SECTION 5.5
AIR QUALITY

5.5 AIR QUALITY

The purpose of this section is to evaluate potential air quality impacts associated with the proposed project, and is specifically focused on those areas defined and described in Section 2.0, Project Description, of this EIR. This section also includes a comprehensive global climate change analysis. Information in this section is based primarily on the *CEQA Air Quality Handbook*, prepared by the South Coast Air Quality Management District (SCAQMD), April 1993 (as revised through November 1993), Air Quality Data (California Air Resources Board 2004 through 2008), and the *Final Air Quality Management Plan for the South Coast Air Basin*, prepared by the SCAQMD, 2007.

The SCAQMD submitted an NOP comment letter on November 30, 2009, pertaining to the methodology of the air quality analysis. SCAQMD comments have been considered in preparation of this section (see Appendix B, Notice of Preparation Comments).

5.5.1 REGULATORY SETTING

Regulatory oversight for air quality in the South Coast Air Basin (Basin) rests at the Environmental Protection Agency (EPA) Region IX office at the Federal level, the California Air Resources Board (CARB) at the State level, and with the SCAQMD at the regional level.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

The United States Environmental Protection Agency (EPA) is responsible for implementing the Federal Clean Air Act, which was first enacted in 1955 and was amended numerous times. The Federal Clean Air Act established Federal air quality standards known as the National Ambient Air Quality Standards. These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are Ozone (O_3), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2) (which is a form of nitrogen oxides [NO_X]), Sulfur Dioxide (SO_2) (which is a form of sulfur oxides [SO_X]), Particulate Matter (PM_{10}), Fine Particulate Matter ($PM_{2.5}$), and Lead (Pb); refer to *Table 5.5-1*, *National and California Ambient Air Quality Standards*.

CALIFORNIA AIR RESOURCES BOARD

CARB administers the air quality policy in California. The California Ambient Air Quality Standards were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the National Ambient Air Quality Standards in *Table 5.5-1*, are generally more stringent and apply to more pollutants than the National Ambient Air Quality Standards. In addition to the criteria pollutants, California Ambient Air Quality Standards have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

Table 5.5-1
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	**Nonattainment**	NA[5]	NA[5]
	8 Hours	0.07 ppm (137 μg/m³)	Unclassified	0.075 ppm (147 μg/m³)	**Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 μg/m³	**Nonattainment**	150 μg/m³	**Nonattainment**
	Annual Arithmetic Mean	20 μg/m³	**Nonattainment**	NA[6]	**Nonattainment**
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 μg/m³	Unclassified
	Annual Arithmetic Mean	12 μg/m³	**Nonattainment**	15 μg/m³	**Nonattainment**
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Attainment
	1 Hour	20 ppm (23 mg/m³)	Attainment	35 ppm (40 mg/m³)	Attainment
Nitrogen Dioxide (NO_2)[7]	Annual Arithmetic Mean	0.030 ppm (56 μg/m³)	NA	0.053 ppm (100 μg/m³)	Attainment
	1 Hour	0.18 ppm (338 μg/m³)	Attainment	0.100 ppm	NA
Lead (Pb)	30 days average	1.5 μg/m³	Attainment	N/A	NA
	Calendar Quarter	N/A	NA	1.5 μg/m³	Attainment
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	N/A	NA	0.030 ppm (80 μg/m³)	Attainment
	24 Hours	0.04 ppm (105 μg/m³)	Attainment	0.14 ppm (365 μg/m³)	Attainment
	3 Hours	N/A	NA	N/A	Attainment
	1 Hour	0.25 ppm (655 μg/m³)	Attainment	N/A	NA
Visibility-Reducing Particles	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 μg/m³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Unclassified		
Vinyl Chloride	24 Hour	0.01 ppm (26 μg/m³)	Unclassified		

μg/m³ = micrograms per cubic meter; ppm = parts per million; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time.
N/A = Not Applicable

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM_{10} and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In 1990, the California Air Resources Board (CARB) identified vinyl chloride as a toxic air contaminant, but determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 parts per million ambient concentration specified in the 1978 standard.
2. National standards (other than ozone, particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. EPA also may designate an area as *attainment/unclassifiable*, if: (1) it has monitored air quality data that show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3. Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
5. The Federal 1-hour ozone standard was revoked on June 15, 2005 in all areas except the 14 8-hour ozone nonattainment Early Action Compact (EAC) areas.
6. The Environmental Protection Agency revoked the annual PM_{10} standard in 2006 (effective December 16, 2006).
7. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

Source: California Air Resources Board and U.S. Environmental Protection Agency, January 27, 2010.

The California Clean Air Act, which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan to achieve compliance with the California Ambient Air Quality Standards. The Air Quality Management Plan also serves as the basis for preparation of the State Implementation Plan for the State of California.

Similar to the EPA, CARB designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the California Ambient Air Quality Standards have been achieved. Under the California Clean Air Act, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Highly irregular or infrequent events are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment.

Under the California Clean Air Act, the Basin is designated as a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. Similar to the Federal Clean Air Act, all areas designated as nonattainment under the California Clean Air Act are required to prepare plans showing how the area would meet the California Ambient Air Quality Standards.

On March 12, 2009, CARB submitted recommendations for revisions to the area designations for the Federal 8-hour ozone standard. These recommendations are based on ozone air quality data collected during 2006 through 2008. As recommended, there are 21 nonattainment areas. These include all areas that were nonattainment for the previous standard and six new or expanded areas. In addition to the nonattainment areas, CARB recommends 12 areas be designated as attainment and five areas be designated as unclassified. Based on CARB's recommendation, the City of San Bernardino, which is within the South Coast Air Basin, would remain a nonattainment area. The EPA reviewed and approved the proposed recommendations on March 25, 2010.

The amendments to the California Clean Air Act establish the California Ambient Air Quality Standards and a legal mandate to achieve these standards. These standards apply to the same criteria pollutants as the Federal Clean Air Act and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride; refer to *Table 5.5-1*.

STATE AIR TOXICS PROGRAM

Toxic air contaminants are another group of pollutants of concern in Southern California. There are hundreds of different types of toxic air contaminants, with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle engine exhaust. Public exposure to toxic air contaminants can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset spill conditions. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

California regulates toxic air contaminants through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the *Health and Safety Code* (*Health and Safety Code* Section 39660 et seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (Health and Safety Code Section 44300 et seq.). CARB, working in conjunction with the State Office of Environmental Health Hazard Assessment, identifies toxic air contaminants. Air toxic control

measures may then be adopted to reduce ambient concentrations of the identified toxic air contaminant to below a specific threshold, based on its effects on health, or to the lowest concentration achievable through use of best available control technology (BACT) for toxics. The program is administered by 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.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

The SCAQMD is one of 35 air quality management districts that have prepared Air Quality Management Plans to accomplish a five-percent annual reduction in emissions. The *2007 Air Quality Management Plan for the South Coast Air Basin* (*2007 Air Quality Management Plan*) relies on a multi-level partnership of governmental agencies at the Federal, State, regional, and local level. The *2007 Air Quality Management Plan* proposes policies and measures to achieve Federal and State standards for improved air quality in the Basin and those portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under the SCAQMD jurisdiction. The *2007 Air Quality Management Plan* includes new information on key elements such as:

- Current air quality;
- Improved emission inventories, particularly significant increases in mobile source emissions;
- An overall control strategy comprised of SCAQMD, State, and Federal Stationary and Mobile Source Control Measures, and the Southern California Association of Governments Regional Transportation Strategy and Control Measures;
- New attainment demonstration for $PM_{2.5}$ and O_3;
- Milestones to the Federal Reasonable Further Progress Plan; and
- Preliminary motor vehicle emission budgets for transportation conformity purposes.

In addition to the *2007 Air Quality Management Plan* and its rules and regulations, the SCAQMD published the *CEQA Air Quality Handbook*.[1] The *CEQA Air Quality Handbook* provides guidance to assist local government agencies and consultants in developing the environmental documents required by CEQA. With the help of the *CEQA Air Quality Handbook*, local land use planners and other consultants are able to analyze and document how proposed and existing projects affect air quality and should be able to fulfill the requirements of the CEQA review process. The SCAQMD is in the process of developing an *Air Quality Analysis Guidance Handbook* to replace the current *CEQA Air Quality Handbook.*

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the Federally-designated metropolitan planning organization for the Southern California region and is the largest metropolitan planning

[1] Approved by the South Coast Air Quality Management District Governing Board in 1993.

organization in the United States. With respect to air quality planning, SCAG has prepared the *Regional Comprehensive Plan and Guide*, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the *2007 Air Quality Management Plan*. SCAG is responsible under the Federal Clean Air Act for determining conformity of projects, plans, and programs with the SCAQMD.

CALIFORNIA GLOBAL CLIMATE CHANGE REGULATORY PROGRAMS

Assembly Bill 1493. In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, Assembly Bill (AB) 1493 (AB 1493, Pavley) was enacted on July 22, 2002. AB 1493 required CARB to set greenhouse gas (GHG) emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is noncommercial personal transportation in the State. The bill required that CARB set the GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. CARB adopted the standards in September 2004. These standards are intended to reduce emissions of carbon dioxide and other GHGs (e.g., nitrous oxide and methane). Some currently used technologies that achieve GHG reductions include small engines with superchargers, continuously variable transmissions, and hybrid electric drive.

