



AIR RESOURCES
AND
CLIMATE CHANGE

Introduction

The Air Resources Element provides policies and programs to guide the location, design, and quality of development in a manner that protects air quality resources in Patterson and in the region.

Because of on-going violations of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for ozone and PM10 in the San Joaquin Valley air basin (SJVAB), the region is designated as a nonattainment area for these criteria pollutants, and these pollutants are therefore the most relevant to air quality planning and regulation in the SJVAB. The San Joaquin Unified Air Pollution Control District manages these pollutants through a long-term attainment planning process that forecasts emissions and future concentrations depending on changes in source activity, regulatory programs, and meteorological conditions. The air quality plans for demonstrating attainment (one each for ozone and PM10) are evolving documents that are updated approximately triennially to reflect the changing population, economic, land use, and transportation conditions in the San Joaquin Valley.

The local transportation planning agencies (in this area, Stanislaus Council of Governments) and California Air Resources Board (CARB) provide the information needed to predict future on-road mobile source emissions. Programs for motor vehicle inspection and maintenance (smog check), fuel reformulation, encouraging use of transit, and stringent control of stationary sources are all triggered by the nonattainment status of the area. If violations of the ambient air quality standards in the region persist beyond the attainment dates predicted by District plans, federal transportation funds can be withheld, adversely affecting future transportation projects in the region. The region needs to meet the federal 8-hour ozone standard before 2013, and the PM10 standard by 2010.

Government Code Section 65302.1, requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality. Specifically, the statute recommends that the following be included in the general plan:

- Determine and mitigate project level and cumulative air quality impacts under the California Environmental Quality Act (CEQA) (Division 13 (commencing with Section 21000) of the Public Resources Code). (B) (please refer to the General Plan Final Environmental Impact Report)
- Integrate land use plans, transportation plans, and air quality plans.
- Plan land uses in ways that support a multimodal transportation system. (Please refer to policies of the Land Use Element, LU-1 through LU-7, as well as AR-2.1 through AR-2.5)
- Local action to support programs that reduce congestion and vehicle trips. (policies AR-1.9 through AR-1.12)
- Plan land uses to minimize exposure to toxic air pollutant emissions from industrial and other sources.
- Reduce particulate matter emissions from sources under local jurisdictions. (please refer to policies AR-5.1 through AR-5.3)

- Support district and public utility programs to reduce emissions from energy consumption and area sources. (see policies AR-6.1 through AR-6.3)

Based upon the schedule outlined in the bill, jurisdictions in Fresno and Kern counties are required to comply with this requirement by June 30, 2009. Jurisdictions in Stanislaus county (including Patterson) are required to comply by June 30, 2010.

Greenhouse Gas Emissions (GHGs)/AB 32

California's major initiatives for reducing climate change or greenhouse gas (GHG) emissions are outlined in Assembly Bill 32 (signed into law 2006), 2005 Executive Order and a 2004 ARB regulation to reduce passenger car GHG emissions. These efforts aim at reducing GHG emissions for the State to 1990 levels by 2020—a reduction of approximately 30 percent, and then an 80 percent reduction below 1990 levels by 2050. Currently, the APCD is engaged in scoping meetings to discuss greenhouse gas issues in the San Joaquin Valley and potential solutions to those issues. District staff will also outline a proposed process to develop a Climate Change Action Plan (CCAP)

Goals and Policies

Effective Coordination of Air Quality Mitigation Efforts

Goal AR-1: To foster effective communication, cooperation, and coordination in developing and operating community and regional air quality programs.

This symbol denotes a policy that contributes to sustainability and/or sustainable practices.



Policies

AR-1.1 Source regulation. The City shall review development projects using criteria established by the San Joaquin Valley Unified Air Pollution Control District in order to minimize future increases in vehicle travel and to assist in implementing appropriate indirect source regulations adopted by the Air Pollution Control District.

AR-1.2 APCD cooperation. The City shall work with the San Joaquin Valley Unified Air Pollution Control District to ensure the earliest practicable attainment and subsequent maintenance of federal and state ambient air quality standards.

