3.7 Air Quality

This section addresses the impacts of the proposed 2030 Lemoore General Plan on local and regional air quality in the context of *Guidelines for Assessing and Mitigating Air Quality Impacts*, prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

ENVIRONMENTAL SETTING

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality. This section addresses issues related to criteria air pollutants and toxic air contaminants; it provides an overview of region-specific information related to climate and topography, followed by a discussion of plans, policies, and regulations and existing air quality conditions in the Planning Area.

CLIMATE AND TOPOGRAPHY

Lemoore is located within the San Joaquin Valley Air Basin (SJVAB), considered one of the most polluted air basins in California due to its unique topography and weather patterns. The San Joaquin Valley has a hot, dry climate, stagnant weather, temperature inversions that act as a lid on the Valley, and bowl-shaped topography created by surrounding mountains. Because of these natural conditions, the San Joaquin Valley has a very low tolerance for air pollution and an extraordinary problem in dispersing it.[1]

REGULATORY SETTING

The U.S. EPA, pursuant to the Federal Clean Air Act of 1967 (Amended 1990) sets National Ambient Air Quality Standards (NAAQS) for several pollutants and oversees their implementation by State air quality agencies. The California Air Resources Board (CARB) is the corresponding State agency. CARB is responsible for establishing emission standards for on-road motor vehicles sold in California and overseeing the activities of regional/county air districts. It also establishes air quality standards and is empowered under the California Clean Air Act to enforce compliance.

Air quality in the San Joaquin Valley Air Basin is monitored by the San Joaquin Valley Air Pollution Control District (SJVAPCD), which operates a network of monitoring stations throughout the Valley to determine if emissions and air pollutant levels meet health and safety standards.

[1] Air Quality Report Card, August 16, 2006, San Joaquin Valley Air Pollution Control District

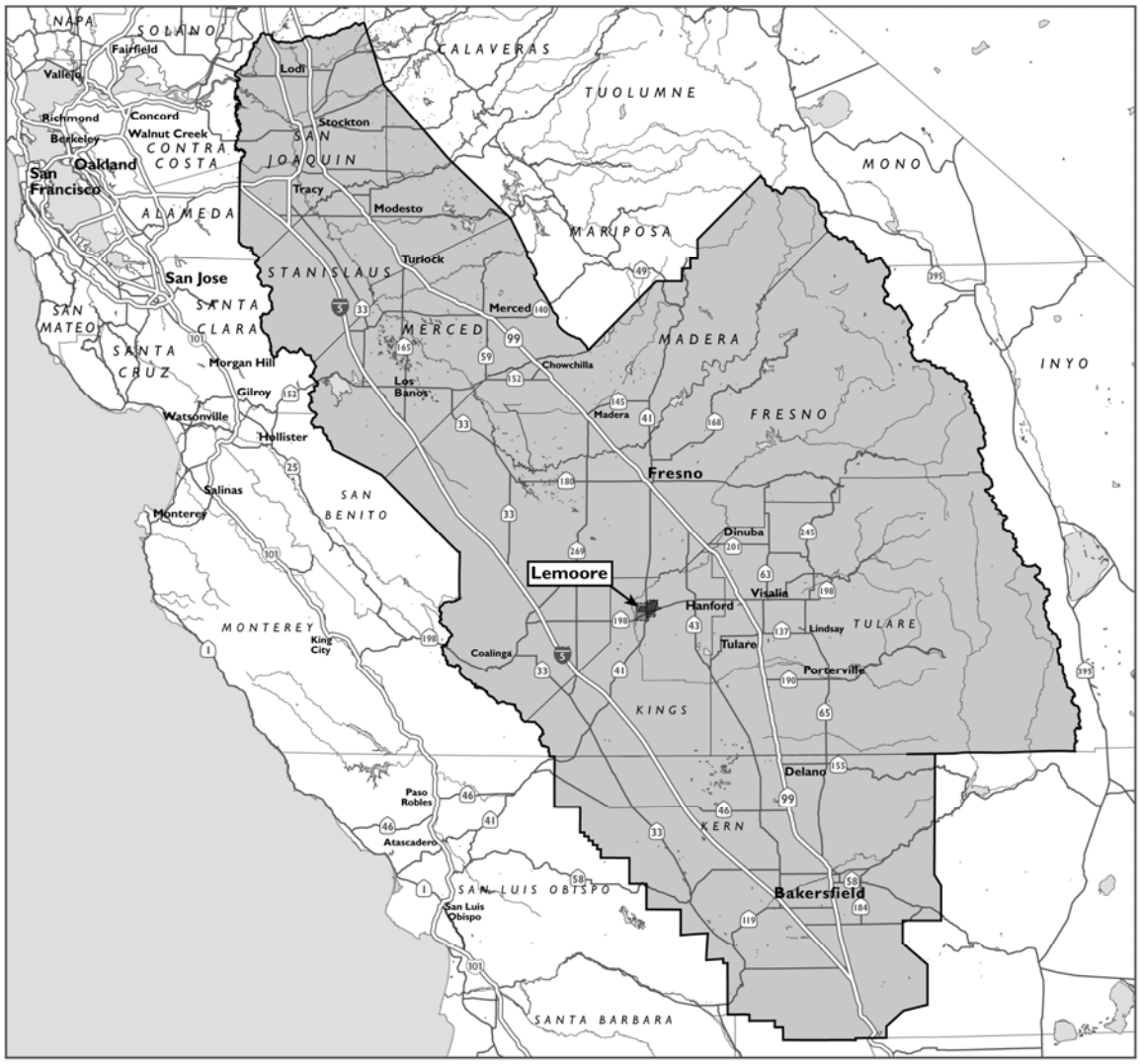

Figure 3.7-1
San Joaquin Valley Air Basin

The SJVAPCD is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and the Valley portion of Kern. The SJVAPCD is governed by an eleven member Governing Board consisting of representatives from the Board of Supervisors of all eight counties and three Valley city representatives. SJVAPCD has permit authority over stationary sources such as factories, acts as the primary reviewing agency for environmental documents and develops regulations consistent with State and federal air quality agencies.