Assembly Bill 32. The Legislature enacted AB 32 (AB 32, Nuñez), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006 to further the goals of Executive Order S-3-05. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries, with penalties for noncompliance. CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. The foremost objective of CARB is to adopt regulations that require the reporting and verification of statewide GHG emissions. This program would be used to monitor and enforce compliance with the established standards. The first GHG emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020. CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted. In order to advise CARB, it must convene an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee. In December 2008, CARB adopted a scoping plan to achieve reductions in GHG emissions in California. The plan indicates how reductions in significant GHG sources would be achieved through regulations, market mechanisms, and other actions.

Executive Order S-3-05. In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050. The Secretary of the California Environmental Protection Agency (the Secretary) is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agencies involved in the GHG reduction plan include Secretary of Business, Transportation, and Housing Agency, Secretary of

Department of Food and Agriculture, Secretary of Resources Agency, Chairperson of CARB, Chairperson of the Energy Commission, and the President of the Public Utilities Commission. The Secretary is required to submit a biannual progress report to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, and the coastline and forestry, and reporting possible mitigation and adaptation plans to combat these impacts.

Executive Order S-1-07. On January 18, 2007, California further solidified its dedication to reducing GHGs by setting a new Low Carbon Fuel Standard for transportation fuels sold within the State. Executive Order S-1-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least ten percent by 2020. The Low Carbon Fuel Standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods. The Executive Order requires the Secretary of the California Environmental Protection Agency to coordinate with actions of the California Energy Commission, CARB, the University of California, and other agencies to develop a protocol to measure the "life cycle carbon intensity" of transportation fuels. CARB identified the Low Carbon Fuel Standard as an early action item with regulation to be adopted and implemented by 2010.

Senate Bill 97. Senate Bill (SB) 97 of 2007 requires the California Office of Planning and Research to develop CEQA guidelines for analysis and, if necessary, the mitigation of effects of GHG emissions to the Resources Agency. These guidelines for analysis and mitigation must address, but are not limited to, GHG emissions effects associated with transportation or energy consumption. On December 30, 2009, the Natural Resources Agency adopted the CEQA Guidelines Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the CEQA Guidelines Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The CEQA Guidelines Amendments became effective on March 18, 2010. These new guidelines require a survey of existing climate change analyses performed by various lead agencies under CEQA[2] In his signing statement, Governor Arnold Schwarzenegger noted:

> *Current uncertainty as to what type of analysis of greenhouse gas emissions is required under the California Environmental Quality Act has led to legal claims being asserted, which would stop these important infrastructure projects. Litigation under CEQA is not the best approach to reduce greenhouse gas emissions and maintain a sound and vibrant economy. To achieve these goals, we need a coordinated policy, not a piecemeal approach dictated by litigation.*

Senate Bill 375. SB 375 would require metropolitan planning organizations to include sustainable communities strategies in their regional transportation plans. The purpose of SB 375 would be to reduce GHG emissions from automobiles and light trucks, require CARB to provide GHG emission reduction targets from the automobile and light truck sector for 2020 and 2035 by January 1, 2010, and update the regional targets until 2050. SB 375 would require

[2] http://ceres.ca.gov/ceqa/docs/Adopted_Text_of_SB97_CEQA_Guidelines_Amendments.pdf. Accessed March 2010.

certain transportation planning and programming activities to be consistent with the sustainable communities strategies contained in the regional transportation plan. The bill would also require affected regional agencies to prepare an alternative planning strategy to the sustainable communities strategies if the sustainable communities strategy is unable to achieve the GHG emissions reduction targets. Governor Schwarzenegger signed and approved SB 375 on September 30, 2008.

Senator Steinberg, author of SB 375, is also making efforts to clean up the bill. The clean up efforts include CEQA streamlining changes for projects that are consistent with the Sustainable Community Strategy (SCS). Currently, SB 375 applies those streamlining provisions to residential and mixed-use projects. The Governor and many interest groups are also lobbying to extend those provisions to Proposition 1B Transportation projects, state highway projects, and infrastructure, retail, and commercial development. A timetable to eliminate schedule conflicts with the new eight-year housing element and the four-year Regional Transportation Plans is also being considered. In addition to a clean up bill, there will continue to be ongoing discussions with CARB to coordinate AB 32 local land use implementation strategies with SB 375, including a new proposed CARB CEQA thresholds of significance proposal to determine which projects will be subject to AB 32 requirements.

5.5.2 ENVIRONMENTAL SETTING

SOUTH COAST AIR BASIN

The South Coast Air Basin (Basin), in which the City of San Bernardino is located, is characterized as having a “Mediterranean” climate (a semi-arid environment with mild winters, warm summers, and moderate rainfall. The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west, and the San Gabriel, the San Bernardino, and the San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin’s terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area’s natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

CLIMATE

The climate in the Basin is characterized by moderate temperatures and comfortable humidity, with precipitation limited to a few storms during the winter season (November through April). The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit. However, with a less pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. January is usually the coldest month at all locations, while July and August are usually the hottest months

of the year. Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature.

In the City of San Bernardino, the climate is typically warm during summer when temperatures tend to be in the 70s and 80s and cool during winter when temperatures tend to be in the 50s. The warmest month of the year is July with an average maximum temperature of 96 degrees Fahrenheit, while the coldest month of the year is December with an average minimum temperature of 41 degrees Fahrenheit. Temperature variations between night and day tend to be moderate during summer with a difference that can reach 33 degrees Fahrenheit, and moderate during winter with a difference of approximately 27 degrees Fahrenheit. The annual average precipitation in San Bernardino is 16.3 Inches. Rainfall in is fairly evenly distributed throughout the year. The wettest month of the year is February with an average rainfall of 3.7 inches.[3]

PHOTOCHEMICAL SMOG

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original or "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

TEMPERATURE INVERSIONS

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air would be mixed and dispersed into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in the southland. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air that acts as a lid through which the marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone observed during summer months in the Basin. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary

[3] The Weather Channel, *Average Weather for San Bernardino, CA*, Accessed March 17, 2010. http://www.weather.com/outlook/events/weddings/setthedate/month/average/USCA0978?from=wed_setdate.

pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The City of San Bernardino offers clear skies and sunshine, yet is still susceptible to air inversions. This traps a layer of stagnant air near the ground where it is further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

MONITORED AIR QUALITY LEVELS

The SCAQMD and CARB monitor the local ambient air quality from approximately 250 air monitoring stations located across the State. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Each monitoring station is located within a Source Receptor Area. The communities within a Source Receptor Area have similar climatology and ambient air pollutant concentrations. The City of San Bernardino is located in the Central San Bernardino Valley Source Receptor Area (Area 34).

The San Bernardino-4th Street Monitoring Station is the air monitoring station located nearest the City of San Bernardino. Air quality data from 2004 to 2008 for the San Bernardino-4th Street Monitoring Station is provided in *Table 5.5-2*, *Local Air Quality Levels*. The following air quality information briefly describes the various types of pollutants monitored at the local stations.

Table 5.5-2
Local Air Quality Levels

Pollutant	California Standard	Federal Primary Standard	Year	Maximum[2] Concentration	Days (Samples) State/Federal Std. Exceeded
1-hour Ozone (O_3)[1]	0.09 ppm for 1 hour	NA[5]	2004 2005 2006 2007 2008	0.157 ppm 0.163 0.154 0.153 0.157	55/9 54/9 57/11 48/8 62/11
8-hour Ozone (O_3)[1]	0.07 ppm for 8 hours	0.075 ppm for 8 hours	2004 2005 2006 2007 2008	0.129 ppm 0.130 0.127 0.122 0.122	79/56 72/56 72/56 72/51 87/62
Carbon Monoxide (CO)[1]	9.0 ppm for 8 hour	9.0 ppm for 8 hour	2004 2005 2006 2007 2008	3.24 ppm 2.45 2.19 2.27 1.65	0/0 0/0 0/0 0/0 0/0
Nitrogen Dioxide (NO_2)[1]	0.18 ppm for 1 hour	0.100 ppm For 1 hour	2004 2005 2006 2007 2008	0.118 ppm 0.098 0.088 0.083 0.091	0/0 0/0 0/0 0/0 0/0

Table 5.5-2 (continued)
Local Air Quality Levels

Pollutant	California Standard	Federal Primary Standard	Year	Maximum[2] Concentration	Days (Samples) State/Federal Std. Exceeded
Fine Particulate Matter ($PM_{2.5}$)[1, 4]	No Separate Standard	35μg/m³ for 24 hours	2004 2005 2006 2007 2008	93.4 μg/m³ 106.2 55.0 72.1 43.5	NA/16 NA/3 NA/9 NA/11 NA/3
Particulate Matter (PM_{10})[1, 3, 4]	50 μg/m³ for 24 hours	150 μg/m³ for 24 hours	2004 2005 2006 2007 2008	72.0 μg/m³ 66.0 78.0 232.0 44.0	4/0 4/0 5/0 6/1 0/0

Source: Aerometric Data Analysis and Measurement System (ADAM), summaries from 2004 to 2008, http://www.arb.ca.gov/adam.

ppm = parts per million; PM_{10} = particulate matter 10 microns in diameter or less; NM = not measured; μg/m³ = micrograms per cubic meter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; NA = not applicable.

Notes:
1. Data collected from the San Bernardino-4th Street Monitoring Station located at 24302 E. 4th St, San Bernardino, California 92410.
2. Maximum concentration is measured over the same period as the California Standards.
3. PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
4. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.
5. The Federal standard was revoked in June 2005.

