specific plans, and local coastal plans, may be used in cumulative impact analysis." Additionally, the SCAQMD recommends assessing project's cumulative impacts by utilizing the same significance criteria as those used by the project. In addressing cumulative effects for air quality, the AQMP utilizes approved general plans and, therefore, is the most appropriate document to use to evaluate cumulative impacts of the subject project. This is because the AQMP evaluated air quality emissions for the entire Basin using a future development scenario based on population projections and set forth a comprehensive program that would lead the region, including the Planning Area, into compliance with all Federal and State air quality standards. As discussed above, only the General Plan build-out under the Typical density scenario is consistent with the underlying land use assumptions in the AQMP, and is therefore not in conflict with the

AQMP. While unlikely to occur, build-out of the General Plan under the Maximum and Maximum w/PRD is not consistent with the underlying land use assumptions in the AQMP.

As discussed in the threshold above, construction activities are projected to result in significant levels of NO_X and ROG, both ozone precursors, PM-10, PM-2.5, and CO. Feasible measures to reduce these impacts to less than significant levels do not exist at the General Plan level. However, Policy AQ-4.5 requires the suspension of all grading operations when winds and gust exceed 25 mile per hour, which helps reduce fugitive particulate matter.

SCAQMD has set recommended thresholds (**Table 5.3-B**) for construction-related emissions. Emissions higher than those suggested by the SCAQMD thresholds are significant on a project-specific basis and when combined with the short-term emissions from all of the other projects within the Basin can also be considered a **significant cumulative impact.**

As shown in **Table 5.3-L** and **Table 5.3-M**, long-term daily emissions associated with General Plan buildout in 2025 will substantially exceed daily thresholds for all criteria pollutants even though emissions of NO_X and CO decrease in all three scenarios in both summer and winter and ROG and NO_X decrease in the Typical and Maximum scenarios in both summer and winter. These decreases in emissions are primarily due to the anticipated improvements to automotive fuels, and cleaner burning engines which reduce vehicle exhaust emissions. **Although long-term emissions are expected to decrease by 2025, all criteria pollutants remain above the SCAQMD thresholds, which represent a significant cumulative impact.**

If a person moves from one location, with long commutes and a land use pattern that requires substantial energy use, to a project location that promotes shorter and fewer vehicle trips, more walking and less energy use, the new project could potentially result in a reduction in generation of global GHG emissions.

According to the General Plan Transportation Study, build-out of the General Plan at Typical densities is expected to increase vehicle trips by approximately 50 percent above existing conditions, while Maximum w/PRD-level development, which is theoretically possible but not reasonably foreseeable, would increase vehicle trips over 400 percent compared to existing conditions. Some future reductions in GHG emissions from vehicular trips can be expected in the future as a result of AB 1493 (2002), which requires emissions reductions in California's new light duty vehicle fleet. Those regulations are to be phased-in, starting in model year 2009. Staff of the California Air Resources Board estimates that emissions could be reduced by 27% by 2030. Nevertheless, since the transportation sector is responsible for approximately 41 percent of California's GHG emissions, the expected reductions may not be enough to reduce GHG emissions to 1990 levels. The following analysis is included to give an "order of magnitude" type of quantification of GHG, which could be expected, from the proposed Project.

While no definitive protocol has been established by an agency responsible for air quality and/or GHG emissions, the following analysis presents the City's best effort, based on all available information, to quantify the Project's GHG emissions compared at the statewide, regional, and project levels. GHG emissions associated with the General Plan were estimated using CO_2 emissions as an equivalent for all GHG emissions. This is consistent with the current reporting

protocol of the California Climate Action Registry. CO_2 emissions associated with vehicle miles traveled (VMT) are a good indicator of GHGs associated with a land development project (CCAR). Annual VMT/person for the year 1990 was estimated using population data from the California Department of Finance (DOF 2006), and VMT data from Caltrans (Caltrans 2003). Using this information, an annual rate of 8,683 VMT/person was calculated. Utilizing a State fleetwide emission factor for the year 1990, this would result in a statewide annual emission rate (CARB 1994) of approximately 3.5 tons CO_2 /person associated with vehicle miles traveled. The same process was utilized to determine a statewide emission rate for the year 2000, which corresponds to 3.6 tons per person annually (Calculations and assumptions found in Appendix C). For analysis purposes, these rates will serve as the basis for comparison.