AR-1.3 CEQA. The City shall use the CEQA process to identify and avoid or mitigate potentially significant air quality impacts of new development. The CEQA process shall be used to ensure early consultation with the San Joaquin Valley Unified Air Pollution Control District concerning air quality issues associated with specific development proposals.



AR-1.4 Air quality mitigation. The City shall ensure all air quality mitigation measures are feasible, implementable, and cost effective.

AR-1.5 Cumulative impacts. The City shall identify the cumulative transportation and air quality impacts of all general plan amendments approved during the previous year.

AR-1.6 Innovative strategies. The City shall encourage innovative mitigation measures to reduce air quality impacts by coordinating with the District, project applicants, and other interested parties.

- AR-1.7 **Neighboring jurisdictions.** The City shall work with neighboring jurisdictions and affected agencies to address cross-jurisdictional and regional transportation and air quality issues.
- AR-1.8 **Technology for air quality mitigation.** The City shall support investment in cost-effective multi-use modeling and geographic information system technology.
- AR-1.9 **Air quality and planning.** The City shall consider air quality when planning the land uses and transportation systems to accommodate the expected growth in this community.
- AR-1.10 **Transportation projects.** The City shall ensure that all transportation improvement projects submitted for inclusion in regional transportation plans (RTP, RTIP, CMP, etc.) shall be consistent with the air quality goals and policies of the General Plan.
- AR-1.11 **Coordination with transit providers.** The City shall coordinate¹ with transit providers to determine project impacts on long range transit plans and ensure that impacts are mitigated.
- AR-1.12 **Affordable housing access to alternate mode of travel.** The City shall work with the Housing Authority, transit providers, and developers to encourage the construction of low income housing



¹ Coordinate. To solicit, consider, and respond to comments from other agencies, organizations, or groups in order to bring common actions, movements, or conditions. Coordinate is used in the context of the general plan to direct an organized approach to addressing inter-jurisdictional issues that are not solely under the purview of the City of Patterson. This does not imply that the City is superior or subordinate to other agencies, organizations, or groups. Rather, it indicates that the City will confer with other agencies, organizations, or groups for the purpose of identifying and potentially implementing mutually-agreeable solutions. It does not commit the City to any specific course of action or interagency relationship. “To coordinate” or “coordination” does not have the same meaning as found in the appellate court decision of California Native Plant Society v. City of Rancho Cordova (2009) 172 Cal. App. 4th 603.

This general plan does not contain fundamental, mandatory, and specific land use policies, standards, objectives of implementation standards similar in character to policies which from the basis of the holding in Families Unafraid to Uphold Rural Etc. County v. Bd. Of Supervisors (1988) 62 Cal. App. 4th 1332. The determination of whether or not an approval or action is consistent with this general plan is guided by the holding in Sequoyah Hills Homeowners v. City of Oakland (1993) 23 Cal. App. 4th 704.

developments that use transit-oriented and pedestrian-oriented design principles.

- AR-1.13 Caltrans.** The City shall work with Caltrans and the Regional Transportation Planning Agency to minimize the air quality, mobility, and social impacts of large scale transportation projects on existing neighborhoods.
- AR-1.14 Public education.** The City shall work to improve the public's understanding of the land use, transportation, and air quality link.
- AR-1.15 Support for education.** The City shall support the efforts of local public and private groups that provide air quality education programs.

Trip Reduction

Goal AR-2: To reduce the air quality impacts of motor vehicle use.

Policies

- AR-2.1 Trip reduction programs.** The City shall promote the implementation of innovative employer-based trip reduction programs for employees.
- AR-2.2 City fleet vehicles.** The City shall consider replacing or converting conventional fuel vehicles to clean fuel vehicles as rapidly as feasible.
- AR-2.3 Teleconferencing.** The City shall support the use of teleconferencing in lieu of employee travel to conferences and meetings when feasible.
- AR-2.4 Teleconferencing centers.** The City shall work to establish public/private partnerships to develop satellite and neighborhood work centers for telecommuting.
- AR-2.5 Commute reduction.** The City shall promote the expansion of employment opportunities in Patterson to reduce the volume and distance of home-to-work commute trips by motor vehicle.