Ozone. Ozone (O_3) occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately ten miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer extends upward from about ten to 30 miles and protects life on earth from the sun's harmful ultraviolet rays (UV-B). "Bad" ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), Nitrogen Oxides (NO_X) and sunlight to form; therefore, VOCs and NO_X are ozone precursors. VOCs and NO_X are emitted from various sources throughout the City. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems (such as forests and foothill plant communities) and damages agricultural crops and some man-made materials (such as rubber, paint and plastics). Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment and reduced crop yields.

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide. Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than ten microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (SB 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the EPA announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for Federal $PM_{2.5}$ standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases and Volatile Organic Compounds. Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and volatile organic compounds (VOCs). Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Global Climate Change Gases. The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[4] The greenhouse effect traps heat in the troposphere through a three fold process summarized as follows: Short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and greenhouse gases (GHGs) in the upper atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This "trapping" of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide. Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential for each GHG based on its ability to absorb and re-radiate long wave radiation. The Global Warming Potential of a gas is determined using carbon dioxide as the reference gas with a Global Warming Potential of 1.

GHGs include, but are not limited to, the following:[5]

- *Water Vapor (H_2O)*. Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively.

  The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change has not determined a Global Warming Potential for water vapor.

- *Carbon Dioxide (CO_2)*. Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent.[6] Carbon dioxide is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.

- *Methane (CH_4)*. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The Global Warming Potential of methane is 21.

- *Nitrous Oxide (N_2O)*. Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal

[4] The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

[5] All Global Warming Potentials are given as 100 year Global Warming Potential. Unless noted otherwise, all Global Warming Potentials were obtained from the Intergovernmental Panel on Climate Change. Climate Change (Intergovernmental Panel on Climate Change, *Climate Change, The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*, 1996).

[6] United States Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 to 2004*, April 2006, http://www.epa.gov/climatechange/emissions/usinventoryreport.html.

manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The Global Warming Potential of nitrous oxide is 310.

- *Hydrofluorocarbons (HFCs)*. HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing, as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The Global Warming Potential of HFCs range from 140 for HFC-152a to 6,300 for HFC-236fa.
- *Perfluorocarbons (PFCs)*. Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semi conductor manufacturing. Perfluorocarbons are potent GHGs with a Global Warming Potential several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).[7] The Global Warming Potential of PFCs range from 5,700 to 11,900.
- *Sulfur hexafluoride (SF_6)*. Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the Intergovernmental Panel on Climate Change with a Global Warming Potential of 23,900. However, its global warming contribution is not as high as the Global Warming Potential would indicate due to its low mixing ratio compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm]).[8]

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric O_3 depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- *Hydrochlorofluorocarbons (HCFCs)*. HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The Global Warming Potentials of HCFCs range from 93 for HCFC-123 to 2,000 for HCFC-142b.[9]
- *1,1,1 trichloroethane*. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The Global Warming Potential of methyl chloroform is 110 times that of carbon dioxide.[10]

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7 Energy Information Administration, *Other Gases: Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride*, October 29, 2001, http://www.eia.doe.gov/oiaf/1605/gg00rpt/other_gases.html.

8 United States Environmental Protection Agency, *High GWP Gases and Climate Change*, October 19, 2006, http://www.epa.gov/highgwp/scientific.html#sf6.

9 United States Environmental Protection Agency, *Protection of Stratospheric Ozone: Listing of Global Warming Potential for Ozone Depleting Substances*, November 7, 2006, http://www.epa.gov/fedrgstr/EPA AIR/1996/January/Day 19/pr 372.html.

10 United States Environmental Protection Agency, *Protection of Stratospheric Ozone: Listing of Global Warming Potential for Ozone Depleting Substances*, November 7, 2006, http://www.epa.gov/fedrgstr/EPA AIR/1996/January/Day 19/pr 372.html.

- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the EPA's Final Rule (57 FR 3374) for the phase out of O_3 depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with Global Warming Potentials ranging from 4,600 for CFC 11 to 14,000 for CFC 13.[11]

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (or sensitive receptors) that are in proximity to localized sources of toxics and CO are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The sensitive receptors located within the Project Area are listed in *Table 5.5-3*, *Sensitive Receptors*.

Table 5.5-3
Sensitive Receptors

Type	Name	Street
Place of Worship	Templo Baptista	North H Street
	Downtown Apostolic Church	760 West 6th Street
	St Bernardine's Church	531 North F Street
	Anointed Remnant Ministries	570 West 4th Street
	First Church of Christ	736 North E Street
	Ministerio Biblico Verbo Dvn	555 North E Street
	Way World Outreach Ministry	310 West 4th Street
	St John Primitive	323 West 7th Street
	Antioch Christian Center	590 North Sierra Way
	New Miracle Christian Center	157 North E Street
	Igelisa Caminando Con Dios	191 South E Street
	Greater Faith Community Church	West Rialto Avenue
	Calvary Chapel Antorcha	761 West 2nd Street
	Catholic War Veterans	298 South D Street
	Hallelujah Temple	395 South G Street
	New Beginnings Christian Center	455 South G Street
	Victory Outreach	441 South E Street
	Door Christian Fellowship Church	West Cluster Street
	Iglesia Rios Be Agua Viva	1375 South E Street
	Community of Christ	1894 Commercenter West
	The Rock Church and World Outreach Center	2345 South Waterman Avenue

[11] United States Environmental Protection Agency, *Class I Ozone Depleting Substances*, March 7, 2006, http://www.epa.gov/ozone/ods.html.

Table 5.5-3 (continued)
Sensitive Receptors

Type	Name	Street
Schools	Juanita B Jones Elementary	700 North F Street
	Genesis 8 Learning Center	661 North Arrowhead Avenue
	Head Start: H Street	342 North H Street
	American Heritage University of Southern California	255 North D Street
	Civic Circle Preschool	265 North D Street
	Rhema College	118 South Arrowhead Avenue
	John Muir Charter School	1824 Commercenter Circle
	Concorde Career College	201 East Airport Drive
	California Baptist College	225 West Hospitality Lane
	University of Phoenix - San Bernardino Learning Center	301 East Vanderbilt Lane
	Azusa Pacific University	685 Carnegie Drive
	Argosy University Inland Empire	636 East Brier Drive
	ITT Technical Institute	670 Carnegie Drive
	La Petite Academy	855 East Hospitality Lane
	Miles of Smiles Education Center	855 East Hospitality Lane
	National University San Bernardino Academic Center	804 East Brier Drive
Hospitals	Kaiser Permanente Med Care	325 West Hospitality Lane
Libraries	San Bernardino Public Library	555 West 6th Street
Parks	Pioneer Park	West 6th Street
	Secombe Lake State Recreation Area	North Sierra Way
	Meadowbrook Park	East 3rd Street
	Municipal Baseball Park	South E Street
Senior Center	San Bernardino Senior Center	600 West 5th Street

Source: Google Earth Maps accessed March 2010.

5.5.3 SIGNIFICANCE THRESHOLD CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of San Bernardino in its environmental review process, and is contained in Appendix A of the EIR. The Initial Study includes questions relating to air quality and global climate change. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan (refer to Section 8.0, Effects Found Not To Be Significant);

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation based on the thresholds in the SCAQMD's "CEQA Air Quality Handbook";

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

- Expose sensitive receptors to substantial pollutant concentrations; and/or

- Creation of objectionable odors affecting a substantial number of people (refer to Section 8.0, Effects Found Not To Be Significant).

Under CEQA, the SCAQMD is an expert commenting agency on air quality and related matters within its jurisdiction or impacting its jurisdiction. The SCAQMD reviews projects to ensure that they will not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan.

The *CEQA Air Quality Handbook* provides significance thresholds for both construction and operation of projects within the SCAQMD jurisdictional boundaries. If the SCAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the lead agency determines the thresholds of significance for impacts. If a project proposes development in excess of the established thresholds, as outlined in *Table 5.5-4*, *SCAQMD Emission Thresholds*, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 5.5-4
SCAQMD Emissions Thresholds

Phase	Pollutant (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction	75	100	550	150	150	55
Operational	55	55	550	150	150	55

ROG = reactive organic gases NOx = nitrogen oxides $PM_{2.5}$ = particulate matter less than 2.5 microns
CO = carbon monoxide SOx = sulfur oxides PM_{10} = particulate matter less than 10 microns

Source: SCAQMD, *CEQA Air Quality Handbook*, page 6-1, April 1993.

Additionally, the SCAQMD criterion recommends performing a CO hotspot analysis when a project increases the volume to capacity ratio (also called the intersection capacity utilization) by 0.02 (2 percent) for any intersection with an existing level of service (LOS) D or worse.

Based on these significance thresholds and criteria, the Project's effects have been categorized as either "effects found not to be significant" or "potentially significant impact." Feasible mitigation measures, which could avoid or minimize potentially significant impacts are identified. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a "significant unavoidable impact."

5.5.4 PROJECT IMPACTS AND MITIGATION MEASURES

SHORT-TERM CONSTRUCTION EMISSIONS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD FACILITATE THE CONSTRUCTION OF NEW LAND USES THAT COULD GENERATE DUST AND EQUIPMENT EMISSIONS.**

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: The proposed project would not directly result in the construction of any new development projects. However, implementation of the proposed project could facilitate development of various public infrastructure improvements and/or public facilities, as well as facilitating more rapid development within the Project Area than might occur otherwise.