Using the process outlined above and displaying the results below in **Table 5.3-N**, an estimated emission rate of 3.6 tons per person was calculated for the year 2010. Since 2020 is the established year for the Statewide GHG cap, it will be analyzed instead of General Plan buildout in 2025. For 2020, the population of the State is projected to grow to 43,851,741 people (DOF 2004). Using the same equation to estimate annual VMT/person and the emission rate from 2010 to be conservative, projected emissions for the year 2020 will be 3.9 tons per person annually. A summary of the emission targets and future levels are included in **Table 5.3-N, Statewide CO_2 Emissions Levels.**

Table 5.3-N, Statewide CO_2 Emission Levels

Statewide	Tons CO_2 Per Person	Million Tons CO_2 per Geographic Location	Meets Target
1990 Level	**3.5**	105.3	
2020	3.9	172.3	No
2000 Level	**3.6**	122.1	
2010	3.6	139.7	No

Evaluation of the above table shows that the 2010 CO_2 emission levels meet the target set by Executive Order S-3-05 when looking at the per person emission rate. However, since the population increases over the same time period, the total amount of CO_2 increases as well making the overall amount of emissions greater than the targets. In order to achieve the amount of emissions that occurred in 1990, the emission rate per person must be reduced by approximately 39 percent to achieve the 1990 target set by AB 32.

Emissions levels for CO_2 were also calculated for the Riverside County portion of the SCAB, primarily for comparison and to document regional cumulative conditions in the conventional manner that cumulative impacts are most often addressed. The Riverside County portion of the SCAB includes cities from Rubidoux in the West to Banning in the East and includes Temecula to the South. The Riverside County portion of the SCAB does not include the Coachella and low desert areas, which includes the cities of Palm Springs and Desert Hot Springs Utilizing data provided by CARB's Population and Vehicle Trends Report (CARB 2004), the following CO_2 emission levels were calculated and summarized in **Table 5.3-O,** below.

Table 5.3-O, Riverside County SCAB CO_2 Emission Levels			
SCAB (Riverside County portion)	**Tons CO_2 Per Person**	**Million Tons CO_2 per Geographic Location**	**Meets Target**
1990 Level	**3.6**	3.3	
2020	3.5	7.3	No
2000 Level	**4.2**	5.0	
2010	3.7	6.2	No

The above table shows that the projected CO_2 emission levels for the Riverside County portion of the SCAB meet the established target levels when looking strictly at the per person emission rate. However, as with the statewide population, the Riverside County portion of the SCAB will also experience steady population growth through 2020. This increase in population causes the total amount of CO_2 in the area to exceed levels of each target year. This data provides a good example of CO_2 emissions for the Riverside County portion of the SCAB; it is useful for analysis purposes related to traditional cumulative analysis, which looks at the region within which impacts occur.

As discussed previously, beginning no later than the year 2012, sources or categories of sources of GHG emissions would be regulated under AB 32. Mobile sources of GHG emissions are scheduled to be regulated beginning with the 2009 model year, and would be the primary emission source of GHGs associated with the General Plan. To be conservative, these potential reductions were not taken into account, however, in the 2020 calculations. Also as discussed above, vehicle miles traveled (VMT) would be a good indicator of CO_2 emissions from the proposed General Plan, and CO_2 emissions are a good indicator of total GHG emissions. Therefore, **Table 5.3-P, City of Riverside CO_2 Emission Levels**, shows the calculated CO_2 emission levels specifically for the City of Riverside Planning Area.

Table 5.3-P, City of Riverside CO_2 Emission Levels			
City/Planning Area	**Tons CO_2 Per Person**	**Million Tons CO_2 per Geographic Location**	**Meets Target**
1990 Level	**2.0**	0.53	
2020	4.2	1.63	No

NOTE: Analysis for the year 2010 was not performed because of the programmatic nature of the General Plan. These results would be too speculative.