Improvements to Infrastructure

Goal AR-3: To Reduce traffic congestion and vehicle trips through more efficient infrastructure and support for trip reduction programs. Reduce the air quality impacts of motor vehicle use.

Policies

AR-3.1 **Priority to existing roadways.** The City shall consider measures to increase the capacity of the existing road network prior to constructing more capacity (additional lanes, new freeways, etc.).



AR-3.2 **Promote alternate modes of travel.** The City shall work with employers and developers to provide employees and residents with attractive, affordable transportation alternatives.



AR-3.3 **Park and Ride.** The City shall plan park and ride lots at suitable locations serving long distance and local commuters.

AR-3.4 **Intersection design.** Major intersections shall be designed to minimize situations (such as long vehicle delays) which can adversely affect localized air quality.

Toxic and Hazardous Air Pollutants

Goal AR-4: Minimize exposure of the public to toxic air pollutant emissions and noxious odors from industrial, manufacturing, and processing facilities.

Policies

AR-4.1 **Sensitive receptors.** The City shall, to the extent practicable, separate sensitive land uses from significant sources of air pollutants or odor emissions. Sensitive land uses include, but are not limited to, those that support people or other organisms that may have a significantly increased sensitivity or exposure to air pollution by virtue of their age and health (e.g. schools, day care centers, hospitals, nursing homes), status (e.g. sensitive or endangered species), or proximity to the source. The City shall require residential development projects and projects categorized as sensitive receptors to be located an adequate distance from existing and potential sources of toxic emissions such as

freeways, major arterials, industrial sites, and hazardous material locations. For purposes of compliance with this policy, the City will be guided by the recommendations provided in the Air Quality and Land Use Handbook: A Community Health Perspective published by the California Air Resources Board.

- AR-4.2 Industrial uses.** The City shall notify, and coordinate with, the San Joaquin Valley Unified Air Pollution Control District when industrial developments are proposed that may adversely impact air quality. Such coordination may include, but is not limited to, providing assistance to applicants in complying with applicable air quality regulations.

Fugitive Dust and PM10

Goal AR-5: Reduce particulate emissions from sources under the jurisdiction of the city.

Policies

- AR-5.1 Particulates from grading.** The City shall work with the District to reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
- AR-5.2 Roadways.** The City shall require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.
- AR-5.3 City maintained roads.** The City shall reduce PM10 emissions from City/County maintained roads to the maximum extent feasible.

Energy Use

Goal AR-6: Reduce emissions related to energy consumption and area sources.

Policies

- AR-6.1 Energy efficient design.** The City shall work with the local energy providers and developers on voluntary incentive-based programs to encourage the use of energy efficient designs and equipment.





AR-6.2 Energy conservation standards. The City shall cooperate with the local building industry, utilities and the District to promote enhanced energy conservation standards for new construction.



AR-6.3 Vehicle idling reduction. The City shall implement circulation improvements that reduce vehicle idling.

Greenhouse Gases

Goal AR-7 To reduce to the emission of greenhouse gases and to promote energy efficiency.

Policies



AR-7.1 Climate Action Plan. The City shall comply with the relevant provisions of State law (i.e. AB 32 and SB 375) to minimize the effect of citywide greenhouse gas emissions associated with buildout of the General Plan. This shall be achieved through the implementation of a Climate Action Plan.



AR-7.2 Greenhouse gas reduction goal. The City shall work with the Air Resources Board and the San Joaquin Valley Unified Air Pollution Control District to comply with statewide greenhouse gas reduction goals as established in the Global Warming Solutions Act of 2006 (AB 32) for 2020, and subsequent goals.



AR-7.3 Sustainable government buildings. All new or renovated City buildings shall be designed and constructed to achieve Leadership in Energy and Environmental Design (LEED) Silver rating requirements.



AR-7.4 Greenhouse gas emissions from new development. The City shall implement measures to reduce the emission of greenhouse gases from new development. Such measures may include, but are not limited to, the following:

- a. Discouraging auto-dependent patterns of development;
- b. Promoting compact, mixed-use, pedestrian-friendly, and transit oriented development;
- c. Promoting energy-efficient building design and site planning using either Build It Green and LEED™ Silver standards for residential and non-residential buildings, respectively; and
- d. Working to improve the ratio of jobs to housing.