Fugitive Dust. Construction activities are a source of fugitive dust (PM_{10} and $PM_{2.5}$) emissions that may have a substantial, temporary impact on local air quality. Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations and weather conditions. Dust (PM_{10}) poses a serious health hazard alone or in combination with other pollutants. Fine Particulate Matter ($PM_{2.5}$) is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gasses such as NO_X and SO_X combining with ammonia. $PM_{2.5}$ components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Exhaust. Exhaust emissions would be generated by the operation of vehicles and equipment on the construction site, such as tractors, dozers, scrapers, backhoes, cranes, and trucks. The majority of construction equipment and vehicles would be diesel powered, which tends to be more efficient than gasoline-powered equipment. Diesel-powered equipment produces lower carbon monoxide and hydrocarbon emissions than gasoline equipment, but produced greater amounts of NO_X, SO_X, and particulates per hour of activity. The transportation of equipment and materials to and from the site, as well as construction workers traveling to and from the site, would also generate vehicle emissions during construction.

Grading/Hauling. Depending on the amount of over-excavation and re-compaction that may be necessary to create a suitable building pad, future development facilitated by the proposed project may require the import/export of fill material. Although these activities may create additional dust and PM_{10} and $PM_{2.5}$, as well as truck-related emissions, they would be mitigated to less than significant levels through implementation of standard dust control practices required as part of the grading permit (periodic site watering, covering laden trucks with tarps, and periodic street sweeping).

Asbestos. It is possible that asbestos-containing materials may exist within existing buildings that may be modified or demolished. Therefore, the possibility exists that asbestos fibers may be released into the air should no asbestos assessment or removal (if needed) take place prior to demolition. Standard practice would be to conduct an asbestos assessment for candidate buildings to determine the presence of asbestos. If identified, an asbestos abatement contractor would be retained to develop an abatement plan and remove the asbestos containing

materials, in accordance with local, State, and Federal requirements. After removal, demolition may proceed without significant concern to the release of asbestos fibers into the air.

Construction-related air quality impacts would be short-term and temporary, lasting only as long as the construction phase of the future development project. Nonetheless, construction impacts have the potential to violate Federal and State ambient air quality standards and may harm nearby sensitive receptors. The SCAQMD has established short-term thresholds for individual development projects, and it is assumed that some of the future development projects that would be implemented under the proposed project could individually exceed the SCAQMD thresholds. The *General Plan EIR* concluded that major construction activities under the General Plan Update could exceed SCAQMD's thresholds and would result in a significant impact, although individual projects may not be significant. Additionally, the *General Plan EIR* concluded that even after the application of *General Plan* Policies and mitigation measures, implementation of the General Plan Update as a whole would result in significant and unavoidable air quality impacts due to the magnitude of emissions that would be generated during construction. A statement of overriding consideration was adopted by the City for this impact.

Implementation of Mitigation Measures AQ-1 and AQ-2 would limit construction air emissions during the grading phase and ensure the use of low or zero VOC content architectural coatings for construction and maintenance activities. Compliance with Policy 12.5.3 of the *General Plan* would require dust abatement measures during project grading and construction operations. Dust abatement measures would be required in accordance with SCAQMD Rule 403 dust minimization requirements (i.e., water exposed surfaces, treat soils with soil conditioner, securely cover loads of fill, provide for street sweeping, wash mud-covered tires before trucks leave the site, etc.). Implementation of Mitigation Measures AQ-1 and AQ-2 and compliance with the *General Plan* policies would lessen construction-related impacts by reducing air pollutant emissions from construction activities. However, as concluded in the *General Plan EIR*, construction-related air quality impacts would be considered significant and unavoidable due to the magnitude of construction under the proposed project.

General Plan Goals and Policies:

NATURAL RESOURCES AND CONSERVATION ELEMENT

Goal 12.5 **Promote air quality that is compatible with the health, well being, and enjoyment of life.**

Policy 12.5.3 Require dust abatement measures during grading and construction operations.

Mitigation Measures:

AQ-1 Prior to the issuance of grading permits, the property owner/developer shall include a note on all grading plans which requires the construction contractor to implement following measures during grading. These measures shall also be discussed at the pregrade conference.

- Use low emission mobile construction equipment.
- Maintain construction equipment engines by keeping them tuned.

- Utilize existing power sources (i.e., power poles) when feasible.
- Configure construction parking to minimize traffic interference.
- Minimize obstruction of through-traffic lanes. When feasible, construction should be planned so that lane closures on existing streets are kept to a minimum.
- Schedule construction operations affecting traffic for off-peak hours to minimize traffic congestion.
- Develop a traffic plan to minimize traffic flow interference from construction activities (the plan may include advance public notice of routing, use of public transportation and satellite parking areas with a shuttle service).

(Source: *General Plan EIR* Mitigation Measure GP5.2-2A)

AQ-2 The City shall promote the use of low or zero VOC content architectural coatings for construction and maintenance activities.

(Source: *General Plan EIR* Mitigation Measure GP5.2-2B)

Level of Significance After Mitigation: Significant Unavoidable Impact.

LONG-TERM MOBILE AND STATIONARY SOURCE EMISSIONS

◆ **IMPLEMENTATION OF THE PROPOSED PROJECT COULD INTRODUCE FUTURE PRJOECTS THAT COULD RESULT IN AN OVERALL INCREASE IN MOBILE AND STATIONARY SOURCE EMISSIONS WITHIN THE CITY, AND WHICH MAY EXCEED SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AIR QUALITY STANDARDS.**

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Implementation of the proposed project would not directly construct any new development projects. However, the proposed project could facilitate the development of new commercial, industrial, and multi-family residential uses. Although the exact nature and location of future land uses are not known at this time, future development projects could introduce new stationary sources of air emissions into the Project Area.

Stationary Source Emissions

Stationary source emissions are sources of air pollutants that individually emit relatively small quantities of air pollutants, but which cumulatively may emit large quantities of emissions. Stationary source emissions would result from the use of natural gas, landscape maintenance equipment, and the use of consumer products, such as aerosol sprays. Although, the project does not propose any specific development, future emissions from stationary sources within the Project Area could be significant. Various industrial and commercial processes (e.g., dry cleaning) allowed under the proposed project would also be expected to release emissions; some of which could be hazardous. As stated in the *General Plan EIR*, these emissions are

controlled at the local and regional level through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits. The emissions from development associated with implementation of the proposed project on a program-level would be expected to exceed the SCAQMD thresholds for ROG, NO_X, CO, PM_{10}, and $PM_{2.5}$, resulting in a significant impact. The thresholds of significance that have been recommended by the SCAQMD were established for individual development projects and are based on the SCAQMD's New Source Review emissions standards for individual sources of new emissions, such as boilers and generators. They do not apply to cumulative development or multiple projects. Air quality impacts would be regional and not confined to the San Bernardino City limits. Future development proposals would be evaluated for potential air emissions once development details have been determined and are available. Individual projects may not result in significant air quality emissions.

Emissions from new, modified, or relocated stationary source equipment are regulated extensively through SCAQMD's Regulation XIII: New Source Review Program, SCAQMD's Permitting Program, and compliance with SCAQMD's source specific regulations. Types of uses requiring permitting that are allowed under current zoning include a variety of manufacturing, fabricating, and processing businesses. All future industrial development projects would be required to comply with SCAQMD regulations and permitting requirements. Compliance with regulations and permit requirements would reduce emissions from new industrial uses. Implementation of *General Plan* Policies 12.5.1, 12.5.2, and 12.5.4 would further reduce stationary source emissions by prohibiting development of heavy polluting land uses, evaluating potential emissions of industrial land uses, and reducing emissions in accordance with SCAQMD standards. However, emissions resulting from stationary sources would remain significant due to the magnitude of development associated with the proposed project.

Mobile Source Emissions

As stated above, implementation of the proposed project would not directly construct any new development projects. However, the proposed project could facilitate the development of new commercial, industrial, and multi-family uses. Development of these uses would generate mobile source emissions.

Mobile source emissions are emissions from vehicle trips that are generated by the operation of a project. Mobile source emissions include tailpipe and evaporative emissions. Future development within the Project Area would be consistent with the land use designations contained in the *General Plan*. Therefore, the proposed project would not intensify land uses in the Project Area beyond conditions assumed in the *General Plan*. As such, future development that is facilitated by the proposed project would not likely increase the number of vehicle trips to and from the Project Area beyond buildout conditions analyzed in the *General Plan EIR*. Mobile sources are anticipated to be the largest contributor to the estimated annual average air pollutant levels, and would likely exceed the SCAQMD thresholds.

All projects developed within the Project Area would be required to satisfy applicable *General Plan EIR* mitigation measures. Furthermore, air quality impacts would be regional and not confined to the San Bernardino City limits. The destination of motor vehicles, which are the primary contributors to air pollution, vary widely and cross many jurisdictional boundaries. Future development projects would be evaluated for potential air emissions. Implementation of

General Plan Policies 6.6.1 through 6.6.8, 12.6.1 through 12.6.5, and 12.6.7 would reduce mobile air emissions by promoting smart land use patterns, encouraging pedestrian activity, requiring transportation demand management programs, and promoting public transit to minimize vehicular travel. Additionally, implementation of Mitigation Measures AQ-3 through AQ-5 would reduce mobile source emissions by implementing transportation systems management techniques, diversion of truck traffic, and utilization of fuel efficient City vehicles. Also, Chapter 17.08, Mobile Source Air Pollution Ordinance, of the *Municipal Code* discusses City efforts to improve air quality. Chapter 17.08 establishes the increase of motor vehicle registration fees within the City (in 1992) to finance the implementation of transportation measures of the SCAQMD *Air Quality Management Plan* and provisions of the California Clean Air Act. However, due to the magnitude of development and associated mobile source air quality impacts, impacts in this regard remain significant.