The emissions levels presented in **Table 5.3-P**, above, were calculated using the following assumptions. The General Plan population in 1990 was obtained from two sources. The population from the City in 1990 was taken from the 1994 City of Riverside General Plan and population from the 1990 sphere area was obtained from the U.S. Census Bureau. Population projections for 2025 under typical conditions were used as the population in 2020 and can be found in **Table 5.12-B** of the Population and Housing section of this EIR. The 1990 VMT data was obtained from the 1994 City of Riverside General Plan Traffic Analysis, which included estimates from the City and Sphere, as it existed at that time. The VMT under the Typical project development level for the Planning Area in 2025 was provided in the Transportation Study prepared for the General Plan Circulation Element (MMA 2007) and was used as the VMT estimate for 2020. Utilizing the same equation used above, approximately 4.2 metric tons

CO_2/person would be generated annually by the General Plan in 2020. This represents a more than doubling of tons of CO_2 per person over the 30-year timeframe, as 1990 estimates show 2.0 tons of CO_2 per capita. When compared to the regional and State estimates (3.6 and 3.5 tons of CO_2, respectively), the 1990 estimate for the Planning Area seems low, but is explained in the following paragraph.

The large difference between the 1990 and 2020 levels is largely due to the change in the estimated VMT for the two study years. The VMT estimates are included in Appendix C of this EIR and indicate that annual VMT per person increased from 5,023.60 to 11,592.81 between 1990 and 2020 for the Planning Area. This represents a 230% increase in VMT, but only a 210% increase in tons of CO_2 per person. Since no reductions were taken related to mobile source GHG emissions which may be regulated beginning with the 2009 model year, the City's General Plan land use plan including L-Corridor intensification, improved job base within the Planning Area, and improved public transportation may have contributed to the lesser increase in CO_2 per capita. When adjusting for the population increase, the total emissions increase from 0.53 million metric tons to 1.63 million metric tons. These levels would be approximately 3 times the annual level that would be needed to achieve 1990 GHG levels. **Due to the overall increase and magnitude of change, which would be necessary to reduce overall CO_2 emissions to 1990 levels, this impact is considered significant and unavoidable.**

Given that the build-out of the General Plan would result in GHG emissions of 1.63 million metric tons in 2020 within a region that will produce 7.3 million metric tons, and would generate approximately three times the annual level in 1990 and approximately double the tons of CO_2 per person, the increase in GHG is considered significant. Therefore, **GHG production is considered cumulatively considerable.**

In addition to emissions from mobile sources, GHGs may also be emitted from stationary sources, such as electricity generation. As noted in the Utilities section of this EIR, implementation of the proposed General Plan would increase use of electricity in the Planning Area, particularly the demand for electricity to light, heat, and air condition the residential, commercial, and business development. New power production facilities proposed by the City include photovoltaic stations and natural gas powered plants. Existing sources of energy, which includes a mix of renewable, coal, nuclear, and natural gas, will also continue to be used. Sources and categories of sources will be subject to the emissions reductions strategy mandated by AB 32, however, no specific regulations, market mechanism, or other actions have been identified or adopted since AB 32 was adopted. Nevertheless, due to increased use in the Planning Area and for the purposes of this analysis, **GHG emissions from energy use and other stationary sources are considered cumulatively considerable under all development scenarios.**

The State has identified emissions in the year 1990 and 2000 as goals through adoption of AB 32 and Executive Order S-3-05, respectively. If these goals are attained, California would generate less GHG than today. It is recognized, though, that there is no simple equation available to determine if a single project or community would contribute significant amounts of GHG. The Year 1990 emissions target for Year 2020 has not yet been established. AB 32 gave CARB until 2008 to develop the 1990 emissions inventory because of the complexity of quantifying such

emissions. The California Climate Action Team (AEP 2007) reported to the Governor strategies to reduce greenhouse gas emissions. Use of these strategies as a guide to determine a project's consistency with AB 32 may be appropriate, because many are or could be components of local land use decisions and regulations. The types of strategies that could relate to local development have been summarized by the Association of Environmental Professionals (AEP 2007) and are presented in Appendix C of this EIR. The paragraphs below demonstrate some of the ways that the City of Riverside, through its programs, regulations and policies meet these strategies to affect reductions in GHG.

