

## 4.3 AIR QUALITY

### 4.3.1 Introduction

This section of the EIR evaluates the potential impacts on air quality resulting from the City of Simi Valley General Plan Update. This includes the potential for the General Plan Update to conflict with or obstruct implementation of the applicable air quality plan, to violate an air quality standard or contribute substantially to an existing or projected air quality violation, to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors that would affect a substantial number of people. Data for this section was taken from the City of Simi Valley General Plan Update Technical Background Report (2007), the Traffic Study for Simi Valley General Plan Update Circulation and Mobility Element (Iteris 2010), the Ventura County Air Pollution Control District (VCAPCD) Air Quality Assessment Guidelines (2003), the Final Ventura County 2007 Air Quality Management Plan (AQMP) (VCAPCD 2008), and other documents prepared for the City and air basin.

Two comment letters associated with air quality were received in response to the December 1, 2009, Notice of Preparation circulated for the General Plan Update. The VCAPCD submitted a letter that requested the air quality section of the EIR be prepared in accordance with the VCAPCD's Air Quality Assessment Guidelines and consider volatile organic compound (VOC), nitrogen oxides (NO<sub>x</sub>), and particulate matter emissions. Alice Sterling submitted a letter that requested the EIR address air quality impacts from construction activities and include meaningful mitigation measures. These items are addressed in this section. Full bibliographic entries for all reference materials are provided in Section 4.3.6 (References) of this section. Climate change is addressed separately in Section 4.7 (Global Climate Change) of this Draft EIR.

### 4.3.2 Environmental Setting

#### ■ Regional Climate

Simi Valley is located within southeastern Ventura County, which is part of the South Central Coast Air Basin (the Basin). This area includes all of Ventura, Santa Barbara, and San Luis Obispo counties. Ventura County is divided into two airsheds for air quality planning purposes: the Ojai Valley Airshed and the Oxnard Plain Airshed. The regional climate within the basin is dominated by the intensity and location of the semi-permanent Pacific high-pressure zone, which, from spring to fall, induces regional subsidence and temperature inversion layers. The region is characterized by warm summers, mild winters, infrequent seasonal rainfall, and moderate humidity. The predominate wind patterns follow a diurnal land/sea breeze cycle, with typical daytime winds from the west.

#### ■ Local Climate

Simi Valley is located within the inland portion of the Oxnard Plain Airshed, approximately 25 miles from the coast of the Pacific Ocean, and experiences the mild Mediterranean climate typical of Southern California. The City is surrounded by the Santa Susana Mountains to the north and northeast, Big

Mountain to the north and the Simi Hills to the south. Simi Valley extends west to east and varies in elevation from approximately 700 feet to the west to approximately 1,200 feet at the northeast.

Average temperatures in the valley are an 88.2°F high and a 40.7°F low. Precipitation averages 14.37 inches per year, with the majority of rainfall occurring from late October through early April. Prevailing daytime winds are from the west to west-southwest with average wind speeds of approximately 8 miles per hour (mph). Predominant nighttime winds are from the east to east-southeast and average 3 to 4 mph. This general flow of winds in the valley is occasionally interrupted by warm and very dry Santa Ana winds, which originate from the deserts located northeast of California and occur between September and March. Santa Ana winds blow through the valley from the north to northeast with velocities in excess of 17 mph, including gusts in excess of 30 mph.

The vertical dispersion of air pollutants in the Oxnard Plain Airshed is limited by the presence of persistent temperature inversions. Because air cools under decreased atmospheric pressure, temperatures typically decrease with altitude. A reversal of this state in the atmosphere, where temperature increases with height, is known as an inversion. The base of the inversion, or the mixing height, represents an abrupt change in the density of the atmosphere so that the air below the inversion base does not mix with the air above the base.

Two types of temperature inversions (warmer air on top of colder air) are created in the area: subsidence and radiational (surface). The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from a high-pressure area to the low-pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but is most evident during the summer months. Surface inversions are formed by the more rapid cooling of air near the ground at night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed. Ozone ( $O_3$ ) is the primary air pollutant of concern during the subsidence inversions, while carbon monoxide (CO) and  $NO_x$  are of greatest concern during winter inversions.

## ■ Air Pollutants

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

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health. The federal and state ambient air quality standards have been set at levels whose concentrations could be generally harmful to human health and welfare and to protect the most sensitive persons from illness or discomfort with a margin of safety. Applicable ambient air quality standards are identified in Table 4.3-1 (Summary of Ambient Air Quality at the Simi Valley Monitoring Station) below. The VCAPCD is responsible for bringing air quality within the Basin into conformity with the federal and state standards.

<b>Table 4.3-1 Summary of Ambient Air Quality at the Simi Valley Monitoring Station</b>				
<i>Pollutant</i>	<i>Air Quality Standards</i>	<i>Year</i>		
		<i>2007</i>	<i>2008</i>	<i>2009</i>
<b>Ozone (O<sub>3</sub>)</b>				
Maximum 1-hour concentration	—	0.113 ppm	0.115 ppm	0.116 ppm
Number of days exceeding state 1-hour standard	>0.09 ppm	7	14	12
Maximum 8-hour concentration	—	0.097 ppm	0.095 ppm	0.092 ppm
Number of days exceeding state 8-hour standard	>0.07 ppm	37	50	39
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>				
Maximum 1-hour concentration	—	0.064 ppm	0.077 ppm	0.047 ppm
Number of days exceeding state 1-hour standard	>0.18 ppm	0	0	0
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>				
Maximum 24-hour concentration	—	118.5 µg/m <sup>3</sup>	83.6 µg/m <sup>3</sup>	76.8 µg/m <sup>3</sup>
Number of days exceeding national 24-hour standard	>150 µg/m <sup>3</sup>	0	0	0
Number of days exceeding state 24-hour standard	>50 µg/m <sup>3</sup>	4	2	1
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>				
Maximum 24-hour concentration measured	—	48.8 µg/m <sup>3</sup>	35.6 µg/m <sup>3</sup>	22.2 µg/m <sup>3</sup>
Number of days exceeding national 24-hour standard	>35 µg/m <sup>3</sup>	2	1	0

SOURCE: California ARB (2010, 2011).  
 ppm = parts by volume per million of air; µg/m<sup>3</sup> = micrograms per cubic meter of air  
 VACPD eliminated monitoring for CO in 2004.

The air pollutants for which federal and state standards have been promulgated and which are most relevant to air quality planning and regulation in the air basins include O<sub>3</sub>, CO, respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and lead. In addition, toxic air contaminants (TACs) are of concern in the air basins. Each of these is briefly described below.

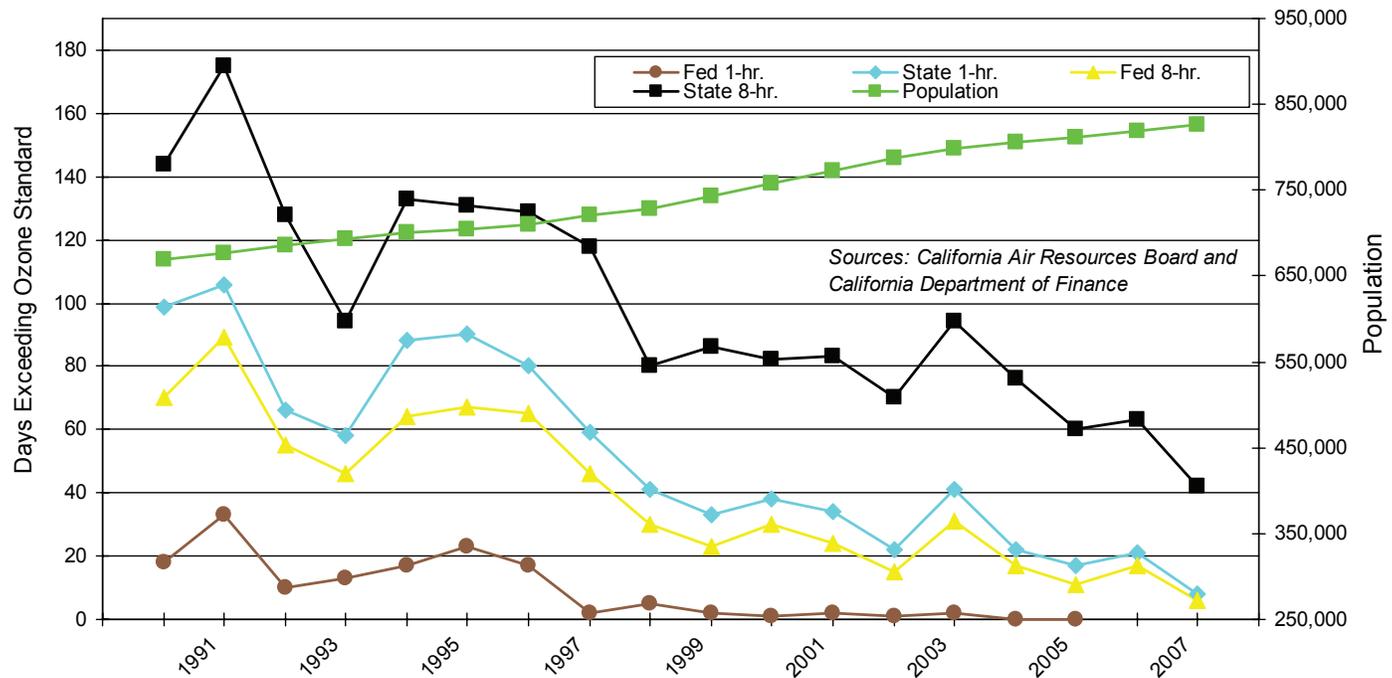
- *Ozone* is a gas that is formed when VOCs and NO<sub>x</sub>, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Meteorological conditions that are needed to produce high concentrations of O<sub>3</sub> are direct sunshine, early morning stagnation in source areas, high ground surface temperatures, strong and low morning inversions, greatly restricted vertical mixing during the day, and daytime subsidence that strengthens the inversion layer.