Health Effects

The Project Area is located in the City of San Bernardino, and is traversed by I-215, I-10, and two railroads. The proximity to I-215, I-10, and railroad rights-of-ways poses a concern for potential exposure of future development to toxic air contaminants from these sources. The Multiple Air Toxics Exposure Study III (MATES III) is a monitoring and evaluation study conducted by the SCAQMD. The MATES III study consists of a monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to characterize risk throughout the Basin. The study concentrates on the carcinogenic risk from exposure to air toxics. Ten monitoring locations measured toxic air contaminants (over 30 air pollutants) once every three days for two years.

The carcinogenic risk from air toxics in the SCAB, based on average concentrations at the fixed monitoring locations, is about 1,200 per million. This risk refers to the expected number of additional cancers in a population of one million individuals that are exposed over a 70-year lifetime. Under the MATES III methodology, approximately 94 percent of the risk is attributed to mobile source emissions, and approximately six percent is attributed to stationary sources. The Inland Valley San Bernardino monitoring location (nearest monitoring station to the project area) reported higher levels of risk. However, the MATES III Study found a decreasing risk for air toxics exposure compared to previous MATES studies. Additionally, the MATES III study found an estimated SCAB-wide population-weighted risk reduced by eight percent from the MATES II Study, which includes the City of San Bernardino. Although the City is located in an area of the SCAB with some of the higher concentrations of air toxics, these concentrations are declining and conditions are continuing to improve. Additionally, the ambient air toxics data from the ten fixed monitoring sites demonstrated a reduction in air toxic levels and risks.

Impact Conclusion

The *General Plan EIR* anticipated additional development within the City, including the commercial, industrial, and multi-family uses under the proposed project. This forecast growth was inclusive of the development that would occur within the Project Area and is consistent with the General Plan land use designations. The *General Plan EIR* concluded that buildout would exceed daily SCAQMD thresholds and would result in significant impacts for operational emissions, as these thresholds were designed for individual projects. Therefore, on a project-by-project basis, thresholds may not be exceeded; however, operational emissions as a result of the proposed project would be expected to be significant. Air quality impacts would be

regional and not confined to the San Bernardino City limits. The destination of motor vehicles, which are the primary contributors to air pollution, vary widely and cross many jurisdictional boundaries. Future development projects within the Project Area would be evaluated for potential air emissions once development details have been determined and are available. The development facilitated by the proposed project was considered in the General Plan EIR since the development that would occur would be consistent with the existing General Plan land use designations and Zoning Districts. Therefore, project implementation would be consistent with the analysis presented in the *General Plan EIR*, and would result in no greater air quality impacts than previously identified. Due to the amount of development that would occur under the proposed project, and consistent with the conclusions in the *General Plan EIR*, operational emissions would be expected to exceed SCAQMD thresholds. Therefore, even with implementation of *General Plan* Policies and adherence to SCAQMD requirements, long-term operational impacts would remain significant.

General Plan Goals and Policies:

CIRCULATION ELEMENT

Goal 6.6 **Promote a network of multi-modal transportation facilities that are safe, efficient, and connected to various points of the City and the region.**

Policy 6.6.1 Support the efforts of regional, state, and federal agencies to provide additional local and express bus service in the City.

Policy 6.6.2 Create a partnership with Omnitrans to identify public transportation infrastructure needs that improve mobility.

Policy 6.6.3 In cooperation with Omnitrans, require new development to provide transit facilities, such as bus shelters and turnouts, as necessary and warranted by the scale of the development.

Policy 6.6.4 Ensure accessibility to public transportation for seniors and persons with disabilities.

Policy 6.6.5 In cooperation with Omnitrans, explore methods to improve the use, speed, and efficiency for transit services. These methods might include dedicated or priority lanes/signals, reduced parking standards for selected core areas, and incorporating Intelligent Transportation System architecture.

Policy 6.6.6 Support and encourage the provision of a range of paratransit opportunities to complement bus and rail service for specialized transit needs.

Policy 6.6.7 Encourage measures that will reduce the number of vehicle-miles traveled during peak periods, including the following examples of these types of measures:

- Incentives for car-pooling and vanpooling.
- Preferential parking for car-pools and vanpools.

- Conveniently located bus stops with shelters.
- An adequate, safe, and interconnected system of pedestrian and bicycle paths

Policy 6.6.8 Promote the use of car-pools and vanpools by providing safe, convenient park-and-ride facilities.

NATURAL RESOURCES AND CONSERVATION ELEMENT

Goal 12.5 Promote air quality that is compatible with the health, well being, and enjoyment of life.

Policy 12.5.1 Reduce the emission of pollutants including carbon monoxide, oxides of nitrogen, photochemical smog, and sulfate in accordance with South Coast Air Quality Management District (SCAQMD) standards.

Policy 12.5.2 Prohibit the development of land uses (e.g. heavy manufacturing) that will contribute significantly to air quality degradation, unless sufficient mitigation measures are undertaken according SCAQMD standards.

Policy 12.5.4 Evaluate the air emissions of industrial land uses to ensure that they will not impact adjacent uses.

Goal 12.6 Reduce the amount of vehicular emissions in San Bernardino.

Policy 12.6.1 Promote a pattern of land uses which locates residential uses in close proximity to employment and commercial services and provides, to the fullest extent possible, local job opportunities and commercial service to minimize vehicular travel and associated air emissions.

Policy 12.6.2 Disperse urban service centers (libraries, post offices, social services, etc.) throughout the City to minimize vehicle miles traveled and the concomitant dispersion of air pollutants.

Policy 12.6.3 Install streetscape improvements and other amenities to encourage pedestrian activity in key City areas and reduce vehicular travel and associated air emissions.

Policy 12.6.4 Facilitate the development of centralized parking lots and structures in commercial districts to promote walking between individual businesses in lieu of the use of automobiles.

Policy 12.6.5 Require qualifying development to implement or participate in transportation demand management programs, which provide incentives for car pooling, van pools, and the use of public transit and employ other trip reduction techniques (consistent with the Circulation Element and South Coast Air Quality Management Plan).

Policy 12.6.7 Promote the use of public transit and alternative travel modes to reduce air emissions.

Policy 12.7.6 Encourage, publicly recognize, and reward innovative approaches to improve air quality.

Mitigation Measures:

AQ-3 The City shall reduce vehicle emissions caused by traffic congestion by implementing transportation systems management techniques that include synchronized traffic signals and limiting on-street parking.

(Source: General Plan EIR Mitigation Measure GP5.2-2C)

AQ-4 The City shall consider the feasibility of diverting commercial truck traffic to off-peak periods to alleviate non-recurrent congestion as a means to improve roadway efficiency.

(Source: General Plan EIR Mitigation Measure GP5.2-2D)

AQ-5 The City shall promote the use of fuel efficient vehicles such as fuel hybrids when purchasing vehicles for the City's vehicle fleet.

(Source: General Plan EIR Mitigation Measure GP5.2-2E)

Level of Significance After Mitigation: Significant Unavoidable Impact.

CARBON MONOXIDE HOTSPOTS

◆ **IMPLEMENTATION OF THE PROPOSED PROJECT COULD FACILITATE DEVELOPMENT THAT COULD NOT RESULT IN AN OVERALL INCREASE IN CARBON MONOXIDE HOTSPOT EMISSIONS WITHIN THE CITY.**

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: Carbon monoxide (CO) emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service LOS D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections. However, at the programmatic stage of analysis for the proposed project, intersection capacity/queuing analyses are not performed, as no specific development is proposed and the future associated traffic numbers are unknown.

As previously noted, the City is located in the South Coast Air Basin, which is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed carbon monoxide analysis was conducted in the Federal Attainment Plan for Carbon Monoxide (CO Plan) for the SCAQMD's 2003 Air Quality Management Plan. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the SCAB, and would likely experience the highest CO concentrations. Of these locations, the Wilshire Boulevard/Veteran Avenue intersection experienced the highest CO concentration (4.6 ppm), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any locations within the City of San Bernardino due to the volume of traffic that would occur as a result of future development within the Project Area. Therefore, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Not Applicable.

5.5.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **AIR QUALITY EMISSIONS RESULTING FROM DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT COULD IMPACT REGIONAL AIR QUALITY LEVELS ON A CUMULATIVELY CONSIDERABLE BASIS.**

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: The geographic context for air quality impacts for the City of San Bernardino is Source Receptor Area 34 of the Basin. The analysis accounts for all anticipated cumulative growth within this geographic area. However, the significance of cumulative air quality impacts is typically determined according to the project methodology employed by the SCAQMD, as the regional body with authority in this area, which has taken regional growth projections into consideration.

As discussed previously, development associated with implementation of the proposed project would likely result in emissions that exceed the SCAQMD emissions thresholds for both the construction and operational phases. The SCAQMD considers exceedance of their daily significance thresholds to lead to a significant contribution to emissions on a cumulative basis. Because the Basin is currently in a state of non-attainment for O_3, PM_{10}, and $PM_{2.5}$, the additional air pollution generated by development associated with implementation of the

proposed project would incrementally contribute to the state of non-attainment of the ambient air quality standards.

CONSTRUCTION

The proposed project would facilitate multiple construction projects within the Project Area that have the potential to exceed the SCAQMD construction emissions thresholds, which would lead to a significant contribution to emissions on a cumulative basis. Even with implementation of *General Plan* Policies and mitigation measures, cumulative construction-related emissions would likely still be significant. In addition, the *General Plan EIR* determined that implementation of the General Plan (in which the proposed project was included) would result in significant and unavoidable cumulative construction impacts due to the amount of proposed development. Also, the SCAQMD considers exceedance of daily thresholds to lead to a significant contribution to emissions on a cumulative basis. Although project-specific details (i.e., timing and amount of construction occurring concurrently) are unknown at this time, due to the amount of potential development under the proposed project, short-term construction emissions are anticipated to exceed SCAQMD daily thresholds. Therefore, significant and unavoidable cumulative construction impacts would occur.