SJVAPCD Rules and Regulations

The SJVAPCD is the regional agency responsible for rulemaking, permitting, and enforcing activities affecting stationary sources in the San Joaquin Valley. Specific rules and regulations adopted by the SJVAPCD limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures that must be implemented in association with various uses and activities. These rules regulate not only emissions of the six criteria air pollutants, but also toxic emissions and acutely hazardous non-radioactive materials emissions.

Emissions sources subject to these rules are regulated through the SJVAPCD's permitting process and standards of operation. Through this permitting process, including an annual permit review, the SJVAPCD monitors the generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of the proposed General Plan would be subject to the SJVAPCD *Rules and Regulations*. Both federal and State ozone plans rely heavily upon stationary source control measures set forth in SJVAPCD's *Rules and Regulations.*

Ambient Air Quality Standards

Regulation of air pollution is achieved through both national and State ambient air quality standards and emissions limits for individual sources of air pollutants. At the national level, air pollution is regulated by NAAQS established by the US EPA. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants (referred to as State Ambient Air Quality Standards or State standards). In addition, California has established standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because of California's unique meteorological problems, there are considerable differences between State and federal standards currently in effect in California, as shown in **Table 3.7-1**. The table also summarizes the related health effects and principal sources for each pollutant.

The ambient air quality standards are intended to protect the public health and welfare, by incorporating an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, the elderly, people weak from illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards.

Table 3.7-1 State and National Criteria Air Pollutant Standards, Effects and Sources

Pollutant	*Averaging Time*	*California Standard*	*National Primary Standard*	*Major Pollutant Sources*	*Pollutant Health and Atmospheric Effects*
Ozone	1 hour	0.09 ppm	---	On-road motor vehicles, other mobile sources, solvent extraction, combustion, industrial and commercial processes.	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.
	8 hours	0.07 ppm	0.08 ppm		
Carbon Monoxide	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 hour	0.18 ppm	---	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.	Irritating to eyes and respiratory tract. Colors atmosphere reddish brown.
	Annual Average	---	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	---	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.	Irritates upper respiratory tract, injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron and steel. Limits visibility and reduces sunlight.
	24 hours	0.04 ppm	0.14 ppm		
	Annual Avg.	---	0.03 ppm		
Respirable Particulate Matter (PM10)	24 hours	50 $\mu g/m^3$	150 $\mu g/m^3$	Dust- and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).	May irritate eyes and respiratory tract, decreases lung capacity and increases risk of cancer and mortality. Produces haze and limit visibility.
	Annual Average	20 $\mu g/m^3$	---		
Fine Particulate Matter (PM2.5)	24 hours	---	35 $\mu g/m^3$	Fuel combustion in motor vehicles, equipment and industrial sources; residential and agricultural burning. Also formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	Increases respiratory disease, lung damage, cancer and premature death. Reduces visibility and results in surface soiling.
	Annual Average	12 $\mu g/m^3$	15 $\mu g/m^3$		
Lead	Monthly Average	1.5 $\mu g/m^3$	---	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurologic dysfunction.
	Quarterly	---	1.5 $\mu g/m^3$		

Note: ppm=parts per million; and $\mu g/m^3$=micrograms per cubic meter

Source: California Air Resource Board, Available at http://www.arb.ca.gov/aqs/aaqs2.pdf, updated February, 2007.

Air Quality Plans

The 1977 Clean Air Act Amendments require that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile source of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. The 1988 California Clean Air Act also requires the development of air quality plans and strategies to meet state air quality standards in areas designated as non-attainment (with the exception of areas designated as non-attainment for the state Particulate Matter (PM) standards). Maintenance plans are required for attainment areas that had previously been designated non-attainment in order to ensure continued attainment of the standards. Air quality plans developed to meet federal requirements are referred to as State Implementation Plans (SIPs).

The SJVAPCD is responsible for developing attainment plans for the SJVAB, for inclusion in California's SIP, as well as establishing and enforcing air pollution control rules and regulations. The attainment plans must demonstrate compliance with federal and State ambient air quality standards, and must first be approved by CARB before inclusion into the SIP. The SJVAPCD regulates, permits, and inspects stationary sources of air pollution. Among these sources are industrial facilities, gasoline stations, auto body shops, municipal solid waste landfills and dry cleaners to name a few. While the State is responsible for emission standards and controlling actual tailpipe emissions from motor vehicles, the SJVAPCD is required to regulate emissions associated with stationary sources such as agricultural burning and industrial operations. The SJVAPCD also works with eight local transportation planning agencies to implement transportation control measures, and to recommend mitigation measures for new growth to reduce the number of cars on the road. The SJVAPCD promotes the use of cleaner fuels, and funds a number of public and private agency projects that provide innovative approaches to reducing air pollution from motor vehicles.

At present, the SJVAB is designated as serious non-attainment for the federal 8-hour ozone standard and serious non-attainment for the federal PM10 standard. Ozone precursors, PM10 emissions and toxic air contaminants are emphasized in the review of Authority to Construct / Permit to Operate applications. Federal and State air quality laws also require regions designated as non-attainment to prepare plans that either demonstrate how the region will attain the standard or that demonstrate reasonable improvement in air quality conditions. As noted, the SJVAPCD is responsible for developing attainment plans for the SJVAB for inclusion in California's SIP.

The following air quality plans are applicable to the SJVAB:

1998 Carbon Monoxide State Implementation Plan (SIP). With the U.S. EPA's re-designation of 10 urban areas in California (including four urban areas in the SJVAB) from non-attainment to attainment for carbon monoxide in 1998, the South Coast Air Basin is the only basin in the State currently considered non-attainment for this pollutant. The 1998 Carbon Monoxide SIP revision modifies the carbon monoxide maintenance plan for the 10 areas, including the urban areas of the SJVAB.

The Federal Ozone Attainment Demonstration Plan (adopted November 14, 1994 and amended 2001). This plan established a regulatory framework to bring the SJVAB into compliance with the

national standards for ozone and satisfied a required triennial review for state standards. This plan did not achieve its goal of meeting the national standards for ozone by 1999 (SJVAPCD, 1994).