- *Carbon monoxide* is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and motor vehicles operating at slow speeds are the primary source of CO in the Basin, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- *Respirable particulate matter* and *fine particulate matter* consist of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM<sub>10</sub> and PM<sub>2.5</sub> represent fractions of particulate matter. PM<sub>10</sub> refers to particulate matter 10 microns or less in diameter, about one-seventh the thickness of a human hair. PM<sub>2.5</sub> refers to particulate matter that is 2.5 microns or less in diameter, roughly one-twenty-eighth the diameter of a human hair. Major sources of PM<sub>10</sub> include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. PM<sub>2.5</sub> results from fuel combustion (from motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM<sub>2.5</sub> can be formed in the atmosphere from gases, such as SO<sub>2</sub>, NO<sub>x</sub>, and VOC.
- *Sulfur dioxide (SO<sub>2</sub>)* is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries.
- *Lead* occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles; therefore, most lead combustion emissions are associated with off-road vehicles. Other sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.
- *Toxic air contaminants (TACs)* refer to a diverse group of air pollutants that can affect human health, but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional.

## ■ Existing Regional Air Quality

Regional air quality throughout the Basin has improved substantially over the 1980s and 1990s, even as substantial growth has occurred. This is illustrated in Figure 4.3-1 (Ventura County Air Pollution Control District Ozone Exceedance Graph) for the percent of days that exceed national and state pollutant standards for ozone.

However, the entire county is designated as a national-level nonattainment area for O<sub>3</sub>. Ventura County is considered a national level attainment area for all other criteria air pollutants for which there are federal attainment standards, including PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>2</sub>, and SO<sub>2</sub>. The Basin is a state-level nonattainment area for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. It is in attainment of the state ambient air quality standards for SO<sub>2</sub> and lead.



Sources: California Air Resources Board and California Department of Finance

Source: VCAPCD, 2008.

Figure 4.3-1  
Ventura County Air Pollution Control District Ozone Exceedance Graph



## ■ Existing Local Air Quality

To identify ambient concentrations of the six primary criteria pollutants (i.e., O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>/PM<sub>2.5</sub> and lead), the VCAPCD operates seven air quality monitoring stations throughout Ventura County. These stations are located in Thousand Oaks, El Rio, Ventura, Piru, Ojai, and Simi Valley. The most representative air quality monitoring station is located on Cochran Street within Simi Valley. This station presently monitors the concentration levels of O<sub>3</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> within the City.

Table 4.3-1 ((Summary of Ambient Air Quality at the Simi Valley Monitoring Station) identifies the national and state ambient air quality standards for relevant air pollutants and provides a summary of ambient air quality measured within the Planning Area through the period of 2007 to 2009. As shown in this table, air pollutants in Simi Valley exceeded the California ambient air quality standards (CAAQS) for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> during the last three years that data is available. Particulate matter emissions decreased over the 3-year period. The PM<sub>2.5</sub> state 24-hour standard was not exceeded on any days in 2009. O<sub>3</sub> concentrations decreased between 2008 and 2009, but have increased from 2007 levels. CO monitoring was eliminated in Ventura County in 2004 as part of network changes in response to the proposed National Monitoring Strategy set forth by the United States Environmental Protection Agency (USEPA). The decision to eliminate CO monitoring was approved by both the USEPA and the California Air Resources Board (California ARB).

## ■ Existing Toxic Air Contaminant Emissions

TACs are airborne substances that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health. They include both organic and inorganic chemical substances that may be emitted from a variety of common sources including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different than the “criteria” pollutants previously discussed in that ambient air quality standards have not been established for them, largely because there are hundreds of air toxins and their effects on health tend to be local rather than regional.

Lifetime cancer risk is defined as the increased chance of contracting cancer over a 70-year period as a result of exposure to a toxic substance or substances. It is the product of the estimated daily exposure of each suspected carcinogen by its respective cancer unit risk. The end result represents a worst-case estimate of cancer risk. The California ARB has produced a series of estimated inhalation cancer risk maps based on modeled levels of outdoor composite toxic pollutant levels. The 2001 map (the most recent map available) indicates that the Planning Area is exposed to an estimated inhalation cancer risk of more than 500 persons per million. The largest contributors to inhalation cancer risk are diesel engines.

## ■ Sensitive Receptors

As discussed previously, the national and state ambient air quality standards have been set at levels whose concentrations could be generally harmful to human health and welfare and to protect the most sensitive persons from illness or discomfort with a margin of safety. The VCAPCD defines typical sensitive receptors as residences, schools, playgrounds, childcare centers, athletic facilities, hospitals, long-term

health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Each of these land use types is present within the City.

## ■ Land Use Planning and Air Quality

Land use patterns and density of development affect the amount of air pollutants that are generated by communities. Land uses that are segregated throughout a community increase the number of motor vehicle trips and associated air pollutant emissions since opportunities to walk, ride bicycles, and use public transportation between such uses as homes and work/shopping are generally reduced. This is compounded in areas such as the City of Simi Valley where low densities increase the distance between uses, and public transportation routes and vehicles are limited. Communities that have more local residents in the work-force than the number of local jobs (i.e., are housing rich), as is the case with the Simi Valley, also increase the potential for emissions to be generated as residents have to commute outside of the community for their employment.

### 4.3.3 Regulatory Framework

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

## ■ Federal

### *U.S. Environmental Protection Agency*

The USEPA is responsible for setting and enforcing the National Ambient Air Quality Standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The USEPA also maintains jurisdiction over emissions sources outside state waters (outer continental shelf), and establishes various emissions standards for vehicles sold in states other than California.

As part of its enforcement responsibilities, the USEPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP. The City of Simi Valley General Plan, Growth Management Plan, and Municipal Code are the regulatory mechanisms by which the City conforms to USEPA regulations, including the SIP.

## ■ State

### *California Air Resources Board*

The California ARB, a part of the California Environmental Protection Agency (Cal/EPA), is responsible for the coordination and administration of both federal and state air pollution control

programs within California. In this capacity, the California ARB conducts research, sets the CAAQS, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The California ARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hair spray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. As with the USEPA, the Simi Valley General Plan, Growth Management Plan, and Municipal Code are the regulatory mechanisms by which the City conforms to the regulations and requirements of the California ARB.