OPERATIONAL IMPACTS

With regard to daily operational emissions and the cumulative net increase of any criteria pollutant for which the region is nonattainment, this is considered to be a potentially significant cumulative impact, due to nonattainment of O_3, PM_{10}, and $PM_{2.5}$ standards in the Basin. Future development in the Project Area, combined with other anticipated future development in the region would contribute to a cumulative annual increase in regional air pollutant emissions. As previously stated, the emissions from development associated with implementation of the proposed project would likely exceed the SCAQMD operational thresholds at the program-level. In accordance with SCAQMD methodology, any project that cannot be mitigated to a level of less than significant is also significant on a cumulative basis. In addition, the *General Plan EIR* determined that implementation of the General Plan (in which the proposed project was included) would result in significant and unavoidable cumulative operational impacts. Therefore, the cumulative operational emissions associated with the proposed project are significant on a program level.

CARBON MONOXIDE HOT SPOT IMPACTS

Cumulative development is not expected to expose sensitive receptors to substantial pollutant concentrations. Thus, this is considered to be a less than significant cumulative impact. Future ambient CO concentrations resulting from implementation of the proposed project would be substantially below National and State standards. These future predictions consider cumulative development that would occur in Source Receptor Area 34 (Central San Bernardino Valley). Therefore, the proposed project's contribution to the impact is considered less than cumulatively considerable, and the cumulative impact would be less than significant.

GLOBAL CLIMATE CHANGE

Cumulative GHG emissions could occur as a result of future development within the Project Area. Future projects within the City, including those associated with implementation of the proposed project, would be reviewed on a project-by-project basis to ensure their compliance with the City's policies as well as State GHG regulations.

Currently, there is no adopted threshold of significance for determining the cumulative significance of a project's GHG emissions on global climate change. However, the available scientific evidence suggests that even without a net increase in GHG emissions, effects would remain significant due to past and existing emissions levels. In the most recent Intergovernmental Panel on Climate Change (IPCC) assessment report (2007), the IPCC acknowledges that anthropogenic climate change and sea level rise would continue for centuries due to the time scales associated with climate processes and feedbacks even if GHG concentrations were to be stabilized.[12] The IPCC further found that both past and future anthropogenic CO_2 emissions would continue to contribute to climate change and sea level rise for more than a millennium, due to the time scales required for the removal of this gas from the atmosphere.[13] Further, the IPCC assessment noted that defining what is dangerous anthropogenic interference with the climate system and, consequently, the limits to be set for policy purposes are complex tasks that can only be partially based on science, as such definitions inherently involve normative judgments.[14]

The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400 to 450 parts per million (ppm) carbon dioxide-equivalent concentration is required to keep global mean warming below two degrees Celsius, which in turn is assumed to be necessary to avoid dangerous climate change.

California Governor Arnold Schwarzenegger issued Executive Order S-3-05 in June 2005, which established the following GHG emission reduction targets:

- 2010: Reduce GHG emissions to 2000 levels;
- 2020: Reduce GHG emissions to 1990 levels; and,
- 2050: Reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32 requires that CARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB has approved a 2020 emissions limit of 427 metric tons of CO_2 equivalent ($MTCO_2eq$).

[12] Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007.*
[13] Ibid.
[14] Ibid.

Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. It is difficult to deem a single development as individually responsible for a global temperature increase. In actuality, GHG emissions from the proposed project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change.

Global Climate Change Analysis

Population growth anticipated to occur under the proposed project is expected to result in increased emissions of GHGs, largely due to increased vehicle miles traveled, as well as increased energy consumption and waste generation. As discussed previously, increased emissions of GHGs could contribute to global climate change patterns and the adverse global environmental effects thereof. Increased concentrations of GHG emissions could also potentially conflict with the requirement of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020.

Direct project-related GHG emissions include emissions from construction activities, area sources, mobile sources, and indirect sources. GHG emissions include CO_2, N_2O, and CH_4 emissions of the proposed project. The proposed project is not anticipated to generate other forms of GHG emissions in quantities that would facilitate a meaningful analysis. As no specific development proposals have yet been formulated, it would be too speculative to estimate the amount of direct GHG emissions resulting from the implementation of the proposed project.

Indirect sources of GHGs from implementation of the proposed project would include those from electricity consumption, water supply, and treatment and disposal of municipal, industrial, and other solid waste (which produces significant amounts of CH_4). As no specific development proposals have yet been formulated, it would be speculative to estimate the amount of indirect GHG emissions resulting from the implementation of the proposed project. However, due to the amount of development that would occur under the proposed project (including 5,681,674 square feet of commercial uses, 518,916 square feet of industrial uses, and 1,833 units of multi-family residential uses), it is anticipated that the sum of direct and indirect GHG emissions would conflict with the requirements of AB 32 to reduce statewide GHG emissions. The *General Plan EIR* determined that CO_2 emissions have been linked to the phenomena known as "global warming", but that CO_2 emissions are unregulated and there are no thresholds for their release. The *General Plan EIR* stated that CO_2 emissions do not jeopardize the attainment status of the Basin and, therefore, were omitted from further discussion in the *General Plan EIR*. However, due to the amount of development that would occur under the proposed project, it is anticipated that the resultant GHG emissions would conflict with the requirements of AB 32 to reduce statewide GHG emissions.

General Plan Policies 6.6.1 through 6.6.8, 12.6.1 through 12.6.5, and 12.6.7 promote smart land use patterns, encourage pedestrian activity, require transportation demand management programs, and promote public transit to minimize vehicular travel. Reduction in vehicle miles traveled inherently reduces GHG emissions. Additionally, GHG emissions resulting from the proposed project would be reduced by *General Plan* Policies 13.1.1, 13.1.2, 13.1.5 through 13.1.7, and 13.1.9, which aim to reduce the City's electricity use, ensure incorporation of energy conservation features, and encourage energy-efficient design in new developments. *General Plan* Policies 13.2.3 and 13.2.4 ensure water conservation measures that would reduce project-related GHGs from water consumption.

Compliance with the Attorney General's Recommendations

The California Office of the Attorney General has established recommended measures for projects to reduce GHG emissions.[15] A list of the Attorney General's recommended measures and the project's compliance with each measure are listed in *Table 5.5-5*, *Compliance with the Attorney General's Recommendations*.

In addition to being compliant with many of the Attorney General's recommended design features, the proposed project is also consistent with the California Environmental Protection Agency Climate Action Team proposed early action measures to mitigate climate change. These early action measures are designed to ensure that projects meet the Governor's climate reduction targets, and are documented in the *Climate Action Team Report to Governor Schwarzenegger at the Legislature*, March 2006.

Table 5.5-5
Compliance with the Attorney General's Recommendations

Recommended Measures	Compliance with Measures
Efficiency	
Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.	**Consistent.** The proposed project would be required to adhere to the Policies established in the *General Plan*. *General Plan* Policy 13.1.1 aims to reduce the City's electricity use by 10 percent. Also, Policies 13.1.2 and 13.1.5 ensure the incorporation of energy conservation features into new project design, and encourage energy-efficient retrofitting of existing buildings. *General Plan* Policy 13.1.6 considers programs awarding incentives to projects installing energy conservation measures. The incorporation of these energy efficiency measures would contribute to a reduction in GHG emissions.
Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings.	
Install light colored "cool" roofs, cool pavements, and strategically placed shade trees.	
Install energy efficient heating and cooling systems, appliances and equipment, and control systems.	
Install light emitting diodes (LEDs) for traffic, street and other outdoor lighting.	
Limit the hours of operation of outdoor lighting.	
Provide education on energy efficiency.	
Renewable Energy	
Install solar and wind power systems, solar and tankless hot water heaters, and energy-efficient heating ventilation and air conditioning. Educate consumers about existing incentives.	**Consistent**. The *General Plan* includes Policy 13.1.9, which encourages the increased use of passive and active solar and wind design in existing and proposed development. These renewable measures could include orienting buildings to maximize exposure to cooling effects of prevailing winds, daylighting design, natural ventilation, space planning, thermal massing, and locating landscaping and landscape structures to shade buildings.

[15] California Office of the Attorney General, *The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level*, updated May 21, 2008.