Triennial Progress Report and Plan Revisions 1997–1999. This report states that all areas of the SJVAB have attained the state carbon monoxide standard and focuses on attainment of the state ozone standard, in light of the basin's "severe non-attainment" status under the state Health and Safety Code. The report reviews previously adopted and implemented Best Available Retrofit Control Technology (BARCT) measures and includes an adoption and implementation schedule for new measures to achieve additional emission reductions. Planned measures include new controls on stationary, mobile, and indirect sources, and plan revisions. This report was adopted March 15, 2001 (SJVAPCD, 2001a).

2000 Ozone Rate of Progress Report (adopted April 20, 2000 and amended April 27, 2000). This report demonstrates that target levels of emission reductions mandated by the CAA for 1997 to 1999 (9 percent) and for 1990 to 1999 (24 percent) were achieved (SJVAPCD, 2000).

2001 Amendment to the 1994 Ozone Attainment Demonstration Plan (OADP). These amendments to the 1994 OADP commit the SJVAPCD to revise, add or delete various Regulation IV rules pertaining to the use and storage of coatings and solvents and specific stationary sources (SJVAPCD, 2001b).

2002 and 2005 Ozone Rate of Progress Plan (adopted May 16, 2002). In December 2001 U.S. EPA reclassified the SJVAB from serious to severe non-attainment for the national 1-hour ozone standard. The severe classification triggered a requirement for the SJVAPCD to prepare plans that demonstrate annual reductions of ozone precursors and attainment of the standard by 2005. The SJVAPCD determined that it could not reach attainment in 2005. This plan demonstrates rates of progress in emissions reductions in volatile organic compounds at the mandated average rate of 3 percent per year, based on three-year periods (i.e., 9 percent between 2000 and 2002 and an additional 9 percent between 2003 and 2005). The plan also satisfies the requirement of the CAA that non-attainment areas adopt all reasonably available control measures (RACM) as expeditiously as possible.

2007 Ozone Plan. This plan contains a comprehensive and exhaustive list of regulatory and incentive based measures to reduce emissions of ozone and particulate matter precursors throughout the Valley. Additionally, this plan calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution, and a significant increase in state and federal funding for incentive-based measures to create adequate reductions in emissions to bring the entire Valley into attainment with the federal ozone standard.

The proposed plan calls for a 75 percent reduction in ozone-forming oxides of nitrogen (NO_X) emissions. These reductions come on the heels of past successful efforts in the Valley that have already reduced ozone precursor emission by nearly 50 percent. Regulatory measures for mobile and stationary sources will reduce NO_X emissions by 382 tons per day (61percent) by 2023. The remaining 14 percent would come from incentives and the deployment of advanced technologies. The incentive-based measures contained in this plan generate NO_X reductions of 50 tons per day in 2012, 56 tons per day in 2015, 41 tons per day in 2020, and 26 tons per day in 2023. In addition

to the above-mentioned reductions in NO_X emissions, full implementation of this plan will reduce Volatile Organic Compound (VOC) emissions by 111 tons per day through regulatory measures, which equates to a 25 percent reduction.

2003 PM10 Plan: San Joaquin Valley Plan to Attain Federal Standards for Particulate Matter 10 Microns and Smaller. This plan was adopted by the SJVAPCD Governing Board June 19, 2003 and submitted to CARB, which also has approved it and submitted it to U.S.EPA. U.S. EPA approved the plan as amended on May 26, 2004 effective June 26, 2004. The 2003 PM10 plan demonstrates attainment of the national PM10 standard at all monitoring stations within the air basin by 2010. It supersedes the SJVAPCD's previous plan, the 1997 *PM10 Attainment Demonstration Plan*, which failed to meet the national standard by the 2001 target date and was withdrawn by the SJVAPCD.

PM10 Attainment Demonstration Plan Progress Report 1997-1999 (August 17, 2000). This report describes progress achieved by the SJVAPCD implementing the 1997 PM10 plan, including actions pertaining to stationary, area and mobile sources, research programs and revisions to Regulation VIII (Fugitive PM10 Prohibitions) that were then in progress.

The SJVAPCD's primary means of implementing the above air quality plans is by adopting and enforcing rules and regulations. Stationary sources within the jurisdiction are regulated by the SJVAPCD's permit authority over such sources and through review and planning. In 2001, the SJVAPCD revised its Regulation VIII-Fugitive PM Prohibitions, in response to commitments made in the 1997 PM10 Attainment Plan to incorporate best available control measures (BACM). The revision also includes new rules for open areas and agricultural operations. The provisions of the revised regulation took effect in May 2002. Regulation VIII consists of a series of dust control rules intended to implement the *PM10 Attainment Demonstration Plan*. The *PM10 Attainment Demonstration Plan* emphasizes reducing fugitive dust as a means of achieving attainment of the federal standards for PM10.

District Rules that may apply to the proposed General Plan are as follows:

- ***District Rule 2201 (New and Modified Stationary Source Review Rule).*** This rule applies to all new stationary sources and all modifications of existing stationary sources that are subject to the SCVAPCD permit requirements and after construction emit or may emit one or more affected pollutants.

- ***District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).*** Prior to any demolition activity, an asbestos survey of existing structures on the project site may be required to identify the presence of any asbestos containing building materials (ACBM). Any identified ACBM having the potential for disturbance must be removed by a certified asbestos-contractor in accordance with CAL-OSHA requirements.

- ***District Regulation VIII (Fugitive PM10 Prohibitions).*** Regulation VIII (Rules 8011-8081) is a series of rules designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction, road construction, bulk materials storage, landfill operations, etc. The Dust Control Plan threshold has changed from 40.0 acres to 5.0 or more acres for non-residential sites. If a non-residential site is 1.0 acre

to less than 5.0 acres, an owner/operator must provide written notification to the SJVAPCD at least 48 hours prior to his/her intent to begin any earthmoving activities. If a residential site is 1.0 acre to less than 10.0 acres, an owner/operator must provide written notification to the SJVAPCD at least 48 hours prior to his/her intent to begin any earthmoving activities.

Regulation VIII specifically addresses the following activities:

- Rule 8011: General Requirements;
- Rule 8021: Construction, Demolition, Excavation, Extraction and other Earthmoving Activities;
- Rule 8031: Bulk Materials;
- Rule 8041: Carryout and Trackout;
- Rule 8051: Open Areas;
- Rule 8061: Paved and Unpaved Roads; and
- Rule 8071: Unpaved Vehicle/Equipment Traffic Areas.