## ■ Regional

### ***Southern California Association of Governments***

The Southern California Association of Governments (SCAG) is a council of governments for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. It is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy and community development, and the environment.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. The organization also promotes using carpools, buses, trains, and other alternative forms of transportation throughout the region. SCAG's Regional Comprehensive Plan and Guide (RCPG) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the VCAPCD. The RCPG is a framework for decision-making for local governments, assisting them in meeting federal and state mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes through the year 2015, and beyond. Policies within the RCPG include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

## ■ Local

### ***Ventura County Air Pollution Control District***

The VCAPCD is the agency principally responsible for comprehensive air pollution control in the Basin. The VCAPCD, a regional agency, works directly with the SCAG, county transportation commissions, and local governments and cooperates actively with all federal and state government agencies. The VCAPCD develops rules and regulations to reduce emissions, protect public health and agriculture, and to achieve and maintain state and federal air quality standards. In addition, the VCAPCD establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

The VCAPCD is directly responsible for reducing emissions from stationary, area, and mobile sources. It has responded to this requirement by preparing a sequence of AQMPs. The most recent of these was adopted by the Governing Board of the VCAPCD in 1994, and has been revised four times, once in 1995, again in 1997, 2004, and the most recent revision being in 2007. The Ventura County AQMP is based on growth projections for Ventura County and subareas within the County that have been agreed

to by both the County and the SCAG. The 2007 AQMP presents Ventura County's: (1) strategy to attain the federal 8-hour ozone standard; (2) attainment demonstration for the federal 8-hour ozone standard; (3) reasonable further progress demonstration for the federal 8-hour ozone standard; and, (4) transportation conformity emissions budget for federal transportation conformity purposes.

### ***County of Ventura, City of Simi Valley***

Local jurisdictions, such as the County of Ventura and the City of Simi Valley, have the shared responsibility to implement or facilitate some of the control measures of the AQMP. Transportation-related strategies for congestion management, low emission vehicle infrastructure, and transit accessibility and non-transportation-related strategies for energy conservation can be encouraged by policies of local governments. The transportation strategies include the following:

- **Trip Elimination**—This strategy reduces vehicle emissions by eliminating vehicle trips. The primary emissions eliminated are the cold start emissions that occur when vehicle engines have been at rest for a period and then restarted. Cold start emissions occur after engine startup but before the engines are warm enough for the emission control systems to work effectively. Cold start emissions are a large percentage of total vehicle emissions and thus a major source of ozone precursors. Telecommuting, carpooling, combining trips, flexible work schedules, and certain land use measures that provide housing near jobs and shopping centers are strategies that eliminate vehicle trips.
- **Vehicle Substitution**—This strategy reduces emissions associated with motor vehicle use by using nonmotorized transportation modes, which do not produce air emissions. Walking, biking, and telecommuting are all mechanisms of vehicle substitution. Adopting trip reduction ordinances is a mechanism to encourage walking or biking facilities and discourage motor vehicle use in highly congested areas.
- **Vehicle Miles Traveled Reduction**—This strategy reduces motor vehicle emissions because vehicles traveling fewer miles produce fewer emissions. This strategy does not reduce cold start emissions. Park and ride lots, carpooling, and land use measures are all ways to reduce trip distance and, therefore, vehicle miles traveled.
- **Vehicle Occupancy**—Increasing the number of passengers per vehicle can reduce all emissions associated with motor vehicle use. Transit, carpools, and vanpools are all mechanisms to implement this strategy. Other mechanisms include providing ride-match services for carpools and vanpools, restricting or limiting roads for high occupancy vehicles and passenger buses, establishing employer-based transportation management programs that encourage carpooling, vanpooling and transit use among employees.
- **Technological Improvements**—This strategy reduces emissions through technological improvements to the internal operation of motor vehicles and the technologies used to improve the performance of transportation systems. Clean-fuel/electric vehicles, vehicle emission controls, Intelligent Transportation Systems, signal synchronization and freeway management systems that improve the performance of transportation systems are all mechanisms to implement this strategy. Programs to control extended idling of vehicles and remove older, high-polluting vehicles through vehicle scrapping incentives reduce emissions as well.

The VCAPCD has primary responsibility for regulating stationary sources, including some area sources, within Ventura County. Stationary sources are sources of air pollution that do not move, such as power plants, turbines, refineries, oil field facilities, manufacturing facilities, industrial engines, water heaters,

furnaces, and gasoline stations. Stationary source control measures provide the framework for VCAPCD rules that reduce harmful air emissions. VCAPCD rules implement AQMP control measures and apply to many activities including power generation, gasoline storage and dispensing, petroleum storage and processing, paint and solvent use, dry cleaning, printing, asphalt paving, and fuel combustion in industrial engines and turbines. A summary of the AQMP Stationary Source measures that are partially within the jurisdiction of local governments to implement is provided in Table 4.3-2 (AQMP Control Strategies for Local Governments). The City must regulate the emissions associated with these stationary sources in order to conform to the AQMP.

<b>Table 4.3-2 AQMP Control Strategies for Local Governments</b>		
<i>AQMP Strategy Name</i>		<i>Effect</i>
<b>Stationary Source Control Measures</b>		
R-303	Architectural Coating	Reduce VOC
R-306	Wood Product Coating	Reduce VOC
R-314	Adhesives	Reduce VOC
R-316	Graphic Arts Solvents	Reduce VOC
R-321	Pleasure Craft Coating	Reduce VOC
R-328	Surface Cleaning and Degreasing	Reduce VOC
R-501	Fiberglass/Polyester Resin Use	Reduce VOC
R-504	Restaurant Cooking Operations	Reduce VOC
N-102	Boiler's Steam Gen, Heaters<1MMBtu	Reduce NO <sub>x</sub>
N-110	Fan Type Central Furnaces	Reduce NO <sub>x</sub>

SOURCE: VCAPCD, *Final Ventura County 2007 Air Quality Management Plan* (May 13, 2008).  
VOC = volatile organic compounds; NO<sub>x</sub> = nitrogen oxides

### ***Simi Valley Municipal Code***

Chapter 9-39 (Transportation Demand Management) of the Simi Valley Municipal Code is intended to promote trip reduction and travel demand measures in the City of Simi Valley, which in turn would serve to reduce Air Quality Impacts from new development within the City. As such, Chapter 9-39 of the Municipal Code sets forth standards and requirements for new commercial and residential development that would promote alternative transportation methods and other strategies to improve both congestion and air quality.

### ***Simi Valley General Plan***

The Simi Valley 1991 Air Quality Element identifies goals and policies for improving air quality in Simi Valley and the air basin. Because air quality goals can be achieved through a variety of land use, housing and transportation strategies, several air quality-related policies are contained in other elements of the 1988 General Plan. The goals and policies are intended to improve local and regional air quality by reducing harmful emissions from both mobile and stationary sources and include such policies as encouraging new development contiguous with existing development, encouraging infill development on

the valley floor, reducing vehicle trips through the use of transportation demand management (TDM) programs, and promoting growth management through the Countywide Planning Program as well as the City's Growth Management Plan.

### 4.3.4 Project Impacts and Mitigation

#### ■ Analytic Method

The description of existing conditions regarding air quality was taken from the Technical Background Report prepared for the General Plan Update. Additional information was provided by the VCAPCD and California ARB. The development anticipated under the General Plan Update was analyzed based on the VCAPCD Air Quality Assessment Guidelines to determine potential impact related to air quality. Potential impacts were then compared to the City and VCAPCD's CEQA Thresholds.

#### ■ Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2011 CEQA Guidelines. For the purposes of this EIR, implementation of the proposed project may result in a potentially significant impact if the proposed project would cause any of the following results:

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

As stated previously, the VCAPCD is principally responsible for comprehensive air pollution control in the Basin and recommends that projects be evaluated in terms of the air pollution control thresholds established by the VCAPCD and published in the Ventura County Air Quality Assessment Guidelines.

#### ■ General Plan Policies that Mitigate Potential Impacts on Air Quality

Policies and goals from the Community Development, Mobility-Infrastructure, and Natural Resources Chapters that would mitigate potential impacts on air quality include the following. All General Plan policies are followed by a set of numbers in parentheses. These numbers reference applicable measures that will be undertaken by the City to implement the policy.