The programs listed in the Local Programs section under Related Regulations and policies located in the Related General Plan Policies section will help reduce vehicle trips and increase energy efficiency throughout the Planning Area. Examples include the Residential Shade Tree Program and the Community Energy Efficient Program, which help increase energy efficiency and reduce fossil fuel consumption. In addition, General Plan policies, such as, OS-8.1 to OS-8.11, encourage renewable energy and energy efficient development. Further, Implementation Plan Tools, such as, OS-30 to OS-32, which promote energy efficient programs that conserve energy 15% above Title 24 requirements. These and other policies in the General Plan will reduce energy demand. Policies like AQ-1.7 continue to promote planned residential development and infill housing, which reduces vehicle trips.

At its February 6, 2007 meeting, the Riverside City Council "1) approved the Sustainable Riverside Policy Statement as framed by the Clean and Green Task Force; 2) directed the City's new Environmental Relations Manager to review the Clean and Green Task Force report and report back to the Council with recommendations for implementation; 3) directed the City Manager to prepare a report on solar steps to become the model solar city in Southern California; 4) supported the Mayor's endorsement of the U.S. Mayors Climate Protection Agreement of 2005, as outlined in the written staff report; 5) incorporated Operation Free Flow, a goods movement program**,** regarding truck traffic; and 6) requested the Environment Relations Manager to present a status report to the Clean and Green Task Force in February 2008." The U.S. Mayors Climate Protection Agreement of 2005 resolved that the U.S. Conference of Mayors will establish a formal relationship with International Council for Local Environmental Initiatives (ICLEI) Cities for Climate Protection Program to track progress and implementation of the agreement. Member cities, like Riverside, will be able to use the services of CLEI to inventory and monitor GHG emissions. Programs and policies like those outlined above will substantially lessen the Project's contribution to GHG emissions; however, it is not anticipated that emission levels can be reduced to levels that are not cumulatively considerable.

In accordance with CEQA, impacts that are less than significant individually, but cumulatively considerable, may be significant. Although there is no standard directly applicable to adoption and implementation of the General Plan, cumulative emissions resulting from buildout in 2025 will contribute criteria pollutants and global warming gases to the Basin. **Therefore, implementation of the General Plan will result in a cumulatively significant net increase of criteria pollutants and global warming gases.**

Zoning Code

The Zoning Code update is consistent with the General Plan. **Therefore, since the General Plan is consistent with the above mentioned policies and plans, the implementation of the Zoning Code will also result in a cumulatively significant impact.**

Magnolia Avenue Specific Plan (MASP)

Development under the proposed General Plan takes into account all projected future growth and development within the MASP. **Therefore, the MASP will result in cumulatively significant impacts related to air quality.**

Threshold: *Expose sensitive receptors to substantial pollutant concentrations.*

General Plan

Sensitive receptors include existing and future residential uses, school playgrounds, childcare facilities, athletic facilities, hospitals, and convalescent homes within the Planning Area.

Short-term impacts associated with construction from General Plan buildout will result in increased air emissions from grading, earthmoving, and construction activities. The common air emission sources from construction that can be mitigated effectively are mostly PM-10 (air borne dust). Mitigation measure **MM Air -2** addresses ways future sources of PM-10 can be lessened. Construction activity will also generate CO, NO_X, and PM-10 and PM-2.5 (primarily from diesel engines). Mitigation measures **MM Air -3** and **MM Air -4** address reducing diesel emissions from construction. Architectural coatings, exterior paints, and asphalt may release reactive organic gases (ROG). Because the General Plan only sets forth broad parameters for new development and does not identify specific development projects, construction-related emissions of individual future developments cannot be quantified at this time. Assuming relatively robust economic conditions over the next 20 years, construction activity will be a constant throughout the Planning Area. Although, **MM Air -1** requires that future development projects be analyzed for their short-term impacts, it is not known if all impacts can be reduced to less than significant levels, therefore **at the General Plan level, impacts related to short-term (construction) emissions are considered significant.**