- ***District Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).*** If asphalt paving will be used, then paving operations specific to a project will be subject to Rule 4841. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt, and emulsified asphalt for paving and maintenance operations.

- ***District Rule 4102 (Nuisance).*** This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that a specific project or construction of a project creates a public nuisance, it could be in violation and subject to District enforcement action.

- ***District Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters).*** The purposes of this rule are to limit emissions of carbon monoxide and particulate matter from wood burning fireplaces and wood burning heaters, and to establish a public education program to reduce wood burning emissions. This rule applies to: any person who manufactures, sells, offers for sale, or operates a wood burning fireplace or wood burning heater; any person who sells, offers for sale, or supplies wood intended for burning in a wood burning fireplace or wood burning heater; any person who transfers or receives a wood burning stove or wood burning heater as part of a real property sale or transfer; any person who installs a wood burning fireplace or wood burning heater in a new residential development.

In addition to the above-described rules, District Rule 9510 Indirect Source Review (ISR) was adopted December 15, 2005. ISR was adopted to fulfill the SJVAPCD's emission reduction commitments in the PM10 and Ozone Attainment Plans. ISR requires submittal of an Air Impact Assessment (AIA) application no later than the date on which application is made for a final

discretionary approval from the public agency. The AIA will be the information necessary to calculate both construction and operational emissions of a development project. Section 6.0 of the Rule outlines general mitigation requirements for developments that include reduction in construction emissions of 20 percent of the total construction NO_X emissions, and 45 percent of the total construction PM10 exhaust emissions. Section 6.0 of the Rule also requires the project to reduce operational NO_X emissions by 33.3 percent and operational PM10 emissions by 50 percent. Section 7.0 of the Rule includes fee schedules for construction or operational excess emissions of NO_X or PM10; those emissions above the goals identified in Section 6.0 of the Rule. Section 7.2 of the Rule identifies fees for excess emissions at a cost of $9,350/ton for NO_X emissions after the year 2008, and $9,011/ton for PM10 emissions after the year 2008. The Kings County Association of Governments also has a role in air quality planning by ensuring its transportation plans, programs, and projects conform to the most recent air quality requirements; and by coordinating effectively between government agencies.

TYPES OF AIR POLLUTANTS

Air quality is affected by three general types of pollutants – criteria air pollutants, toxic air contaminants, and odors and nuisances. Criteria air pollutants and toxic air contaminants (as described below) are under the purview of the SJVAPCD. The City has a more direct role in regulating odors and nuisances, and the release of particulate matter at construction sites.

Criteria Air Pollutants

The US EPA has identified six criteria air pollutants that are pervasive in urban environments and for which State and national health-based ambient air quality standards have been established under the Federal Clean Air Act. The agency regulates these critical air pollutants by developing specific public health- and welfare-based criteria as the basis for setting permissible pollutant levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM), and lead are the six criteria air pollutants.

Ozone

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_X). ROG and NO_X are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO_X under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone. Ground level ozone in conjunction with suspended particulate matter in the atmosphere leads to hazy conditions generally called “smog.”

Carbon Monoxide

Carbon monoxide, a colorless and odorless gas, is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High carbon monoxide concentrations develop primarily during winter when periods of light wind combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased carbon monoxide emission rates at low air temperatures. When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia.

Nitrogen Dioxide

Nitrogen dioxide is an air quality concern because it acts a respiratory irritant and is a precursor of ozone. Nitrogen dioxide is produced by fuel combustion in motor vehicles, industrial stationary sources, ships, aircraft, and rail transit.

Sulfur Dioxide

Sulfur dioxide is a combustion product of sulfur or sulfur-containing fuels such as coal and oil, which are restricted in the San Joaquin Valley. Its health effects include breathing problems and may cause permanent damage to lungs. SO_2 is an ingredient in acid rain, which can damage trees, lakes and property, and can also reduce visibility.

Particulate Matter

PM10 and PM2.5 consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM10 and PM2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles (PM2.5) of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.

PM emissions in the Planning Area are mainly from urban sources, dust suspended by vehicle traffic and secondary aerosols formed by reactions in the atmosphere. Particulate concentrations near residential sources generally are higher during the winter, when more fireplaces are in use and meteorological conditions prevent the dispersion of directly emitted contaminants.

Lead

Leaded gasoline (which is being phased out), paint (houses, cars), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a

range of adverse neurotoxic health effects for which children are at special risk. Some lead-containing chemicals cause cancer in animals.

Toxic Air Contaminants

The Health and Safety Code defines toxic air contaminants (TACs) as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a present or potential hazard to human health. TACs are less pervasive in the urban atmosphere than criteria air pollutants, but are linked to short-term (acute) or long-term (chronic and/or carcinogenic) adverse human health effects. There are many different types of TACs, with varying degrees of toxicity. TACs are emitted during industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and from motor vehicle exhaust. The current list of toxic air contaminants includes approximately 200 compounds, including all of the toxics identified under federal law plus additional compounds, such as particulate emissions from diesel-fueled engines, which was added in 1998. Other sources of TACs include paradichlorobenzene from moth repellent products and in toilet deodorizer blocks; perchloroethylene used in dry-cleaning and metal degreasing, and in some adhesives, aerosols, paints, and coatings.

Unlike regulations concerning criteria air pollutants, there are no ambient air quality standards for evaluation of TACs based on the amount of emissions. Instead, TAC emissions are evaluated based on the degree of health risk that could result from exposure to these pollutants. Regulation of toxic air contaminants is achieved through Federal and State controls on individual sources. Federal environmental laws refer to "hazardous air pollutants," while California environmental laws refer to "toxic air contaminants." Both of these terms basically encompass the same constituent toxic compounds.

TACs have been regulated under federal air quality law since the 1977 federal Clean Air Act Amendments. The most recent federal Clean Air Act Amendment (1990) reflect a technology-based approach for reducing TACs. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT). The MACT standards vary depending on the type of emitting source. US EPA has established MACT standards for over 20 facilities or activities, such as perchloroethylene dry cleaning and petroleum refineries. The second phase of control involves determining the residual health risk represented by air toxics emissions sources after implementation of MACT standards.