- Policy LU-1.2 Development Location.** Limit development to lands within the Simi Valley City Urban Restriction Boundary (CURB), as shown in Figure LU-1, thereby protecting existing agriculture, open space, viewsheds, wildlife, and watersheds surrounding the City from development impacts and limiting urban sprawl. (*Imp A-1, A-2, LU-6, LU-10, LU-18*)

- Policy LU-20.7 Buffering from Adjacent Properties.** Ensure that business and industrial park developments are positive additions to the City’s community setting, incorporating adequate landscaped buffers to minimize any negative impacts to surrounding neighborhoods and development, and controlling on-site lighting, noise, odors, vibrations, toxic materials, truck access, and other elements that may impact adjoining non-business-park and non-industrial uses. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-11, LU-15, LU-18*)
- Policy LU-24.2 Transit-Oriented Development.** Promote the development of a new Metrolink transit station to serve the western portion of Simi Valley and intensify development within its proximity to foster transit use and reduce automobile trips, energy consumption, air pollution, and greenhouse gas emissions. Incorporate retail uses on the ground floor of street-facing elevations of parking structures developed to serve transit riders and or office uses that are designed for continuity with development on adjoining parcels. (*Imp A-1, A-2, A-3, LU-3, LU-9, LU-10, LU-16, LU-18, ED-9, M-15*)
- Policy M-1.1 Comprehensive Mobility System.** Establish a diverse transportation system that provides mobility options for the community, including adequate roads, transit service, bike paths, pedestrian walkways, and commuter rail services. (*Imp A-1, A-2, LU-18, M-1*)
- Policy M-1.2 Integrated Multi-Modal System.** Provide an integrated transportation system that supports the land use plan set forth in the Land Use Element. (*Imp A-1, A-2, LU-18, M-1, M-8, M-10, M-13, M-15*)
- Policy M-1.3 Complete Streets.** Accommodate and balance the needs of all users of the transportation system including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers through all phases of transportation and development projects so that all users can travel safely within the various public rights-of-way. (*Imp A-1, A-2, LU-18, M-4, M-8*)
- Policy M-2.4 Regional Traffic Mitigation.** Participate in programs (Congestion Management Program, Growth Management Program, etc.) to reduce regional traffic congestion. (*Imp A-1, A-2, LU-18, M-12*)
- Policy NR-9.1 Regional Cooperation.** Ensure that air quality standards are consistent with the Countywide recommendations of the Ventura County Air Pollution Control District, which are intended to reduce air quality impacts. In addition, cooperate with the Southern California Association of Government’s efforts to implement provisions of the region’s Air Quality Management Plan. (*Imp A-1, A-2, LU-2, LU-18, NR-2, NR-13*)
- Policy NR-9.2 Truck Deliveries.** Encourage local businesses to alter truck delivery schedules for off-peak delivery times. (*Imp A-1, A-2, LU-1, LU-2, LU-18, NR-2, NR-5*)
- Policy NR-9.3 Improved Technology.** Promote and implement state and federal regulations that improve transportation technology, vehicle mileage performance, and cleaner fuels. (*Imp A-1, A-2, LU-7, LU-18, IU-10, NR-4, NR-6*)
- Policy NR-9.4 Contractors.** Require that government contractors minimize greenhouse gas emissions in building construction, operations, etc. For example, contractors can

use low or zero-emission vehicles and equipment. (*Imp A-1, A-2, LU-7, LU-18, NR-4, NR-7*)

**Policy NR-9.5 Dust and Particulate Control.** Adopt procedures to regulate and minimize particulate emissions from paved and unpaved roads, parking lots, and building construction activities. (*Imp A-1, A-2, LU-2, LU-18, NR-2*)

**Policy NR-9.6 Construction and Operation.** Evaluate development project applications using the procedures and thresholds established in the most recent version of the Ventura County Air Quality Assessment Guidelines as published by the Ventura County Air Pollution Control District and ensure that projects incorporate all applicable construction and operation mitigation measures contained therein. (*Imp A-1, A-2, LU-2, LU-18, NR-2, NR-13*)

## ■ Effects Not Found to Be Significant

No Effects Not Found to Be Significant have been identified with respect to air quality.

## ■ Less-Than-Significant Impacts

**Impact 4.3-1 Construction activities under the General Plan Update could result in the long-term exposure of sensitive receptors to pollutants; however, this impact would be reduced to less-than-significant levels through the implementation of General Plan policies and compliance with relevant local, state, and federal regulations. This is a *less-than-significant* impact.**

Construction emissions that would occur under the General Plan Update would be temporary and would occur throughout the City. Emissions of TACs are localized, not regional, in nature and impacts related to construction activities would be limited to the area immediately surrounding the construction site. General Plan Policies NR-9.1, NR-9.3, and NR-9.5 would further reduce and mitigate impacts to air quality during construction. Therefore, construction emissions would not contribute to long-term emissions that would increase the lifetime probability of a particular sensitive receptor contracting cancer or increase the Health Hazard Index for non-carcinogenic effects. Construction emissions that would occur as a result of construction of development under the General Plan Update would be *less than significant*.

**Impact 4.3-2 Operation of the land uses under the General Plan Update could expose sensitive receptors to substantial concentrations of criteria pollutants or San Joaquin Valley Fever; however, this impact would be reduced to less-than-significant levels through the implementation of General Plan policies and compliance with relevant local, state, and federal regulations. This is a *less-than-significant* impact.**

All of the sensitive land uses identified by the VCAPCD are present in the Planning Area, including residences, schools, playgrounds, childcare centers, athletic facilities, hospitals, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. All of these land uses would continue to be present throughout the Planning Area with implementation of the General Plan Update.

Air pollutants of concern to sensitive receptors during operation of land uses include CO, TACs, and San Joaquin Valley Fever (Valley Fever).

### Carbon Monoxide

Motor vehicles, and traffic-congested roadways and intersections are the primary source of high localized CO concentrations. The VCAPCD recommends the use of CALINE4, a dispersion model for predicting CO concentrations that may result due to the operation of a project, as the preferred method of estimating pollutant concentrations at sensitive receptors near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak-hour turning volumes to the existing ambient CO air concentrations. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO hotspots. CO modeling was conducted for the five most congested intersections that would operate at an LOS D or E at build-out of the General Plan Update without mitigation. As shown in Table 4.3-3 (Carbon Monoxide Concentrations at Selected Intersections at Build-out), CO concentrations would be substantially below the national 35.0 ppm and state 20.0 ppm 1-hour ambient air quality standards, and the national and state 9.0 ppm 8-hour ambient air quality standards at build-out. Further, General Plan Policies M-1.1, M-1.2, M-1.3, M-2.4, and LU-24.2 would help reduce traffic, and, therefore, CO emissions. Therefore, sensitive receptors within the City would not be exposed to substantial concentrations of CO, and the potential impacts of the General Plan Update would be *less than significant*.

Intersection	Carbon Monoxide Concentrations (ppm)	
	1-Hour Average General Plan Build-Out	8-Hour Average General Plan Build-Out
Stearns Street at Los Angeles Avenue	6.8	4.7
Sycamore Drive at Los Angeles Avenue	6.8	4.7
Los Angeles Avenue at Patricia Avenue	6.9	4.8
First Street at Easy Street	7.0	4.9
First Street at Los Angeles Avenue	7.0	4.9
<b>Significance Threshold</b>	<b>20</b>	<b>9</b>
Exceeds Threshold?	No	No

SOURCE: CALINE4; Iteris, *Traffic Study for Simi Valley General Plan Update Circulation and Mobility Element* (November 2010) (calculation sheets are provided in Appendix B).

All concentrations are measured at edge of roadway right-of-way.

### Toxic Air Contaminants

According to the VCAPCD, to minimize exposure of sensitive receptors to TACs, a project should avoid development project near a congested intersection or roadway and existing sources of TACs, such as industrial facilities. Sensitive receptors near congested roadways may be exposed to diesel particulate matter (DPM), a carcinogen that is a component of diesel exhaust. Long-term exposure to TACs of potential concern within the Planning Area includes DPM emitted mostly from diesel powered cars and trucks on the SR-118 freeway, DPM from trains traveling through the area as well as idling while

dropping off and picking up passengers, and chemicals emitted from the existing industrial uses within the area.

Potential TAC generators that may be developed under the General Plan Update are dry cleaners, gas stations, and industrial land uses. Because the number and location of these potential sources are unknown, TACs from these sources cannot be identified, nor emissions quantified. Project specific health risk assessments would be required for new sources of TACs to determine if the project would increase the lifetime probability of contracting cancer or increase the Health Hazard Index for non-carcinogenic effects by a significant amount. This impact is potentially significant.