Table 5.5-5 (continued)
Compliance with the Attorney General's Recommendations

Recommended Measures	Compliance with Measures
Water Conservation and Efficiency	
Create water-efficient landscapes.	**Consistent**. Future development projects within the Project Area would be required to comply with the City's *Municipal Code Chapter 17.06*, Water Wise Landscape Program, includes standards related to landscape and maintenance water conservancy. Additionally, *General Plan* Policy 13.2.3 considers incentives and programs for projects implementing water conservation measures (i.e., replacing aging, leaking, and/or inefficient plumbing with more efficient, water-saving plumbing). Also, Policy 13.2.4 requires the use of reclaimed water for landscape irrigation and industrial projects.
Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.	
Use reclaimed water for landscape irrigation in new developments. Install the infrastructure to deliver and use reclaimed water.	
Design buildings to be water-efficient. Install water-efficient fixtures and appliances.	
Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.	
Restrict the use of water for cleaning outdoor surfaces and vehicles.	
Provide education about water conservation and available programs and incentives.	
Solid Waste Measures	
Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.	**Consistent**. The proposed project would comply with *General Plan* Policies 9.5.1 and 9.5.3, which include the installation of public trash receptacles along City streets in commercial areas, and aim to reduce the amount of solid waste disposed of in landfills. Also, *General Plan* Policies 9.5.4 through 9.5.6 address the development of local recycling programs, and the implementation of a public education recycling program.
Provide education and publicity about reducing waste and available recycling services.	
Land Use Measures	
Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.	**Consistent**. The proposed project would facilitate infill and brownfield development. Although, the proposed project would not alter the land uses designated by the General Plan, it would encourage infill development and renewal as opposed to expanding outward. Furthermore, *General Plan* Policies 6.6.1 through 6.6.8 consist of transportation measures that are intended to reduce vehicle trips and related emissions.
Educate the public about the benefits of well-designed, higher density development.	
Incorporate public transit into project design.	
Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.	**Consistent.** The proposed project would be subject to compliance with *Municipal Code* Section 12.40, *Street Trees*, which requires adherence to the City's Street Tree Master Plan. Tree removal and replacement would be conducted in accordance with regulations of the Street Tree Master Plan. Also, minimal trees would be removed with implementation of the proposed project, as the majority of the project facilitates infill development.
Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking.	**Consistent.** As stated above, the proposed project would incorporate transportation measures that would encourage the use of alternative transportation modes and would reduce vehicle trips.

Table 5.5-5 (continued)
Compliance with the Attorney General's Recommendations

Recommended Measures	Compliance with Measures
Transportation and Motor Vehicles	
Limit idling time for commercial vehicles, including delivery and construction vehicles.	**Consistent.** Future development projects within the Project Area would be required to limit idle times pursuant to *Title 13* of the *California Code of Regulations*, Section 2485.
Promote ride sharing programs by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.	**Consistent.** Future development projects in the Project Area would consider ride sharing programs in addition to the existing public transit, and transportation demand measures as discussed above and included in *General Plan* Policies.
Create car sharing programs. Accommodations for such programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.	
For commercial projects, provide adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. For large employers, provide facilities that encourage bicycle commuting, including locked bicycle storage or covered or indoor bicycle parking.	**Consistent.** Based on the above transportation demand measures, future development projects would be required to reduce vehicle trips and would potentially include bicycle facilities to achieve that goal.

Source: State of California Department of Justice, Attorney General's Office, *The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level,* updated May 21, 2008.

Consistency with the CARB Scoping Plan

A complete list of CARB Scoping Plan Measures/Recommended Actions needed to obtain AB 32 goals, as well as the Governor's Executive Order, are referenced in *Table 5.5-6*, *Recommended Actions for Climate Change Proposed Scoping Plan*. Of the 39 measures identified, those that would be considered to be applicable to the proposed project would primarily be those actions related to electricity and natural gas use and water conservation. Consistency of the proposed project with these measures is evaluated by each source-type measure below. *Table 5.5-6* identifies which CARB Recommended Actions applies to the proposed project, and of those, whether the proposed project is consistent therewith.

Table 5.5-6
Recommended Actions for Climate Change Proposed Scoping Plan

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	No	No
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	No	No
T-3	Transportation	Regional Transportation-Related GHG Targets	**Yes**	No
T-4	Transportation	Vehicle Efficiency Measures	No	No
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	No	No

Table 5.5-6 (continued)
Recommended Actions for Climate Change Proposed Scoping Plan

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
T-6	Transportation	Goods-movement Efficiency Measures	**Yes**	No
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	No	No
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	No	No
T-9	Transportation	High Speed Rail	No	No
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency programs More stringent Building and Appliance Standards	**Yes**	No
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	No	No
E-3	Electricity and Natural Gas	Renewable Portfolio Standard	No	No
E-4	Electricity and Natural Gas	Million Solar Roofs	No	No
CR-1	Electricity and Natural Gas	Energy Efficiency	**Yes**	No
CR-2	Electricity and Natural Gas	Solar Water Heating	No	No
GB-1	Green Buildings	Green Buildings	**Yes**	No
W-1	Water	Water Use Efficiency	**Yes**	No
W-2	Water	Water Recycling	**Yes**	No
W-3	Water	Water System Energy Efficiency	No	No
W-4	Water	Reuse Urban Runoff	No	No
W-5	Water	Increase Renewable Energy Production	No	No
W-6	Water	Public Goods Charge (Water)	No	No
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources	**Yes**	No
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	No	No
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	No	No
I-4	Industry	Refinery Flare Recovery Process Improvements	No	No
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	No	No
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	No	No
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	No	No
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	**Yes**	No
F-1	Forestry	Sustainable Forest Target	No	No
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	No	No
H-2	High Global Warming Potential Gases	SF_6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	No	No

Table 5.5-6 (continued)
Recommended Actions for Climate Change Proposed Scoping Plan

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
H-3	High Global Warming Potential Gases	Reduction in Perflourocarbons in Semiconductor Manufacturing (Discrete Early Action)	No	No
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)	No	No
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	No	No
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	No	No
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	No	No
A-1	Agriculture	Methane Capture at Large Dairies	No	No

Source: California Air Resources Board, *Assembly Bill 32 Scoping Plan*, October 2008.

AB 32 requires California to reduce its GHG emissions by approximately 28 to 33 percent below business as usual. CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan. Thus, projects that are consistent with the CARB Scoping Plan are also consistent with the 28 to 33 percent reduction below business as usual required by AB 32. The proposed project would facilitate development that would directly generate GHG emissions. Potential indirect GHG emissions could also be generated by incremental electricity consumption and waste generation. A detailed discussion of each applicable measure and if the proposed project conflicts with its implementation is provided below.

Transportation

Action T-3 is based on the requirements of SB 375 which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Through the SB 375 process, regions will work to integrate development patterns and the transportation network in a way that achieves the reduction of GHG emission while meeting housing needs and other regional planning objectives. SB 375 requires CARB to develop, in consultation with SCAG, passenger vehicle GHG emissions reduction targets for 2020 and 2035 by September 30, 2010. As the City of San Bernardino is within the SCAG area, future development projects within the proposed project area would be consistent with Action T-3.

Action T-6 refers to the improvement of efficiency in goods movement activities. T-6 mainly addresses ports, but also includes discussion on trucks and related facilities. The *General Plan* Circulation Element addresses the convenience of the movement of people and goods throughout the City. *General Plan* Policy 6.7.1 addresses the accommodation of railroad services that allows for the movement of people and goods while minimizing their impact on adjacent land uses. Also, *General Plan* Policy 6.4.3 encourages the evaluation and proposal of solutions to regional transportation problems, which would improve regional goods movement efficiency. Therefore, the proposed project would be consistent with Recommended Action T-6.

Electricity and Natural Gas

Action E-1 aims to reduce electricity demand by increased efficiency of Utility Energy Programs and adoption of more stringent building and appliance standards. As discussed above, the proposed project would be consistent with the City's *General Plan*, which aims to reduce the City's electricity use by 10 percent, encourages energy-efficient retrofitting of existing buildings, encourages energy efficient design and conservation, and considers a program that provides incentives for projects installing energy conservation measures. The *General Plan* also encourages the use of passive and active solar and wind design and ensures that new development consider the ability of adjacent properties to take advantage of energy conservation design. As a result, it is anticipated that future development associated with implementation of the proposed project would incorporate energy efficient features into future projects. Therefore, the proposed project would help implement and would not conflict with Action E-1.

Action CR-1 refers to energy efficiency. Key energy efficiency strategies would include codes and standards, existing buildings, improved utility programs, solar water heating, and combined heat and power, among others. As previously stated, the *General Plan* includes multiple policies which encourage energy efficient design and conservation measures, and considers incentive programs for projects including energy conservation measures. Therefore, the proposed project would not obstruct implementation of Action CR-1.

Green Buildings

Action GB-1 expands the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The City's *General Plan* encourages energy efficiency in buildings and requires the compliance with *Title 24* of the *California Administrative Code* and considers incentives to go beyond these guidelines. Additionally, the proposed project would not alter any land use designations outlined in the *General Plan*, and is, therefore, consistent with and would not obstruct this Recommended Action. Also, *General Plan* Policy 13.1.8 aims to educate the public regarding the need for energy conservation, environmental stewardship, and sustainability techniques that would achieve greater energy and resource efficiency, such as the U.S. Green Building Council's "Leadership in Energy and Environmental Design" (LEED) building standards. Also, Policy 13.1.10 considers the adoption of an ordinance relating to energy conservation and the incorporation of LEED standards.

Water Use

Recommended Action W-1 pertains to implementation water use efficiency measures. The City's *Municipal Code Article IV*, Landscaping and Water Conservation, includes standards related to landscape and maintenance water conservancy. Future projects within the Project Area would be required to comply with the City's *Municipal Code Chapter 17.06*, Water Wise Landscape Program, which includes standards related to landscape and maintenance water conservancy. Additionally, *General Plan* Policy 13.2.3 considers incentives and programs for projects implementing water conservation measures (i.e., replacing aging, leaking, and/or inefficient plumbing with more efficient, water-saving plumbing). The proposed project would not alter any land use designations outlined in the *General Plan*, and is, therefore, consistent with and would not obstruct this Action.

Action W-2 water recycling is part of the water use efficiency measures intended to reduce water usage and energy consumption. As stated above, the proposed project would be required to comply with the Water Wise Landscape Program. Also, Policy 13.2.4 requires the use of reclaimed water for landscape irrigation and industrial projects. The proposed project would not obstruct Action W-2.