Table 3.7-2 Annual Average Concentrations and Health Risks for Toxic Air Contaminants in the San Joaquin Valley Air Basin (1995-2005)

TAC	*Conc.*/ Risk***	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*
Acetaldehyde	Annual Avg	0.54	1.28	1.19	1.3	1.56	1.09	1.15	1.24	1.34	1.14	1.42
	Health Risk	*3*	*6*	*6*	*6*	*8*	*5*	*6*	*6*	*7*	*6*	*7*
Benzene	Annual Avg	1.16	0.73	0.71	0.76	0.69	0.63	0.538	0.552	0.463	0.372	0.374
	Health Risk	*107*	*68*	*66*	*71*	*64*	*58*	*50*	*51*	*43*	*34*	*35*
1,3-Butadiene	Annual Avg	0.264	0.222	0.195	0.233	0.177	0.158	0.15	0.146	0.095	0.08	0.082
	Health Risk	*99*	*83*	*73*	*88*	*67*	*59*	*56*	*55*	*36*	*30*	*31*
Carbon Tetrachloride	Annual Avg	0.098	0.077		0.114		0.096	0.086	0.091	0.097		
	Health Risk	*26*	*20*		*30*		*25*	*23*	*24*	*26*		
Chromium, Hexavalent	Annual Avg	0.28	0.13	0.11	0.1	0.1	0.12		0.086	0.078	0.083	0.076
	Health Risk	*42*	*20*	*16*	*15*	*15*	*18*		*13*	*12*	*13*	*11*
para-Dichlorobenze	Annual Avg	0.11	0.1	0.13			0.11	0.13	0.15	0.15	0.15	0.15
	Health Risk	*8*	*7*	*9*			*7*	*9*	*10*	*10*	*10*	*10*
Formaldehyde	Annual Avg	2.1	2.96	2.77	2.86	3.44	2.61	3.08	3.13	3.02	2.27	2.52
	Health Risk	*15*	*22*	*20*	*21*	*25*	*19*	*23*	*23*	*22*	*17*	*19*
Methylene Chloride	Annual Avg	0.61	0.54	0.53	0.52	0.5	0.53	0.27	0.16	0.14	0.11	0.12
	Health Risk	*2*	*2*	*2*	*2*	*2*	*2*	*<1*	*<1*	*<1*	*<1*	*<1*
Perchloroethylene	Annual Avg	0.068	0.068	0.056	0.039		0.076	0.052	0.039	0.033	0.027	0.032
	Health Risk	*3*	*3*	*2*	*2*		*3*	*2*	*2*	*1*	*1*	*1*
Diesel PM***	Annual Avg	(1.7)					(1.3)					
	Health Risk	*(510)*					*(390)*					
Average Basin Health Risk	*Without Diesel PM*	*305*	*231*	*194*	*235*	*181*	*196*	*169*	*184*	*157*	*111*	*114*
	With Diesel PM	*(815)*					*(586)*					

* Concentrations for Hexavalent Chromium are expressed as ng/m3, and concentrations for Diesel PM are expressed as ug/m3. Concentrations for all other TACs are expressed as ppb.

** Health Risk represents the number of excess cancer cases per million people based on a lifetime (70-year) exposure to the annual average concentration. Total Health Risk represents only those compounds listed in this table and only those with data for that year. There may be other significant compounds for which monitoring and/or health risk information are not available.

*** The Diesel PM concentrations are estimates based on receptor modeling. Because data are not available for all years, Diesel PM is not included in the Average Basin Health Risk number.

Source: California Air Resources Board 2007 Almanac, Appendix C.

Two principal laws provide the foundation for State regulation of TACs from stationary sources. In 1983, the State Legislature adopted Assembly Bill 1807, which established a process for identifying TACs and provided the authority for developing retrofit air toxics control measures on a State-wide basis. Air toxics from stationary sources in California are also regulated under Assembly Bill 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under Assembly Bill 2588, TAC emissions from individual facilities are quantified and prioritized by the regional air quality management district or county air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are violated, they are required to communicate the results to the public in the form of notices and public meetings. Depending on the risk level, emitting facilities can be required to implement varying levels of risk reduction measures. **Table 3.7-2** describes annual average concentrations for TACs from 1995 to 2005 in the SJVAB.

Air Toxics "Hot Spots" Program

Locally, the SJVAPCD administers the state-mandated Air Toxics "Hot Spots" Program for Lemoore and Kings County, which is intended to reduce public exposure to TACs from stationary sources in the San Joaquin Valley. SJVAPCD is currently working to control TAC impacts at local "hot spots" and to reduce TAC background concentrations. The control strategy involves reviewing new stationary sources to ensure compliance with required emissions controls and limits, maintaining an inventory of existing stationary sources of TACs, and developing new rules and regulations to reduce TAC emissions. The potential for new and modified stationary sources to emit toxic air contaminants is reviewed by the SJVAPCD's Permit Services Division, which implements the SJVAPCD's Risk Management Policy. Toxic air contaminant emissions from stationary sources are limited by:

- SJVAPCD adoption and enforcement of rules aimed at specific types of sources known to emit high levels of toxic air contaminants;
- Implementation of the Air Toxics "Hot Spots" Program; and
- Implementation of the Federal Title III Toxics program.

Regulation of TACs from mobile sources has traditionally been implemented through emissions standards for on-road motor vehicles (imposed on vehicle manufacturers) and through specifications for gasoline and diesel fuel sold in California (imposed on fuel refineries and retailers), rather than through land use decisions, air quality permits, or regulations addressing how motor vehicles are used by the general public.

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress and other air quality-related health problems. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions than commercial and

industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions, and because the presence of pollution detracts from the recreational experience.

EXISTING CONDITIONS AND TRENDS

Existing sources of emissions include on-road and off-road motor vehicles, farming operations, industrial activities, wood burning, and windblown dust. The SJVAPCD's regional air quality monitoring network provides information on existing ambient concentrations of criteria air pollutants. Monitored ambient air pollutant concentrations reflect the number and strength of emissions sources and the influence of topographical and meteorological factors.