Additionally, new sensitive land uses accommodated under the General Plan Update may be located near the SR-118 freeway or the freight and commuter rail line. The proposed land use plan encourages mixed-use and transit-oriented development. A guiding principle for the plan is to focus higher density developments and mixed-use projects in areas adjacent to transit stations, along transit corridors and commercial corridors, near job centers, and in strategic opportunity areas throughout the City. Policy LU-24.2 (Transit-Oriented Development) promotes the development of a new Metrolink transit station to serve the western portion of Simi Valley and the intensification of development within its proximity. Mixed-use development near transit centers would have the potential to locate residences near the railroad. Additionally, sensitive receptors may be proposed in areas close to the SR-118, such as long-term health care facilities in the Simi Valley Hospital Area. Because the number and location of future proposed sensitive land uses is unknown, specific TACs that would present a health risk cannot be identified, nor emissions quantified. Individual projects that propose sensitive receptors near an existing source of TACs would also need to prepare an HRA to determine if the project would expose sensitive receptors to concentrations of TACs that would result in a lifetime probability of contracting cancer that is greater than 10 in 1 million ( $10 \times 10^{-6}$ ), or a Health Hazard Index of 1 or greater for non-carcinogenic effects. This impact is potentially significant.

The VCAPCD Air Quality Assessment Guidelines recommends the measures below to reduce the potential impacts to sensitive receptors from TAC exposure. The Air Quality Assessment Guidelines are applicable to development projects and would reduce the potentially significant impact that would result from the development of new TAC emitters and new sensitive receptors within the Planning Area. General Plan Policy NR-9.6 has been identified to ensure that the VCAPCD Guidelines are implemented for new development projects under the General Plan Update.

All new industrial and commercial development projects that have the potential to emit TACs shall be required to be located at least a quarter mile from existing and proposed development used by sensitive receptors, as defined by the VCAPCD, unless a project-specific evaluation of human health risks is conducted to minimize risk.

All new proposed land uses that would be used by sensitive receptors, as defined from the VCAPCD, shall be required to be located at least a quarter mile from existing and reasonably foreseeable proposed land use that would emit TACs, unless a project-specific evaluation of human health risks is conducted to minimize risk.

Operational activities under the General Plan Update may include the implementation of industrial or commercial activities that will emit TACs, or the siting of sensitive receptors in the vicinity of existing TAC emitters. This is considered a potentially significant impact. Implementation of Air Quality

Assessment Guidelines recommended mitigation measures would reduce this impact through preparation of an HRA or by providing buffers between sensitive receptors and TAC emissions. According to the VCAPCD, providing a buffer zone between the source of emissions and the receptor will often reduce emissions to a less-than-significant level. Where an adequate buffer zone is not available to reduce impacts to a less-than-significant level, a project-level HRA would be required to demonstrate that a significant health risk would not occur. Additionally, Policy NR-9.2 (Truck Deliveries), Policy NR-9.3 (Improved Technology) in the Air Quality section of the proposed Natural Resources element would reduce vehicle idling and increase fuel efficiency. General Plan Policy NR-9.6 has also been identified to ensure that the VCAPCD Guidelines are implemented for new development projects under the General Plan Update. Therefore, with application of the VCAPCD Air Quality Assessment Guidelines, the General Plan Update would result in a *less-than-significant* impact with respect to TAC emissions.

### **San Joaquin Valley Fever**

The VCAPCD has not established a threshold for significant Valley Fever impacts. Valley Fever is an infectious disease caused by the fungus *Coccidioides immitis*. In Ventura County, the Valley Fever fungus is most prevalent in the county's dry, inland regions. Several factors indicate a project's potential to expose sensitive receptors to Valley Fever: disturbance of the top soil of undeveloped land; dry, alkaline, sandy soils; virgin, undisturbed, non-urban areas; windy areas; and presence of archaeological resources. The Planning Area is located in inland Ventura County; however, build-out of the General Plan Update is focused in the urban areas of the Planning Area. The General Plan Update focuses on re-use of economically underperforming properties and obsolete development, conversion of uses in response to market demand, and more infill and intensified use of land in defined areas. The land uses proposed in the General Plan Update are consistent with the Simi Valley Urban Restriction Boundary (Simi Valley CURB) and would protect existing agricultural, open-space, and wildlife areas, and would limit urban sprawl. However, as the exact locations of all development under the General Plan Update are unknown, there is the potential that construction could result in exposure of sensitive receptors to Valley Fever. Each individual project developed under the General Plan Update will be required to identify the potential risk of exposing sensitive receptors to Valley Fever.

The VCAPCD indicates that the likelihood that the Valley Fever fungus may be present and impact the project or nearby land uses increases with the number of the following factors that may indicate a potential to create Valley Fever Impacts:

- Disturbance of the top soil of undeveloped land (to a depth of 12 inches)
- Dry alkaline, sandy soils
- Virgin, undisturbed, non-urban areas
- Windy areas
- Archaeological resources probable or known to exist in the area (Native American midden sites)
- Special events (fairs, concerts) and motorized activities (motocross track, All Terrain Vehicle activities) on un-vegetated soil
- Nonnative population (i.e., out-of-area construction workers)

The following measures are suggested by the VCAPCD Air Quality Assessment Guidelines to reduce potential impacts from exposure to Valley Fever. The Air Quality Assessment Guidelines are implemented during review of the individual projects:

- *All new development projects determined to have the potential to create a significant Valley Fever impact shall implement the following measures during construction activities to reduce potential exposure.*
- *Restrict employment to persons with positive coccidioidin skin tests (since those with positive tests can be considered immune to reinfection)*
- *Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore more likely immune*
- *Require crews to use respirators during project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health Regulations*
- *Require that the cabs of all grading and construction equipment be air-conditioned*
- *Require crews to work upwind from excavation sites*
- *Pave construction roads*
- *Where acceptable to the fire department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering*
- *During rough grading and construction, the access way into the project site from adjoining paved roadways should be paved or treated with environmentally-safe dust control agents*

The implementation of VCAPCD Air Quality Assessment Guidelines, as required by Policy NR-9.6 in the Air Quality section of the proposed Natural Resources Element, would reduce fugitive dust emissions as well as exposure to on-site workers, as is indicated by the VCAPCD for mitigating impacts from Valley Fever. General Plan Policy NR-9.5 would further reduce the impacts from fugitive dust during construction. Therefore, the General Plan Update would not result in substantial disturbance of undeveloped, non-urban areas that would expose sensitive receptors to Valley Fever. This impact is *less than significant*.

**Impact 4.3-3**      **Implementation of the General Plan Update could result in the creation of objectionable odors that affect a substantial number of people; however, this impact would be reduced to less-than-significant levels through the implementation of General Plan policies and compliance with relevant local, state, and federal regulations. This is a *less-than-significant* impact.**

Construction activities have the potential to generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings. These odors are not generally considered to be especially offensive. Additionally, emissions would occur during daytime hours only, would be temporary, and would be isolated to the immediate vicinity of the construction site and activity. As such, they would not affect a substantial number of people.

The VCAPCD lists types of facilities known to emit objectionable odors in Table 6-3 (Project Screening Distances for Odorous Land Uses) of the Air Quality Assessment Guidelines. Land uses are primarily industrial processing facilities, solid waste and wastewater infrastructure, and agricultural uses. Land uses may result in objectionable odors up to one to two miles from the source. New industrial development

may occur under the General Plan Update that would have the potential to generate nuisance odors. As discussed under Impact 4.3-3, industrial uses would generally be required to provide a buffer between the industrial use and the nearest sensitive receptor. Buffers to reduce TAC exposure would also reduce exposure to nuisance odors. Additionally, General Plan Update Policy LU-20.7 (Buffering from Adjacent Properties) would ensure that industrial park developments are positive additions to the City's community setting by controlling on-site odors. Therefore, industrial developments would not result in odors affecting a substantial number of people.

As discussed in Section 4.17 (Utilities/Service Systems), the City currently has plans to expand its existing wastewater treatment plant and add a reclaimed water pump station and reclaimed water pipelines to accommodate the reclaimed water program proposed by the City. However, the wastewater treatment expansion plan is based on current General Plan build-out and SCAG population projections and is not a result of the growth anticipated under the updated General Plan. If the proposed project were not implemented, the wastewater expansion would still occur. Odors would generally be contained within wastewater pipes. Policy IU-3.8 (System Asset Evaluation and Rehabilitation Plan), Policy IU-3.9 (Sewer System Maintenance) and Policy IU-3.10 (Plant Condition Assessment), would maintain the adequacy of the City's sewer system by requiring frequent inspections to prevent infrastructure failures caused by aging and deteriorating sewer pipelines and addressing any inadequacies. These policies would avoid cracks and leaks that would result in exposure to odors. Therefore, substantial odors from wastewater facilities would not occur.