AR-7.5 Passive solar heating. To the extent feasible, the City shall require the orientation of buildings to maximize passive solar heating during cool seasons, avoid solar heat gain in warm seasons, enhance natural ventilation and effective use of daylight, and to maximize opportunities for the installation of solar panels.



AR-7.6 Energy efficiency for low income residents. The City shall partner with community service agencies and organizations to fund energy efficient projects for low income residents. Eligible projects include but are not limited to the installation of heating, ventilation, and air-conditioning systems, lighting, water heating equipment, and insulation and weatherization.



AR-7.7 Waived permit fees. The City shall consider waiving building permit fees for projects that make an existing home or business more energy-efficient. Eligible projects include but are not limited to the installation of solar panels, tankless water heaters, and highly energy-efficient heating, ventilation, and air-conditioning systems.



AR-7.8 Financing for energy-efficient improvements. The City shall investigate options for providing low-interest financing for energy efficient improvements and solar system installation for residents. Such financing could take the form of long-term assessments on individual property tax bills.



AR-7.9 Environmentally responsible government purchasing. The City shall, in its purchasing of products, equipment, or services, give preference to those which reduce or eliminate indirect greenhouse gas emissions.



AR-7.10 Life-cycle costing. The City shall incorporate the method of life-cycle costing to determine the most energy-efficient equipment and systems for its buildings and operations.



AR-7.11 Methane recovery. The City shall investigate the implementation of a methane recovery system for its wastewater treatment plant.



AR-7.12 Solar power for wastewater treatment plant. The City should investigate the implementation of a solar power system to help power the City's wastewater treatment plant.



Implementation Measures							
No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near - Term	Mid-Term	Long- Term	Ongoing
AR-1	The City will ensure that development projects are submitted to the District for CEQA comments and review of air quality analysis.	AR-1.1 AR-1.2 AR-1.3 AR-1.4	Community Development				■
AR-2	The City will train staff planners preparing CEQA documents on how to use the Guide for Assessing and Mitigating Air Quality Impacts guidance manual.	AR-1.3	Community Development				■
AR-3	The City shall develop a system that tracks changes in land use by traffic analysis zone and work with the District to perform air emissions modeling on the cumulative land use changes	AR-1.1 AR-1.2 AR-1.3 AR-1.4	Community Development				■
AR-4	The City shall audit existing signalized intersections to ensure that they are programmed to respond to actual traffic volumes. All new signalized intersections must be programmed in like manner.	AR-6.3	Public Works Dept.	■			
AR-5	The City shall, within 24 months of adoption of the General Plan, prepare and adopt a comprehensive Climate Action Plan that includes but is not limited to the following components: 1. Strategies for public involvement and input; 2. A baseline inventory of greenhouse gas (GhG) emissions from all sources within the city; 3. Emissions reduction targets and deadlines, enforceable reduction measures, and programmatic guidance for individual projects to achieve compliance with the Plan; 4. A program of regular review of progress toward emissions reduction targets; 5. A green building program that includes adoption of an ordinance which requires Build It Green certification for all new housing and	AR-7.1	City Council Community Development Dept.	■			

Implementation Measures

No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near - Term	Mid-Term	Long- Term	Ongoing
	LEED Silver certification for all non-residential buildings; 6. A renewable energy portfolio standard of 33% for both investor-owned and publicly-owned utilities.						
AR-6	<p>The City shall require all of the following as a condition of project approval of future development projects:</p> <ul style="list-style-type: none"> All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking. With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition. When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets 	AR-1.1 AR-1.3 AR-1.4	City Council Planning Commission Planning Department Building Department				■

Implementation Measures

No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near - Term	Mid-Term	Long- Term	Ongoing
	<p>at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)</p> <ul style="list-style-type: none"> • Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant. • Within urban areas, track-out (earth material deposited on City streets by construction equipment) shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday. • Any site with 150 or more vehicle trips per day shall prevent carryout and track-out. • Limit traffic speeds on unpaved roads to 15 mph; • Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent. • Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site; • Install wind breaks at windward side(s) of construction areas; • Suspend excavation and grading activity when winds exceed 20 mph; and <p>Limit area subject to excavation, grading, and other construction activity at any one time. Regardless of wind speed, an owner/operator must comply with Regulation VIII's 20 percent</p>						