Attainment Status

Under amendments to the Federal Clean Air Act, US EPA has classified air basins or portions thereof, as either "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the national standards have been achieved. The California Clean Air Act, which is patterned after the Federal Clean Air Act, also requires areas to be designated as "attainment" or "non-attainment" for the State standards. Thus, areas in California have two sets of attainment / non-attainment designations: one set with respect to the national standards and one set with respect to the State standards. **Table 3.7-3** shows the attainment status of the San Joaquin Valley with respect to the national and State ambient air quality standards for criteria pollutants, while **Table 3.7-4** shows Kings County historical data on emissions of criteria pollutants and particulate matter from 1999-2005.

Table 3.7-3 Attainment Status of the San Joaquin Valley Air Basin for State and National Ambient Air Quality Standards

	Designation/Classification	
Pollutant	*Federal Standards*[1]	*State Standards*[2]
Ozone - One hour	*No Federal Standard*	Non-attainment/Severe
Ozone - Eight hour	Non-attainment/Serious[5]	Non-attainment
PM10	Non-attainment/Serious[3]	Non-attainment
PM2.5	Non-attainment[4]	Non-attainment
CO - Fresno Urbanized Area	Attainment	Non-attainment/Moderate
CO - Remainder of Fresno County	Unclassified/Attainment	Attainment
CO - Merced, Madera and Kings Counties	Unclassified/Attainment	Unclassified
CO - Kern (SJVAB portion), Tulare, Stanislaus, San Joaquin	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide - Kern County (SJVAB portion)	Attainment	Attainment
Sulfur Dioxide - All Other Counties	Unclassified	Attainment
Lead (Particulate)	*No Designation*	Attainment
Hydrogen Sulfide	*No Federal Standard*	Unclassified
Sulfates	*No Federal Standard*	Attainment
Visibility Reducing Particles	*No Federal Standard*	Unclassified

[1] See 40 CFR Part 81

[2] See CCR Title 17 Sections 60200-60210

[3] Although EPA has determined that the San Joaquin Valley Air Basin has attained the federal PM 10 standards, their determination does not constitute a re-designation to attainment per section 107(d)(3) of the Federal Clean Air Act. The Valley will continue to be designated non-attainment until all of the Section 107(d)(3) requirements are met.

[4] The Valley is designated non-attainment for the 1997 PM 2.5 federal standards. EPA designations for the 2006 PM 2.5 standards will be finalized in December 2009. The District has determined, as of the 2004-06 PM 2.5 data, that the Valley has attained the 1997 24-Hour PM 2.5 standard.

[5] On April 30, 2007 the governing board of the San Joaquin Valley Air Pollution Control District voted to request EPA to reclassify the San Joaquin Valley Air Basin as extreme non-attainment for the federal 8-hour ozone standard. On June 14, 2007, the California Air Resources Board approved the request. This request must be forwarded to the EPA by the CARB and would become effective upon EPA final rulemaking after a notice and comment process; it is not yet in effect.

Source: San Joaquin Valley Air Pollution Control District, Ambient Air Quality Standards & Valley Attainment Status.

Table 3.7-4 Ozone, Nitrogen, Carbon Monoxide and Particulate Matter Air Pollution for Kings County (1999 - 2005)

OZONE (ppm)	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*
Peak 1-Hour Indicator	0.109	0.115	0.113	0.114	0.107	0.106	0.1
Peak 8-Hour Indicator	0.099	0.102	0.098	0.099	0.095	0.093	0.088
4th High 1-Hr. in 3 Yrs	0.123	0.127	0.124	0.126	0.12	0.119	0.112
Avg. of 4th High 8-Hr. in 3 Yrs	0.128	0.128	0.124	0.124	0.121	0.121	0.113
Maximum 1-Hr. Concentration	0.111	0.11	0.107	0.105	0.1	0.094	0.098
Max. 8-Hr. Concentration	0.14	0.124	0.127	0.125	0.12	0.121	0.12
Days Above State Standard	95	112	64	86	71	55	38
Days Above Nat. 1-Hr. Std.	25	51	18	27	15	9	4
Days Above Nat. 8-Hr. Std.	28	48	21	29	19	7	6
NITROGEN DIOXIDE (ppm)							
Peak 1-Hr. Indicator	0.084	0.073	0.068	0.073	0.073	0.072	0.071
Max. 1-Hr. Concentration	0.086	0.072	0.096	0.067	0.076	0.069	0.072
Max. Annual Average		0.014		0.014	0.013	0.012	0.012
*CARBON MONOXIDE (ppm)**							
Peak 8-Hr. Indicator	8.5	8.4	6.4	5.3	4.8	4.2	3.7
Max. 1-Hr. Concentration	11.9	10.1	8.4	6.1	5.8	4.6	4.3
Max. 8-Hr. Concentration	7.8	6.6	6	4.5	4.1	3	3
Days Above State 8-Hr. Std.	0	0	0	0	0	0	0
Days Above Nat. 8-Hr. Std.	0	0	0	0	0	0	0
PM-10 (ug/m3)							
Max. 24-Hr. Concentration (State)	185	137	221	174	150	219	137
Max. 24-Hr. Concentration (Nat)	174	128	185	168	150	217	131
Annual Average (State)	53.1	51.3		55.4	47.5	43.6	42.6
Annual Average (Nat)	52.2	50.2	57.4	53.5	46.7	47.9	40.3
Calc Days Above State 24-Hr Std	135	132		172	149	100	126
Calc Days Above Nat 24-Hr Std	6	0	14	6	0	7	0
PM-2.5 (ug/m3)							
Max. 24-Hr. Concentration (State)	53	76	123.2	90.7	55.1	61	92.5
Max. 24-Hr. Concentration (Nat)	53	76	123.2	90.7	55.1	61	92.5
98th Percentile of 24-Hr Conc.			89.5	65.1	42.2	49.4	74.5
Annual Average (State)					16.2		17.5
Avg. of Quarterly Means (Nat)		16.4	19.2	21.5	16.3	17.5	17.5

*Data for Carbon Monoxide are for the San Joaquin Valley Air Basin overall.

Source: California Air Resources Board Almanac 2007 - Appendix A and Chapter 4.