Long-term implementation of the General Plan will allow for substantial population and employment growth and development within the Planning Area. As a result, there will be a significant increase in the number of sensitive receptors within the Planning Area, which could be exposed to substantial pollutant concentrations. These concentrations typically occur near stationary sources such as industrial and manufacturing facilities, or where schools or hospitals are located adjacent to major mobile sources such as roads. The majority of industrial land uses are adjacent to residential land uses, according to the Conceptual Land Use Plan, General Plan Figure 3-3. However, these facilities already exist and will not effect the implementation of the General Plan. Several General Plan policies will help lessen the impacts associated with siting of compatible land uses. Policy AQ-1.3 protects sensitive receptors from significant sources of pollution through buffering and policy AQ-1.4 facilitates communication between residents and businesses on nuisance issues related to air quality. Policy AQ-2.11 promotes the use of the "Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities"

in determining which land uses are compatible with each other. Likewise, existing schools and hospitals are currently located adjacent to major roads. Policies like AQ-1.3, described above, will lessen impacts to the construction of new sensitive receptors.

Review of individual projects will be necessary to ensure that projects involving activities (construction and operation) that generate significant levels of air pollutants are carefully designed and regulated to ensure that pollutant levels are reduced below significance thresholds and not concentrated near sensitive receptors. Policies like AQ-1.3, described above, and the following address how to lessen impacts to sensitive receptors. Policy AQ-1.12 supports mixed-use land use patterns and encourages community centers that promote community self-sufficiency and discourage automobile dependency. Policy AQ-1.13 encourages employment centers that are non-polluting or extremely low-polluting and does not draw large numbers of vehicles near residential uses. Policy AQ-3.6 supports "green" building codes that require air conditioning/filtration installation, upgrades, or improvements for all buildings, but particularly for those associated with sensitive receptors.

Vehicular emissions can also be concentrated near sensitive receptors, primarily at congested intersections. These conditions can result in localized CO "Hot Spots." The General Plan Circulation and Community Mobility Element is intended to improve intersections and relieve congestion which effects traffic movement. **Even with regular assessment of air quality in relation to sensitive receptors from new development projects and transportation improvements and adherence to policies such as AQ-2.5, impacts related to exposing sensitive receptors to substantial pollutant concentrations are expected to be significant.**

Zoning Code

The Zoning Code update is consistent with the General Plan. **Therefore, since the General Plan is consistent with the above mentioned policies and plans, the Zoning Code will result in significant impacts to sensitive receptors.**

Magnolia Avenue Specific Plan (MASP)

Development under the proposed General Plan takes into account all projected future growth and development within the MASP. The implementation of the MASP will expose sensitive receptors to substantial pollutant concentrations. **The impact is significant.**

Threshold: *Expose a substantial number of people to objectionable odors.*

General Plan

While exact quantification of objectionable odors cannot be determined due to the subjective nature of what is considered "objectionable", the types and quantity of development allowed by the proposed General Plan present the potential for generation of objectionable odors. Construction activities initiated as a result of the proposed General Plan could generate airborne odors from diesel exhaust emissions and the application of architectural coatings during construction of said future projects. However, said emissions would occur only during daylight hours, be short-term in duration, and would be isolated to the immediate vicinity of the construction site. Therefore, they would not expose a substantial number of people to objectionable odors on a permanent or temporary basis.

Potential operational airborne odors could occur as a result of certain land uses and how they are sited relative to other land uses. However, Policy AQ-2.11 promotes the use of the "Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities" in determining which land uses are compatible with each other. Additionally, future industrial and commercial uses established pursuant to the General Plan that could generate objectionable odors within the Planning Area will be subject to SCAQMD Rule 402 governing odor emissions. Any objectionable odor may be reported to the SCAQMD, which resolves complaints through investigation. A Notice to Comply/Notice of Violation will be issued when necessary. **Therefore, implementation of the proposed General Plan will not result in development that will cause objectionable odors affecting a substantial number of people and the impacts thereof will be less than significant.**

Zoning Code

The Zoning Code update is consistent with the General Plan. **Therefore, since the General Plan is consistent with the above mentioned policies and plans, the implementation of Zoning Code will not expose a substantial number of people to objectionable odors, and the impacts are considered less than significant.**

Magnolia Avenue Specific Plan (MASP)

Development under the proposed General Plan takes into account all projected future growth and development within the MASP. Implementation of the MASP will not expose a substantial number of people to objectionable odors. **Impacts are less than significant**.