New trash receptacles would also be a new source of odors within the community. The City would continue to provide trash pick-up services so that receptacles would generally be emptied before odors have a chance to develop. Additionally, residences and business would be subject to Title 6, Chapter 3, of the City's Municipal Code (Discards, Recyclable Commodities Collection and Disposal, and Related Provisions). The ordinances in this chapter establish requirements to prevent unsanitary trash buildup that would generate odors. Odors would also be limited to the area immediately surrounding a particular trash receptacle. Therefore, trash receptacles would not result in odors affecting a substantial number of people.

Regarding agricultural use, a limited amount of land within the City is used for agricultural activities. Agricultural activities are separated from the developed urban areas of the City, where growth in the City would primarily take place, by the Simi Valley Urban Restriction Boundary (Simi Valley CURB) line. Draft update General Plan Policy LU-1.2 (Development Location) limits development to lands within the Simi Valley City Urban Restriction Boundary (CURB) to protect existing agricultural uses. Therefore, agricultural land uses would be separated from development under the General Plan Update and would not expose substantial numbers of people to objectionable odors.

Potential operational airborne odors could result from cooking activities associated with residential and restaurant uses within the City. These odors would be similar to existing housing and food service uses throughout the City and would be confined to the immediate vicinity of new buildings. Restaurants are also typically required to have ventilation systems that avoid substantial adverse odor impacts. Therefore, implementation of the draft update General Plan would not create objectionable odors affecting a substantial number of people. Impacts related to objectionable odors would be *less than significant*.

## ■ Significant and Unavoidable Impacts

**Impact 4.3-4** Implementation of the General Plan Update could result in construction emissions that contribute substantially to an existing or projected air quality violation. This impact would be reduced through the implementation of General Plan policies and compliance with relevant local, state, and federal regulations, but not to less than significant levels. Therefore, this would be a *significant and unavoidable* impact.

Implementation of the General Plan Update would result in new emissions being generated from construction activities. In order to determine construction-related emissions, specific information, including, but not necessarily limited to, the number of individual construction equipment that would be utilized, the amount of time that construction equipment would operate on a daily basis, and the amount and duration of grading and demolition activities, must be available. Typically, this is conducted during a project-level CEQA analysis. Under the General Plan Update, varying amounts of construction would likely occur every year until build-out of the plan. The amount, timing, and construction methods of individual projects are unknown at this time. Without adequate construction schedules or information regarding project locations and demolition requirements, future economic conditions or market demand, construction emissions for individual projects cannot be quantified. Therefore, it would be difficult, if not impossible, to quantify the emissions related to construction activities under the General Plan Update and it would be speculative to do so. However, construction activities would occur; therefore, the General Plan Update would have the potential to accommodate construction projects that would result in substantial emissions of fugitive dust, and emissions of VOCs and NO<sub>x</sub>. The Air Quality Assessment Guidelines of the VCAPCD recommend implementation of the following to reduce emissions during construction:

1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
3. Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:
  - a. All trucks shall be required to cover their loads as required by California Vehicle Code § 23114.
  - b. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
4. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is

evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.

5. Signs shall be posted on-site limiting traffic to 15 miles per hour or less.
6. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off site or on site. The site superintendent/supervisor shall use his/her discretion in conjunction with the VCAPCD in determining when winds are excessive.
7. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.
8. Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.
9. Minimize equipment idling time.
10. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
11. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.
12. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.

General Plan policies that would support implementation of the above recommendations include Policies NR-9.1, NR-9.3, NR-9.5, and NR-9.6. Due to the unknown level of construction activity that would occur on any given day under the proposed General Plan Update, this is considered a potentially significant impact. Implementation of the VCAPCD Guidelines and compliance with General Plan Policies NR-9.1, NR-9.3, NR-9.5 and NR-9.6 would reduce this impact, but not necessarily to a less-than-significant level. Individual development projects could, even with implementation of the identified VCAPCD Guidelines, result in an air quality violation or a substantial contribution to an existing air quality violation. Therefore, this would be a *significant and unavoidable* impact for construction activities on a programmatic level.

**Impact 4.3-5      Implementation of the General Plan Update would accommodate growth that exceeds the SCAG projections for the City and would conflict with or obstruct implementation of the Air Quality Management Plan. This is a *significant and unavoidable* impact.**

The AQMP is the applicable air quality plan for the basin. As discussed above, any General Plan revision that would accommodate increased population growth above that forecasted in the AQMP would result in a significant impact. The population projections in the AQMP are based on the 2008 Regional Transportation Plan (RTP) (SCAG 2008). The projected population in the RTP for Simi Valley in 2035 is 135,389.

As discussed in greater detail in Section 4.13 (Population/Housing) the General Plan Update has the potential to exceed the SCAG housing unit and employment projections for the City, which in turn could result in greater population growth. Assuming full build-out of residential uses permitted under the

General Plan Update, the City's housing stock would increase by approximately 14,821 new housing units by 2035, which would exceed SCAG's 2035 projection. Approximately 75,599 employment opportunities would be available in City in 2035, which exceeds the SCAG 2035 employment projection by 8,839 jobs. Build-out of the General Plan Update could result in a worst-case scenario estimate of a total population of 178,236 residents. Under this worst-case scenario, population increase as a result of the General Plan Update would exceed SCAG 2035 population projections by approximately 42,847 residents.

Build-out of the General Plan is not anticipated by 2035. Rather, an annual growth rate of approximately one percent, as projected by the SCAG RTP, is more likely to occur. Although build-out of the General Plan Update is not expected by 2035, the amount and timing of each individual project that would occur under the General Plan is not known at this time. The potential exists for growth under the General Plan Update to exceed the growth rate projected by the SCAG RTP. As the AQMP growth projections are based on the SCAG RTP population levels, the increase in population growth beyond the SCAG RTP growth rate would not have been accounted for in the AQMP. Therefore, implementation of the General Plan Update would not be consistent with AQMP.

Another measurement tool in determining consistency with the AQMP is to determine the project's consistency with the emission reduction strategies included in the AQMP. The AQMP contains a number of transportation and energy control measures that help to reduce project emissions. New stationary sources of criteria pollutants that would be developed under the General Plan Update would continue to be required to conform with the VCAPCD measures in the AQMP in order to obtain permits to operate, including the measures listed in Table 4.3-2 (AQMP Control Strategies for Local Governments). The transportation control measures listed in the AQMP reduce motor vehicle emissions by reducing vehicle trips, vehicle use, vehicle miles traveled (VMT), vehicle idling, and traffic congestion. The measures in 2007 AQMP are based on the measures proposed in the 2008 RTP. The General Plan Update's consistency with the RTP is addressed under Impact 4.10-1 in Section 4.10 (Land Use/Planning). As discussed in this section, the General Plan Update includes Policies NR-9.1, M-1.1, M-1.2, M-1.3, M-24, and LU-24.2 to encourage multi-modal transportation, relieve regional congestion, and promote a development pattern that maximizes provision of community facilities and services to residents to minimize the need for auto travel. The specific policies that support each of these measures are listed in Table 4.10-7 (SCAG Regional Transportation Plan and Growth Visioning Principles). Additionally, Policy NR-9.2 (Truck Deliveries) and Policy NR-9.3 (Improved Technology) in the Air Quality section of the proposed Natural Resources element would reduce vehicle idling and increase fuel efficiency.

The proposed Climate Action Plan also includes programs to increase energy efficiency such as providing incentives to install photovoltaic panels (R2-E4: Residential Renewable Retrofit Program, R2-E6: Commercial/Industrial Renewable Energy Program) and increasing the energy efficiency requirements for new development to 20 percent, a five percent increase from the minimum requirements of the City's existing building code (R2-E5: Commercial Energy Efficiency Program). Therefore, the General Plan Update includes plans and policies to reduce motor vehicle emissions by reducing vehicle trips, vehicle use, VMT, vehicle idling, and traffic congestion. The General Plan Update would be consistent with the emissions reduction measures in the AQMP.