IMPACT ANALYSIS

SIGNIFICANCE CRITERIA

Implementation of the proposed General Plan would result in a significant impact on air quality if it would:

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

METHODOLOGY AND ASSUMPTIONS

The proposed General Plan will allow planned development to occur within both developed (infill) and undeveloped portions of the Planning Area. While the pace and timing of build-out will ultimately be market driven, for modeling purposes this analysis is based on the assumption that most uses will be developed by the year 2030 and emissions are estimated for this planning horizon. This analysis is based on methodologies and thresholds included in the SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD, 2002).

SUMMARY OF IMPACTS

Air quality impacts resulting from the implementation of the proposed General Plan fall into two categories: short-term impacts due to construction, and long-term impacts due to operation. Construction activities would affect local particulate concentrations primarily due to fugitive dust sources and other criteria pollutant emissions from equipment exhaust. The Plan commits the City to use Best Management Practices to reduce these emissions, consistent with SJVAPCD guidelines.

Over the long term, the full implementation of the proposed General Plan would result in an increase in criteria pollutant emissions primarily due to related motor vehicle trips. Stationary sources and area sources would result in lesser quantities of criteria pollutant emissions. Stationary sources and diesel-fueled mobile sources would also generate emissions of toxic air contaminants including diesel particulate matter that could pose a health risk. However, implementation of the proposed Lemoore General Plan in itself would not create objectionable odors affecting a substantial number of people. Overall, implementation of the proposed General Plan would result in a cumulatively considerable net increase of criteria pollutants which would exceed the annual SJVAPCD thresholds for NO_X and ROG. However, the Plan also commits the City to support federal and State efforts to reduce emissions through its policies for reduced

automobile use, energy conservation in new buildings and energy management in public buildings, public infrastructures (e.g. street lighting) and publicly-owned vehicles. These policies intend that the proposed General Plan would not interfere with the SJVAPCD's efforts to achieve and maintain air quality standards through regional incentives and regulatory programs it has established or is planning to put in place. However, since the full scope and effectiveness of General Plan policy measures is not fully known, and the air quality problems in the Valley are regional in nature, this impact is considered significant and unavoidable.

IMPACTS AND MITIGATION MEASURES

Impact

3.7-1 Implementation of the proposed General Plan would result in a cumulatively considerable net increase of criteria pollutants. Future growth in accordance with the Plan and traffic associated with the Plan would generate emissions exceeding the annual SJVAPCD thresholds for NO_X and ROG. (*Significant and Unavoidable*)

Construction activity that would occur over the next 23 years in accordance with the proposed General Plan would cause temporary, short-term emissions of various air pollutants. Nitrogen oxides and carbon monoxide would be emitted by activities that disturb the soil, such as grading and excavation, infrastructure construction, building demolition, and a variety of construction activities. Information regarding specific development projects, soil conditions, and the location of sensitive receptors in relation to the various projects would be needed in order to quantify the level of impact associated with construction activity. However, all new development under the proposed General Plan would be subject to Best Management Practices to reduce dust and other air pollutant emissions, as well as mandatory compliance with SJVAPCD's Fugitive Dust Rule, so it is reasonable to assume that in general SJVAPCD-adopted thresholds would not likely to be exceeded over the next 23 years although there may well be isolated instances requiring enforcement action. Actual significance would be determined on a project by project basis as future development applications are submitted. Additionally, the General Plan includes a variety of policies designed to address construction-related air quality impacts including requiring contractors to implement appropriate dust suppression measures.

Operational impacts would result from local and regional vehicle emissions generated by future population growth and travel associated with build out of the proposed General Plan. The total emissions generated by the proposed General Plan, calculated using the California Air Resources Board's EMFAC 2007 model and the citywide traffic model, are provided in **Table 3.7-5**. As shown in the table, future growth in accordance with the proposed General Plan would exceed the daily SJVAPCD thresholds for NO_X and ROG. The complete outputs for the EMFAC model are provided in Appendix E.

Table 3.7-5 Vehicle Emissions (tons per year) - Proposed Lemoore General Plan

	Unmitigated Operation Emissions (metric tons/year)				
Pollutant	*Emissions Factor [1] (grams/mile) Summer/Winter*		*SJVAPCD Thresholds (tons/year)*	*Build out Year (2030)[2]*	*Significant (Yes or No)[2]*
ROG	0.078	0.077	10	**75**	Yes
NOx	0.516	0.648	10	**561**	Yes
CO	1.296	1.112	N/A	1,161	N/A
CO2	710.102	650.918	N/A	655,930	N/A

[1] Emission factors were generated by the Air Resources Board EMFAC 2007 computer model (version 2.3) for Kings County, using an average vehicle speed of 45 mph, and seasonally adjusted average temperature and humidity.

[2] Buildout totals use an average of summer and winter emissions factors. Bold values are in excess of the applicable standard. The SJVAPCD established thresholds for ROG and NO_x are 10 tons per year whereas CO and CO_2 do not have established emissions thresholds of significance.

Source: Dyett & Bhatia, 2007; EMFAC, 2007.

An increase in stationary source emissions is also anticipated with build out of the proposed General Plan. In addition to vehicle emissions, emissions will be generated from a variety of stationary sources, through the use of natural gas, the use of landscape maintenance equipment, and the use of wood burning fireplaces. A variety of industrial and commercial processes (e.g., dry cleaning, etc.) allowed under the proposed General Plan are also expected to release emissions; some of which could be of a hazardous nature. These emissions are controlled at the local and regional level through the permitting process. Proposed General Plan policies that would minimize this impact are listed below.

Proposed General Plan Policies that Reduce the Impact

The following policies would help reduce potential air quality impacts associated with criteria pollutant emissions:

C-I-3 Provide for greater street connectivity by:

- Incorporating in subdivision regulations requirements for a minimum number of access points to existing local or collector streets for each development (e.g. at least two access points for every 10 acres of development, with additional access, if warranted, for multi-family housing);
- Encouraging the construction of roundabouts instead of traffic signals and 4-way stop signs, where feasible;
- Requiring bicycle and pedestrian connections from cul-de-sacs to nearby public areas and main streets; and
- Requiring new residential communities on undeveloped land planned for urban uses to provide stubs for future connections to the edge of the property line. Where stubs exist on adjacent properties, new streets within the development should connect to these stubs.