Proposed Mitigation Measures

As discussed above, the project will result in significant impacts related to short term construction impacts and long-term operational impacts as well as contribute cumulatively to air quality emissions. The General Plan will include the above listed policies related to reducing air quality emissions in the City over its buildout to 2025. Implementation of these policies will help

to reduce future impacts; however, using the SCAQMD- approved methodologies applied in this analysis, it is not possible to present quantifiable emission reductions with these policies incorporated.

In addition to the General Plan policies, an Environmental Impact Report is required to describe feasible mitigation measures, which could minimize significant adverse impacts (CEQA Guidelines, Section 15126.4). Mitigation measures were evaluated for there ability to eliminate the potential significant adverse impacts related to air quality or to reduce impacts to below the level of significance.

The following mitigation measures shall be implemented to address short-term construction impacts as appropriate on a case-by case basis:

MM Air 1: To mitigate for potential adverse impacts resulting from construction activities, proposed development projects that are subject to CEQA shall have construction-related air quality impacts analyzed using the latest available URBEMIS model, or other methods sanctioned by the SCAQMD. The analysis of construction-related air quality impacts shall be included in the development project's CEQA analysis, including recommended mitigation measures. Proposed mitigation measures may include extending the construction period as feasible in order to ensure air quality thresholds are not exceeded. The analysis shall address pollution levels near sensitive receptors and require mitigation to reduce emissions.

MM Air 2: To mitigate for potential adverse impacts resulting from construction activities, development projects must abide by the SCAQMD's Rule 403 concerning Best Management Practices for construction sites in order to reduce emissions during the construction phase. Measures may include:

- Development of a construction traffic management program that includes, but is not limited to, rerouting construction related traffic off congested streets, consolidating truck deliveries, and providing temporary dedicated turn lanes for movement of construction traffic to and from site;
- Sweep streets at the end of the day if visible soil material is carried onto adjacent paved public roads;
- Wash off trucks and other equipment leaving the site;
- Replace ground cover in disturbed areas immediately after construction;
- Keep disturbed/loose soil moist at all times;
- Suspend all grading activities when wind speeds exceed 25 miles per hour;
- Enforce a 15-mile per hour speed limit on unpaved portions of the construction site.

MM Air 3: To reduce both mobile and stationary source emissions, to the extent feasible, the City will continue to use when practical Best Available Control Technologies and Best Available Retrofit Control Technology, as defined by SCAQMD, in the City's practices, including but not

limited to advanced diesel particulate traps on City vehicles and purchase and use of aqueous diesel fuel vehicles.

MM Air 4: To reduce diesel emissions associated with construction, construction contractors shall provide temporary electricity to the site to eliminate the need for diesel-powered electric generators, or provide evidence that electrical hook ups at construction sites are not cost effective or feasible.

MM Air 5: To reduce construction related particulate matter air quality impacts of City projects the following measures shall be required:

1. the generation of dust shall be controlled as required by the AQMD;
2. grading activities shall cease during periods of high winds (greater than 25 mph);
3. trucks hauling soil, dirt or other emissive materials shall have their loads covered with a tarp or other protective cover as determined by the City Engineer; and
4. the contractor shall prepare and maintain a traffic control plan, prepared, stamped and signed by either a licensed Traffic Engineer or a Civil Engineer. The preparation of the plan shall be in accordance with Chapter 5 of the latest edition of the Caltrans Traffic Manual and the State Standard Specifications. The plan shall be submitted for approval, by the engineer, at the preconstruction meeting. Work shall not commence without an approved traffic control plan.

The following mitigation measures shall be implemented to address long-term operational impacts:

MM Air 6: Within a year of adoption of the General Plan 2025 Program the City will implement the Good Neighbor Guidelines prepared by Western Riverside Council of Governments in coordination with the South Coast Air Quality Management District. Implementation of these Guidelines will include, but are not limited to, measures to:

- minimize exposure to diesel emissions to neighbors in close proximity to a warehouse/distribution center;
- substantially eliminate diesel trucks from unnecessarily traversing through residential neighborhoods; and
- reduce diesel idling within the warehouse/distribution center.