Based on the above information, the General Plan Update would be consistent with the AQMP emissions reduction measures, but would have the potential to be inconsistent with the AQMP population projections. As stated above, any general plan revision that would accommodate growth beyond the AQMP population projections would be considered a significant impact. Therefore, because the General Plan Update would conflict with implementation of the AQMP, this impact would be considered significant. Mitigation measures recommended by the VCAPCD for a project that is determined to be inconsistent with the AQMP include:

- Phasing, reducing the size, or delaying implementation of the project to ensure consistency with the AQMP population forecasts
- Adoption of a residential building permit allocation program to pace population growth with the AQMP population forecasts in such a way as to ensure that population projections contained in the AQMP are not exceeded

The General Plan includes growth management in Policy LU-1.4 (Growth Management), which would manage growth to assure that it does not exceed the limits of Simi Valley's Measure C, adopted in 2004. Additionally, as discussed above, the plan is not anticipated to be built-out by 2035. The anticipated growth rate is consistent with SCAG projection in the AQMP. Therefore, the draft update General Plan is projected to be phased over a longer period of time than the worst-case scenario. The recommended mitigation measures have been incorporated into the General Plan Update. However, the amount and timing of project that would be proposed under the General Plan is unknown at this time, and additional limits on growth would hinder implementation of the General Plan Update. Therefore, this impact remains *significant and unavoidable*. Alternatives to the proposed project that would accommodate less total growth are discussed in Chapter 6 (Alternatives to the Proposed Project).

**Impact 4.3-6      Implementation of the General Plan Update would result in operational emissions of PM<sub>10</sub> and PM<sub>2.5</sub> that contribute substantially to an existing or projected air quality violation. This is a *significant and unavoidable* impact.**

Air emissions associated with the General Plan Update would occur as a result of operation of new land uses. The primary source of air pollutant emissions associated with residential, commercial, institutional, and some industrial land uses, is motor vehicles; however, land uses also result in emissions of area source pollutants. Area sources are groups of similar emission sources that do not contribute significant amounts of emissions individually, but do contribute significantly in the aggregate. Examples of area sources include fuel combustion from natural gas appliances, utility engines (including landscape maintenance equipment), and consumer products (VCAPCD 2003). The projected net increase in criteria pollutant emissions that would result from build-out of the General Plan Update has been estimated using the URBEMIS model, consistent with the recommendations of the VCAPCD. The model incorporates mobile source emissions from the EMFAC 2007 computer model as well as the Institute of Transportation Engineers (ITE) trip generation rates for vehicle emission projections. Criteria pollutant emissions were modeled for the build-out of the land uses proposed in the General Plan and the existing land uses in the Planning Area. A complete list of model inputs is provided in Appendix B. Projected annual criteria pollutant emissions from existing land uses and General Plan build-out are provided in Table 4.3-4 (Existing and General Plan Build-out Annual Emissions).

**Table 4.3-4 Existing and General Plan Build-out Annual Emissions (tons/year)**

<i>Emissions Source</i>	<i>VOC</i>	<i>NO<sub>x</sub></i>	<i>CO</i>	<i>SO<sub>2</sub></i>	<i>PM<sub>10</sub></i>	<i>PM<sub>2.5</sub></i>
<b>Existing Land Uses</b>						
Area Source	671.72	150.01	664.89	0.66	37.66	36.28
Vehicular	2,157.06	2,955.10	24,632.64	25.93	2,917.85	573.08
<b>Total Existing Emissions</b>	<b>2,828.78</b>	<b>3,105.11</b>	<b>25,277.53</b>	<b>26.59</b>	<b>2,955.51</b>	<b>609.36</b>
<b>General Plan Build-Out</b>						
Area Source	846.96	200.57	746.51	0.88	50.12	48.28
Vehicular	751.99	766.13	7,863	23.14	3,988	773.19
<b>Total General Plan Build-out Emissions</b>	<b>1,598.95</b>	<b>966.7</b>	<b>8,609.18</b>	<b>24.02</b>	<b>4,038.17</b>	<b>821.47</b>
<b>Net Change in Emissions</b>	<b>(1,229.83)</b>	<b>(2,138.41)</b>	<b>(16,668.35)</b>	<b>(2.57)</b>	<b>1,082.66</b>	<b>212.11</b>

SOURCE: California Air Resources Board, URBEMIS2007 Computer Model, Version 9.2 (2007); VCAPCD, *Air Quality Assessment Guidelines* (October 2003).

VOC = volatile organic compounds; NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide; SO<sub>2</sub> = sulfur dioxide; PM<sub>10</sub> = respirable particulate matter; PM<sub>2.5</sub> = fine particulate matter

As shown in Table 4.3-4, build-out of the General Plan Update would result in increased PM<sub>10</sub> and PM<sub>2.5</sub> emissions between 2006 and 2030. Area source emissions of VOCs, NO<sub>x</sub>, CO, and SO<sub>2</sub> would also increase as a result of build-out of the plan. However, the combination of changes to land use type in conjunction with the anticipated increases in vehicle efficiencies by year 2030 result in a reduction in VOC, NO<sub>x</sub>, CO, and SO<sub>2</sub> emissions from vehicles compared to existing conditions even though there is an overall increase in vehicle use and VMT. Land uses are proposed to shift to development that reduces vehicle trips and VMT. For example, the General Plan Update focuses on higher density developments and mixed-use projects in areas adjacent to transit stations, along transit corridors and commercial corridors, near job centers, and in strategic opportunity areas throughout the city, which would reduce vehicle trips. Implementation of the General Plan Update would not result in significant VOC, NO<sub>x</sub>, CO, and SO<sub>2</sub> emissions because emissions of these pollutants would be reduced at build-out of the plan compared to existing conditions. However, build-out of the plan would result in an increase in PM<sub>10</sub> and PM<sub>2.5</sub> emissions. The Basin is currently in non-attainment for these pollutants; therefore, the draft update General Plan would contribute to an existing air quality violation. Project-specific air quality analyses would be required to determine whether an individual project would substantially increase particulate matter emissions to a level that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property. The project-specific analyses would also be required to ensure that the proposed individual project is consistent with the growth projections for the draft update General Plan and to determine whether the emissions from the individual project would exceed the City's thresholds for VOC and NO<sub>x</sub>. Currently, no information pertaining to the land use and overall size of individual projects under the General Plan Update is available. As such, operational emissions cannot be quantified. Impacts related to emissions of PM<sub>10</sub> and PM<sub>2.5</sub> are potentially significant. As indicated in Table 4.3-3 the majority of the contribution to PM<sub>10</sub> and PM<sub>2.5</sub> emissions is from vehicle emissions. The VCAPCD does not recommend mitigation measures for particulate matter emissions during operation.

However, the VCAPCD suggests that Cities consider several strategies when implementing a plan-level document. These strategies will reduce vehicle miles traveled and as such will further reduce emissions of PM<sub>10</sub> and PM<sub>2.5</sub>. The General Plan Update has incorporated several measures recommended by the VCAPCD, including Policies NR-9.1, M-1.1, M-1.2, M-1.3, M-2.4, and LU-24.2, as shown in Table 4.3-5 (Implementation of Recommended VCAPCD Plan-Level Measures). While implementation of these strategies will reduce emissions of PM<sub>10</sub> and PM<sub>2.5</sub>, it is unknown to what extent these reductions will reduce vehicle miles traveled. While impacts from PM<sub>10</sub> and PM<sub>2.5</sub> will be reduced, emissions are still anticipated to increase beyond existing emissions and, therefore, will contribute to already existing air quality violations. Therefore, impacts would remain *significant and unavoidable*.

Table 4.3-5 Implementation of Recommended VCAPCD Plan-Level Measures	
VCAPCD Plan-Level Recommendation	General Plan Update Consistency
Commit to determine and mitigate project level and cumulative air quality impacts under CEQA.	Individual projects proposed in the City of Simi Valley would continue to be subject to the requirements of CEQA, including analysis of potential air quality impacts.
Commit to integrate land use plans, transportation plans, and air quality plans.	<b>Policy NR-9.1 Regional Cooperation.</b> Ensure that air quality standards are consistent with the Countywide recommendations of the Ventura County Air Pollution Control District, which are intended to reduce air quality impacts. In addition, cooperate with the Southern California Association of Government's efforts to implement provisions of the region's Air Quality Management Plan.
Commit to take local action to support programs that reduce congestion and vehicle trips.	<b>Policy M-2.4 Regional Traffic Mitigation.</b> Participate in programs (Congestion Management Program, Growth Management Program, etc.) to reduce regional traffic congestion.
Commit to plan land uses in ways that support a multi-modal transportation system.	<p><b>Policy M-1.1 Comprehensive Mobility System.</b> Establish a diverse transportation system that provides mobility options for the community, including adequate roads, transit service, bike paths, pedestrian walkways, and commuter rail services.</p> <p><b>Policy M-1.2 Integrated Multi-Modal System.</b> Provide an integrated transportation system that supports the land use plan set forth in the Land Use Element.</p> <p><b>Policy M-1.3 Complete Streets.</b> Accommodate and balance the needs of all users of the transportation system including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers through all phases of transportation and development projects so that all users can travel safely within the various public rights-of-way.</p> <p><b>Policy LU-24.2 Transit-Oriented Development.</b> Promote the development of a new Metrolink transit station to serve the western portion of Simi Valley and intensify development within its proximity to foster transit use and reduce automobile trips, energy consumption, air pollution, and greenhouse gas emissions. Incorporate retail uses in the ground floor of street-facing elevations of parking structures developed to serve transit riders and or office uses that are designed for continuity with development on adjoining parcels.</p>

SOURCE: Ventura County Air Pollution Control District, *Ventura County Air Quality Assessment Guidelines* (October 2003).