Implementation Measures

No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near - Term	Mid-Term	Long- Term	Ongoing
	opacity limitation.						
AR-7	<p>The following measures shall be incorporated into the design of projects to be constructed within the City of Patterson to minimize operational emissions:</p> <ul style="list-style-type: none"> a. Bike racks shall be provided at proposed commercial land uses and schools, at a minimum rate of one bike rack space per 20 vehicle parking spaces; b. Non-residential projects should include facilities for bike commuters including showers, lockers and changing space. c. Multi-unit residential projects shall include long-term bike parking facilities (locker, locked room or standard bike rack under surveillance); d. Bike lanes (Class II) shall be provided on all arterials and linked to a regional bikeway network; e. Sidewalks shall be provided on all roadways to facilitate pedestrian access to land uses; f. New roads and major roadway improvements shall provide adequate roadway widths to safely accommodate buses and provide bus turn-outs and shelters as needed to serve proposed commercial and industrial land uses, and schools; g. Commercial projects shall consider charging for parking (if determined to be feasible by the City Council) to entice use of the transit system; h. Parking lots shall provide pedestrian pathways that connect to transit facilities; i. Facilities for charging electric vehicles shall should be provided as an amenity for residential land uses; 	<p>AR-1.1 AR-1.3 AR-1.4 AR-3.2</p>	<p>City Council Planning Commission Planning Department Building Department</p>				■

Implementation Measures

No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near - Term	Mid-Term	Long- Term	Ongoing
	<p>j. Electrical outlets shall be provided to facilitate use of electrical landscape maintenance equipment;</p> <p>k. Residential units shall be pre-wired with internet cables/lines to facilitate telecommuting;</p> <p>l. Wood-burning heaters and fireplaces shall be prohibited; and</p> <p>m. Energy conservation measures shall be implemented to exceed Title 24 requirements, and may include reflective roofing materials, energy efficient lighting, appliances, heating and cooling systems, use of natural lighting (skylights or solar tubes), and use of awnings and overhangs.</p>						
AR-8	<p>The following measures shall be required as a condition of approval for development projects with the potential to have adverse air quality impacts to sensitive land uses:</p> <ul style="list-style-type: none"> ▪ Maintain a minimum 500 foot separation between sensitive land uses and the Interstate 5 freeway; ▪ Maintain a minimum 1,000 foot separation between sensitive land uses and major rail yards; ▪ Maintain a minimum 1,000 foot separation between sensitive land uses and major distribution centers (more than 100 trucks per day); ▪ Maintain a minimum 300 foot separation between sensitive land uses and dry cleaning operations (500 feet for operations with two or more machines); and ▪ Maintain a minimum 50 foot separation between sensitive land uses and gasoline dispensing facilities (300 feet if throughput exceeds 3.6 	<p>AR-1.3 AR-1.4 AR-1.5 AR-4.1 AR-4.2</p>	<p>City Council Planning Commission Planning Department Building Department</p>				■

Implementation Measures							
No.	Implementation Measure	Policies/ Goals	Responsibility	Timeframe			
				Near - Term	Mid-Term	Long- Term	Ongoing
	million gallons per year).						
AR-9	When a project could expose sensitive receptors to toxic air contaminants the City shall require an applicant to perform a prioritization on all sources of emissions in accordance with guidelines adopted by the San Joaquin Unified Air Pollution Control District to determine if it is necessary to conduct a Health Risk Assessment. If a project has a prioritization score of 10 or more, the project has the potential to exceed the District's significance threshold for health impacts of 10 in a million and a Health Risk Assessment shall be performed.	AR-1.3 AR-1.4 AR-1.5 AR-4.1 AR-4.2	City Council Planning Commission Planning Department Building Department				■

Near-Term = Within 5 Years
 Mid-Term = Within 10 Years
 Long-Term = 10 Years and Beyond