MM Air 7: As part of the CEQA process, the City shall require proposed development projects with potential operational air quality impacts to identify and mitigate those impacts. To ensure proper characterization and mitigation of those impacts, regional impacts shall be analyzed using the latest available URBEMIS model, or other analytical method determined in conjunction with the SCAQMD. To address potential localized impacts, the air quality analysis may incorporate SCAQMD's Localized Significance Threshold analysis, CO Hot Spot analysis or other appropriate analyses as determined in conjunction with SCAQMD. If such analyses identify potentially significant regional or local air quality impacts, the City shall require the incorporation of appropriate mitigation. Mitigation should reduce identified impacts to the

maximum extent feasible using, among others, measures identified in the Air Quality Element Policies of the General Plan and the most recent Air Quality Management Plan as well as mitigation from the most recent CEQA Air Quality Handbook available at the SCAQMD. Example topics include, but are not limited to, energy conservation, reduction of vehicle miles traveled, overall trip reduction, and reduction of particulate matter.

MM Air 11: For all new residential projects located within 1,000-feet of any freeway full disclosure shall be provided on all rental, lease and sale documents to future tenants and/or buyers of a potential increased cancer risk due to the proximity of the freeway.

MM Air 12: All new truck terminals, warehouses and other shipping facilities requiring the use of refrigerated trucks and with more than 50 truck trips per day shall provide electrical hookups for the refrigerated units to reduce idling and its associated air quality pollutants. Additionally, future tenant improvements involving conversion of a warehouse for refrigeration storage shall include electrical hookups for refrigerated units.

The following mitigation measures shall be implemented to address impacts related to greenhouse gas emissions.

MM Air 8: To reduce GHG emissions through reduced energy consumption and the procurement of lower-emission resources, Riverside Public Utilities (RPU) shall join the California Climate Action Registry (www.climateregistry.org) and comply with GHG regulations developed by the California Air Resources Board (CARB) and the California Energy Commission (CEC) pursuant to AB 32. RPU shall perform yearly GHG inventories according to the Power/Utility Protocol to identify and implement conservation measures and resource procurement practices that will reduce its GHG emissions.

MM Air 9: To reduce GHG emissions, the City's Environmental Relations Manager, working in conjunction with RPU shall develop, enhance, and/or implement programs to reduce energy consumption. Some examples of programs may be, but are not limited to:

- Replacing incandescent light bulbs with compact fluorescent lamps;
- Participating in the Energy Star Programs;
- Promotion of the use of energy efficient equipment and vehicles;
- Promotion of commercial and residential solar energy rebate programs; and
- Performance based, commercial/industrial energy efficiency rebate program.

MM Air 10: The City will implement an incentive based program, Green Builder Program, by the end of 2008 to reduce GHG emissions through the energy consumption of proposed new development. A Riverside Green Builder home must meet five criteria:

- Energy Efficiency – built to exceed California Title 24 energy efficiency standards by 15%;

- Water Conservation – conserving 20,000 gallons of water per home per year;
- Waste Reduction – at least 50% of construction waste diverted from landfills;
- Wood Conservation – wood must be from a certified sustainable source and engineered wood products must be used; and
- Indoor Air Quality – Heating, Ventilating and Air Conditioning (HVAC) designed by a licensed engineer to Air Conditioning Contractors of America (ACCA) manual J, S and D or equivalent Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) or American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) standards.

The program will offer incentives such as, but not limited to, faster processing times, same day inspections, etc. for homebuilders to implement green building techniques in the designs of their buildings.

Summary of Environmental Effects After Mitigation Measures Are Implemented

With implementation of the identified policies in the General Plan Air Quality Element and the mitigation measures listed above, short-term and long-term air quality impacts, and GHG emissions will be substantially lessened. However, the degree to which these measures will reduce air emissions and/or GHG emissions cannot be quantified. Air pollutant levels are expected to continue to exceed the SCAQMD thresholds of significance, and associated health impacts from ozone, PM-10 and PM-2.5 are expected to remain as long as ambient concentrations remain above the applicable Ambient Air Quality Standards. **Impacts associated with both long- and short-term air emissions, including criteria pollutants and global warming gases, are significant, unavoidable and cumulatively considerable.** Statements of Overriding Considerations will be required prior to project approval.