**Impact 4.3-7 Implementation of the General Plan Update would result in a cumulatively considerable net increase of criteria pollutants for which the region is nonattainment under an applicable federal or state ambient air quality standard. This is a *significant and unavoidable* impact.**

The Basin is currently in non-attainment for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The VCAPCD considers any General Plan Amendment or revision that would provide directly or indirectly for increased population growth above that forecasted in the most recently adopted AQMP to be a significant cumulative impact related

to criteria pollutant emissions. As discussed in Impact 4.3-5, although growth under the General Plan Update is expected to occur at the rate projected by SCAG incorporated in the AQMP, the plan has the potential to exceed the growth assumptions in the AQMP. For projects that would be inconsistent with the AQMP, the VCAPCD establishes a significance threshold for cumulative VOC and NO<sub>x</sub> emissions of 2 pounds per day.

The proposed project’s projected net daily increase in criteria air pollutants is shown in Table 4.3-6 (Existing and General Plan Build-Out Maximum Daily Emissions). As shown in this table, build-out of the General Plan Update is projected to result in reduced daily VOC and NO<sub>x</sub> emissions compared to existing conditions. As discussed above under Impact 4.3-6, the decrease in emissions is due to increased fuel efficiencies and a shift towards land uses that would result in fewer vehicle trips and VMT. Therefore, the General Plan Update would not exceed the cumulative thresholds for VOC and NO<sub>x</sub> emissions and would not result in a cumulatively considerable impact related to these pollutants.

<b>Table 4.3-6 Existing and General Plan Build-Out Maximum Daily Emissions (lbs/day)</b>						
<i>Emissions Source</i>	<i>VOC</i>	<i>NO<sub>x</sub></i>	<i>CO</i>	<i>SO<sub>2</sub></i>	<i>PM<sub>10</sub></i>	<i>PM<sub>2.5</sub></i>
<b>Existing Land Uses</b>						
Area Source	9,708.77	1,384.54	19,348.01	53.31	2,942.15	2,832.42
Vehicular	12,551.81	18,307.70	132,449.51	131.46	15,988.05	3,140.13
<b>Total Existing Emissions</b>	<b>22,260.58</b>	<b>19,692.24</b>	<b>151,797.52</b>	<b>184.77</b>	<b>18,930.20</b>	<b>5,972.55</b>
<b>General Plan Build-out</b>						
Area Source	12,830.59	1,837.14	25,933.31	71.31	3,940.53	3,793.54
Vehicular	4,314.68	4,733.05	41,229.64	111.82	21,852.30	4,236.50
<b>Total General Plan Build-out Emissions</b>	<b>17,145.27</b>	<b>6,570.19</b>	<b>67,162.95</b>	<b>183.13</b>	<b>25,792.83</b>	<b>8,030.04</b>
<b>Net Change in Emissions</b>	<b>(5,115.31)</b>	<b>(13,122.05)</b>	<b>(84,634.57)</b>	<b>(1.64)</b>	<b>6,862.63</b>	<b>2,057.49</b>
Significance Threshold	2	2	**	**	**	**
Exceeds Threshold?	No*	No*				

SOURCE: California Air Resources Board, URBEMIS2007 Computer Model, Version 9.2 (2007); VCAPCD, *Air Quality Assessment Guidelines* (October 2003).

VOC = volatile organic compounds; NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide; SO<sub>2</sub> = sulfur dioxide; PM<sub>10</sub> = respirable particulate matter; PM<sub>2.5</sub> = fine particulate matter

\* Implementation of the General Plan Update would not result in cumulatively significant VOC, NO<sub>x</sub>, CO, and SO<sub>2</sub> emissions because emissions of these pollutants would be reduced at build-out of the plan compared to existing conditions.

\*\* VCAPCD has not established numeric thresholds for CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

The General Plan Update incorporates the plan-level measures recommended by the VCACPD, as shown in Table 4.3-5 (Implementation of Recommended VCAPCD Plan-Level Measures). General Plan Update Policies NR-9.1, M-1.1, M-1.2, M-1.3, M-2.4, and LU-24.2 are reflected in the draft land use plan and were included in the analysis of the plan’s impacts related to operational emissions. However, implementation of individual projects under the plan have the potential to result in significant and unavoidable PM<sub>10</sub> and PM<sub>2.5</sub> emissions that would contribute to the existing air quality violation. The proposed project is projected to result in daily and annual increases in particulate matter emissions compared to existing conditions. Therefore, the General Plan Update would result in a cumulative

considerable net increase in criteria pollutants for which the Basin is in non-attainment. Therefore, this impact would remain *significant and unavoidable*.

## ■ Cumulative Impacts

The geographic context for cumulative air quality impacts is the Basin. The significance of cumulative air quality impacts is determined according to the methodology recommended by the VCAPCD, as the regional body with authority in this area, and which has taken regional growth projections into consideration.

Cumulative development could result in a significant impact in terms of conflicting with, or obstructing implementation of, the AQMP. Growth considered to be inconsistent with the AQMP could interfere with attainment of federal or state ambient air quality standards because this growth is not included in the projections utilized in the formulation of the AQMP. Consequently, as long as growth in the Basin is within the projections for growth identified in the 2008 SCAG RTP, implementation of the AQMP would not be obstructed by such growth. As discussed under Impact 4.3-5, growth accommodated by the proposed project would have the potential to exceed the growth assumptions in the AQMP. Therefore, the proposed project would result in a cumulatively considerable impact related to consistency with the AQMP. This cumulative impact would be considered *significant and unavoidable*.

The potential for a cumulative net increase of any criteria pollutant for which the region is in nonattainment is discussed under Impacts 4.3-5 and 4.3-7. As discussed construction of individual projects would be required to incorporate all applicable VCAPCD Guideline measures to reduce construction emissions, which would result in a reduction of construction related emissions. However, since the level of construction activity that would occur on any given day under the General Plan Update is currently unknown, construction emissions could exceed the thresholds established by the VCAPCD. As discussed under Impact 4.3-7, operation of the proposed project would not exceed the cumulative significance thresholds for VOCs or NO<sub>x</sub> established by the VCAPCD for projects that would conflict with the AQMP. However, implementation of the General Plan Update would result in an increase in PM<sub>10</sub> and PM<sub>2.5</sub> emissions. Therefore, the General Plan Update would result in a *significant and unavoidable* impact related to a net increase in criteria pollutants.

Impacts related to exposure of sensitive receptors to substantial pollutant concentrations and the creation of objectionable odors are generally site-specific and not cumulative in nature. However, the cumulative increase in traffic as a result of growth under the General Plan Update and regional growth would increase traffic and change traffic flows on the City's roadway network. Increasing traffic volumes and lowering the LOS at busy intersections would tend to increase local CO levels, which could result a CO hot spot. However, the potential for CO hot spots to occur with build-out of the General Plan and cumulative development by the year 2030 was addressed in the analysis under Impact 4.3-3. As shown in Table 4.3-3 (Carbon Monoxide Concentrations at Selected Intersections at Build-out), no CO hot spots would occur at the most congested intersections in the City in year 2030. Therefore, a cumulative impact would not occur. The proposed project would not result in significant impacts related to Valley Fever or objectionable odors, or TACs with implementation of VCAPCD Air Quality Assessment Guidelines. Due to the site specific nature of potential impacts, cumulative impacts related to these issues would also be *less than significant*.

### 4.3.5 References

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