Industry

Recommended Action I-1 would apply to the direct GHG emissions at major industrial facilities. Air Quality Element *General Plan* Policy 12.5.4 requires the evaluation of air emissions from industrial land uses to ensure that they will not impact adjacent uses. Also, Policy 12.5.2 prohibits the development of land uses (e.g. heavy manufacturing) that will contribute significantly to air quality degradation, unless sufficient mitigation is incorporated in accordance with SCAQMD standards. Therefore, the proposed project would be consistent with Recommended Action I-1.

Recycling and Waste Management

RW-3 relates to high recycling/zero waste and would apply to the proposed project. The proposed project would comply with *General Plan* Policies 9.5.1 and 9.5.3, which include the installation of public trash receptacles along City streets in commercial areas, and aim to reduce the amount of solid waste disposed of in landfills. Also, *General Plan* Policies 9.5.4 through 9.5.6 address the development of local recycling programs, and the implementation of a public education recycling program. Also, the *General Plan EIR* states that City has achieved a 45 percent reduction in the total amount of refuse produced due to the implementation of waste diversion programs. The City anticipates meeting the 50 percent waste diversion requirements with implementation of *General Plan* Policies 9.5.3 through 9.5.6 which address waste reduction in landfills and the implementation of local recycling programs. Therefore, future development associated with implementation of the proposed project would also participate in waste diversion efforts. The proposed project would comply with Recommended Action RW-3.

Conclusion

The proposed project would promote the rehabilitation and updating of existing uses, promote the use of compact mixed-use, encourage the efficient use of infill parcels, and encourage the overall enhancement of the area.

As previously stated, the proposed project is anticipated to generate a significant amount of GHG emissions due to the amount of development that would occur under the proposed project. However, the proposed project would adhere to *General Plan* policies, including those addressing transportation, energy, solid waste, and water efficiency measures (which would inherently reduce GHG emissions). AB 32 requires the reduction of GHG emissions to 1990 levels that would require a 28 to 33 percent reduction in “business as usual” GHG emissions for the entire State. Due to the amount of development proposed under the proposed project (including 5,681,674 square feet of commercial uses, 518,916 square feet of industrial uses, and 1,833 multi-family residential units), the proposed project could hinder the statewide reduction goals of AB 32 on a program level basis.

The City's process for the evaluation of discretionary projects includes environmental review and documentation pursuant to CEQA, as well as analysis of those projects for consistency with the goals, policies, and recommendations of the *General Plan*. In general, implementation of the policies in the *General Plan*, as well as compliance with Federal, State, and local regulations would avoid or reduce their incremental contribution to the significant worldwide increase in GHG emissions. However, for some projects it is possible that adherence to *General Plan* Policies may not adequately avoid or reduce incremental impacts, and such projects would require additional mitigation measures. For each future discretionary project requiring mitigation (i.e., measures that go beyond what is required by existing programs, plans, and regulations), project specific measures would be identified with the goal of reducing incremental project level impacts to less than significant or the incremental contributions of a project may remain significant and unavoidable where no feasible mitigation exists. Where mitigation is determined necessary and feasible, these measures would be included in a Mitigation Monitoring and Reporting Program for the project. The measures may be updated, expanded, and refined when applied to specific future projects proposed under the proposed project based on project specific design and changes in existing conditions, and local, State, and Federal laws.

The degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately determined for each specific future project at this programmatic level of analysis. As stated above, reducing GHG emissions to 1990 levels would require a 28 to 33 percent reduction in "business as usual" GHG emissions for the entire State. Although the project includes mitigation measures that would reduce GHG emissions, there are no specific development proposals for the proposed project and the City has not developed a Climate Action Plan or Greenhouse Gas Reduction Plan. Therefore, an accurate correlation cannot be made at this stage between GHG emissions from future development of the proposed project and extent of potential GHG reductions. Future development within the Project Area would need to be analyzed on a project-by-project basis to determine the extent of each project's potential contribution to global climate change and appropriate mitigation measures specific to each project. Thus, cumulative operational and climate change impacts would be significant and unavoidable at this program level of analysis.

General Plan Goals and Policies:

NATURAL RESOURCES AND CONSERVATION ELEMENT

Refer to the following Goal and Policies previously identified:

- Goal 12.6
- Policy 12.6.1
- Policy 12.6.2
- Policy 12.6.3
- Policy 12.6.4
- Policy 12.6.5
- Policy 12.6.7

CIRCULATION ELEMENT

Refer to the following Goal and Policies previously identified:

- Goal 6.6
- Policy 6.6.1
- Policy 6.6.2
- Policy 6.6.3
- Policy 6.6.4
- Policy 6.6.5
- Policy 6.6.6
- Policy 6.6.7
- Policy 6.6.8

Policy 6.7.1 Accommodate railroad services that allow for the movement of people and goods while minimizing their impact on adjacent land uses.

ENERGY AND WATER CONSERVATION ELEMENT

Goal 13.1 Conserve scarce energy resources.

Policy 13.1.1 Reduce the City's ongoing electricity use by 10 percent and set an example for residents and businesses to follow.

Policy 13.1.2 Ensure the incorporation of energy conservation features in the design of all new construction and site development in accordance with State Law.

Policy 13.1.5 Encourage energy-efficient retrofitting of existing buildings throughout the City.

Policy 13.1.6 Consider program that awards incentives to projects that install energy conservation measures, including technical assistance and possible low-interest loans.

Policy 13.1.7 Ensure that new development consider the ability of adjacent properties to utilize energy conservation design.

Policy 13.1.8 Educate the public regarding the need for energy conservation, environmental stewardship, and sustainability techniques and about systems and standards that are currently available for achieving greater energy and resource efficiency, such as the U.S. Green Building Council's "Leadership in Energy and Environmental Design" (LEED) standards for buildings.

Policy 13.1.9 Encourage increased use of passive and active solar and wind design in existing and new development (e.g., orienting buildings to maximize exposure to cooling effects of prevailing winds, daylighting design, natural ventilation, space planning, thermal massing and locating landscaping and landscape structures to shade buildings).

Policy 13.1.10 Consider adopting an ordinance relating to energy conservation, environmental stewardship, and sustainability for new development that incorporates the LEED standards.

Goal 13.2 Manage and protect the quality of the City's surface waters and ground water basins.

Policy 13.2.3 Consider the establishment of incentives, funding programs, or a rebate program for projects that implement water conservation measures, such as replacing aging, leaking, and/or inefficient plumbing with more efficient, water-saving plumbing.

Policy 13.2.4 Require the use of reclaimed water for landscape irrigation and other non-contact uses for industrial projects, golf courses, and freeways.

Mitigation Measures: Refer to Mitigation Measures AQ-3 through AQ-5. No additional mitigation measures are required.

Level of Significance After Mitigation: Significant and unavoidable impact for cumulative short-term emissions and cumulative long-term emissions, including global climate change.

5.5.6 SIGNIFICANT UNAVOIDABLE IMPACTS

The proposed project would result in a significant and unavoidable impact for the following areas:

- Construction-related Emissions – Due to the magnitude of project-related emissions associated with future development and infrastructure projects facilitated by the proposed project, construction-related emissions are considered significant and unavoidable.

- Operational Emissions – During the operational phase, potential development within the Project Area would result in a net increase in regional emissions of ROG, NO_X, SO_2, CO, PM_{10}, and $PM_{2.5}$ from the operation of both stationary and mobile sources. Mitigation measures and General Plan Policies identified above would reduce the potential air quality impacts to the degree feasible, but emissions are anticipated to remain above SCAQMD significance thresholds. Therefore, operation of the proposed project would have a significant and unavoidable impact.

- Cumulative Construction-Related Emissions – The associated Implementation Action requires Best Available Control Measures to be incorporated to reduce construction emissions below daily emissions standards established by the SCAQMD. These Best Available Control Measures include procedures to control emissions of particulate matter, ozone, and NO_X (an ozone precursor). However, even with implementation of the policies and implementation actions, cumulative construction-related emissions would not be reduced to a less than significant level. Thus, significant and unavoidable impacts would occur in this regard.

- Cumulative Operational Emissions – Many of the individual projects would be small and generate mobile and stationary emissions that do not exceed the SCAQMD's recommended thresholds of significance. With regard to daily operational emissions and the cumulative net increase of any criteria pollutant for which the region is nonattainment, this is considered to be a potentially significant cumulative impact, due to nonattainment of O_3 and PM_{10}, and $PM_{2.5}$ standards in the Basin. The contribution of daily operational emissions from the growth associated with the proposed project could be cumulatively considerable. This cumulative impact is considered to be significant and unavoidable.

- Cumulative GHG Emissions – When considering the proposed project as a whole, proposed amount of development under the proposed project would be expected to produce a significant amount of GHG emissions. Many of the individual projects would be small and generate nominal amounts of GHGs. However, as global climate change is cumulatively considerable, future project GHG contributions associated with the proposed project could result in a significant cumulative impact. Although the proposed project would be required to adhere to the previously identified General Plan Policies regarding vehicle emissions reductions and energy and water efficiency, it would be too speculative to quantify GHG emissions and reductions from the proposed project, as project specific details are unknown at this time. Therefore, the contribution of GHG emissions from the growth associated with the proposed project could be cumulatively considerable. This cumulative impact is considered to be significant and unavoidable.

All other impacts related to air quality associated with implementation of the proposed project would be less than significant with compliance with the policies in the General Plan. If the Redevelopment Agency approves the proposed project, the Redevelopment Agency shall be required to cite their findings in accordance with *CEQA Guidelines* Section 15091 and prepare a Statement of Overriding Considerations in accordance with *CEQA Guidelines* Section 15093.

5.5.7 SOURCES CITED

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