C-I-4 Develop a multi-modal transit system map integrating bicycle, public transportation, pedestrian and vehicle linkages within the City to ensure circulation gaps are being met. Safe Routes to School and any necessary related improvements will also be shown on this map, and costs and priorities indicated based on need.

C-I-23 Provide incentives for City employees to commute by public transit, car-pool, or use alternative fuel technology vehicles.

C-I-24 Offer alternative work hours and telecommuting when appropriate to City employees to reduce VMT and trips to work.

C-I-25 Purchase hybrid gasoline-electric, bio-diesel fuel, or electric vehicles for the City fleet.

C-I-26 Ensure that new development is designed to make public transit a viable choice for residents. Options include:

- Locate medium-high density development whenever feasible near streets served by public transit; and
- Link neighborhoods to bus stops by continuous sidewalks or pedestrian paths.

C-I-27 Implement the Lemoore Bikeway Plan in coordination with the County's Regional Bicycle Plan, which is updated every four years.

COS-I-41 Amend the Zoning Ordinance to prohibit locating new "sensitive receptor" uses—hospitals, residential care facilities and child care facilities—within:

- 500 feet of a freeway, urban roads carrying 100,000 vehicles per day, or rural roads carrying 50,000 vehicles per day.
- 1,000 feet of a distribution center (that accommodates more than 100 trucks a day, more than 40 trucks with operating transport refrigeration units (TRUs) a day, or where TRU operation exceeds 300 hours per week).
- 300 feet of any dry cleaning operation that uses toxic chemicals. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult your local air district.
- 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons or more per year).

COS-I-42 Conforming to the SJVAPCD Fugitive Dust Rule, require developers to use best management practices (BMPs) to reduce particulate emission as a condition of approval for subdivision maps, site plans and all grading permits. BMPs include:

- During clearing, grading, earth-moving or excavation operations, fugitive dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures;

- All materials excavated or graded shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust;
- All materials transported off-site shall be either sufficiently watered or covered by canvas or plastic sheeting to prevent excessive amounts of dust;
- All motorized vehicles shall have their tires watered before exiting a construction site;
- The area disturbed by demolition, clearing, grading, earth-moving, or excavation shall be minimized at all times; and
- All construction-related equipment shall be maintained in good working order to reduce exhaust.

COS-I-43 Enact a wood-burning ordinance compliant with District Rule 4901 that:

- Regulates the installation of EPA-certified wood heaters or approved wood-burning appliances in new developments or replacements;
- Lists permitted and prohibited fuels; and
- Describes a "No Burn" policy on days when the air quality is poor.

COS-I-44 Seek grant funding for a "change-out" program to help homeowners replace old word-burning fireplaces with EPA-certified wood-burning appliances.

Smoke released from fireplaces and wood stoves contains carbon monoxide, nitrogen dioxide, volatile organic compounds, and inhalable particulate matter (PM10). The changeout programs have been successful in areas of the State where emissions from wood-burning fireplaces cause significant air pollution. Many grant programs offer cash rebates to encourage replacement of old wood-burning appliances with more efficient ones.

COS-I-45 Utilize more plants and trees in public area landscaping, focusing on those that are documented as more efficient pollutant absorbers.

COS-I-46 Establish a Clean Air Awards Program to acknowledge outstanding effort and to educate the public about the linkages between land use, transportation and air quality.

COS-I-47 Coordinate air quality planning efforts and CEQA review of discretionary projects with potential for causing adverse air quality impacts with other local, regional and State agencies.

The City will work with the San Joaquin Valley Air Pollution Control District on parallel initiatives for air quality, so programs are complementary and uniform wherever possible.

COS-I-48 Educate employees and department managers about sustainability with a focus on specific operational changes that can be made to reduce greenhouse gas emissions, such as fuel efficient driving and reducing energy use at work.

As stated above, the City will implement a variety of policies designed to address air quality issues. Additionally, future project-specific compliance with SJVAPCD permitting would also help to reduce air quality emissions associated with individual projects. However, total air quality emissions associated with buildout of the proposed General Plan would still exceed daily SJVAPCD thresholds for NO_X and ROG. Therefore, implementation of the proposed General Plan, even with the adoption and implementation of the policies listed above, would still result in a significant impact. Because no additional, feasible, mitigation is currently available besides reducing Plan buildout, and the effectiveness of the SJVAPCD Ozone Plan has not been confirmed, this impact is considered significant and unavoidable.

Impact

3.7-2 Implementation of the proposed General Plan would expose sensitive receptors to substantial pollutant concentrations. (***Significant and Unavoidable***)

Development resulting from buildout of the proposed General Plan could place sensitive land uses near local intersections or roadways associated with air pollutant emissions that exceed State or federal ambient air quality standards. Similarly, existing sensitive land uses near local roadways could be exposed to air pollutant emissions from increased levels of traffic. In addition to these air pollutant emissions, a variety of TAC emissions could also be released from various construction and operations (i.e., industrial activities) associated with the proposed General Plan. The California Air Resources Board has declared that diesel particulate matter from diesel engine exhaust is a TAC. Additionally, the California Office of Environmental Health Hazard Assessment (OEHHA) has determined that chronic exposure to DPM can cause carcinogenic and non-carcinogenic health effects.

CEQA documentation prepared for individual projects resulting from implementation of the proposed General Plan would have project-specific data and will be required to address, and to the extent feasible, mitigate any significant or potentially significant air quality impacts. Examples of mitigation that may be proposed include intersection/roadway capacity improvements or additional land use siting and required setbacks. However, it should be noted, that the ability to mitigate these potential impacts is contingent on a variety of factors, including the severity of the air quality impact, existing land use conditions and the technical feasibility of implementing proposed mitigation measures (e.g., relocations, road widening) that cannot be reasonably known until development projects are proposed.

Proposed General Plan Policies that Reduce the Impact

Policies listed under Impact 3.7-1 help to reduce this impact and thus are incorporated here by reference. No additional mitigation is deemed feasible, thus Impact 3.7-2 remains significant and unavoidable.