

SECTION 4: MONITORING AND TRACKING

The main purposes of this section are to identify benchmarks and measurable criteria that will enable the City to track progress in implementing the Air Quality Element.

4.1 - Benchmarks for Tracking Progress

As part of the annual report to the City Council on progress in implementing the General Plan, staff will report on benchmarks achieved that implement goals, objectives, and policies having air quality benefits. The City provides development data on a regular basis to Kings County for incorporation into its Geographic Information System (GIS). GIS land use data is used in the regional transportation model to forecast future transportation needs. Parcel level data is maintained for tax assessment purposes. The City will work with the County to obtain up-to-date land use and development reports and maps from the GIS to assist in tracking development related metrics. Appropriate benchmarks and the means to track them will be developed within 12 months of adoption of the General Plan and will be adjusted over time to respond to changing conditions and lessons learned. The following benchmarks are proposed:

Land Use Benchmarks

1. Summary of building permits for new construction issued during the previous year
2. The amount of residential development approved in new subdivisions and parcel maps
3. The average density of new development approved during the previous year
4. Progress in improving the jobs/housing balance in the City
5. Inventory of vacant land in Hanford by designation including change from previous year

Resource Conservation Benchmarks

1. Status report on achieving landfill recycling and diversion targets
2. Progress achieved on landfill methane capture projects
3. Progress achieved on water conservation programs and projects
4. Progress achieved on water reuse projects
5. Progress achieved on wastewater treatment plant methane capture projects

Transportation and Circulation Benchmarks

1. San Joaquin Valley Blueprint implementation status report
2. Transit ridership statistics

3. Transit route expansions and changes to service frequency
4. New lane miles of roads built by functional classification
5. Progress in implementing congestion relief projects
6. Status report on Kings County rail projects impacting Hanford
7. Report on traffic calming projects completed

Air Quality Benchmarks

1. Compile a report from information provided by the SJVAPCD and ARB on air quality in Kings County and Hanford during the previous year and upcoming regulations and initiatives impacting the City.
2. Inventory City fleet vehicles replaced with conventionally fueled vehicles compared to those fueled by alternative fuels.
3. Create a public education program status report (number of City events, sponsorships, outreach materials developed and distributed).
4. SJVAPCD Rule 8061 – Paved and Unpaved Roads Compliance Report. Document City actions to reduce fugitive dust from City roads.
5. SJVAPCD Rule 9510 – Indirect Source Review. Create a list of projects in Hanford that complied with the rule. Include mitigation fees paid and emission reductions reported by the SJVAPCD for the projects.
6. Compile solar roof statistics for Hanford (number of installations of solar panels, and cumulative generation capacity using information from building permits).
7. List projects that exceed Title 24 energy efficiency standards and those that achieved certification through programs such as those offered by the LEED program. Include estimated energy savings by project and cumulatively.
8. Identify private sector initiatives in construction, agriculture, and industry that reduce energy consumption, promote alternative energy use, or voluntarily reduce air pollutant emissions.
9. Create a Greenhouse Gas Reduction Progress Report that quantifies the benefits from all City initiatives toward meeting reduction targets.
10. Report on Transportation Control Measure (TCM) implementation on annual basis through KCAG to the SJVAPCD, as well as those TCM commitments not met during the year.

SECTION 5: GLOSSARY OF TERMS AND ACRONYMS

Air Basin. An area of the State designated by ARB pursuant to Subdivision (a) of Section 39606 of the California Health & Safety Code.

Air Pollutants. Substances that are foreign to the atmosphere or are present in the natural atmosphere to the extent that they may result in adverse effects on humans, animals, vegetation, and/or materials.

Alternative Fuels. Fuels such as methanol, ethanol, natural gas, and liquid petroleum gas that are cleaner-burning and contribute to the attainment of ARB's emission standards.

Ambient Air. Air occurring at a particular time and place outside of structures. Often used interchangeably with outdoor air.

Anthropogenic. Of, relating to, or influenced by the impact of man on nature.

APCD (Air Pollution Control District). A county agency with authority to regulate stationary sources of air pollution (such as refineries, manufacturing facilities, and power plants) within a given county, and governed by a District Air Pollution Control Board composed of the elected county supervisors (compare Air Quality Management District (AQMD) and Unified District).

AQAP (Air Quality Attainment Plan). A plan prepared by an APCD/AQMD designated as a non-attainment area, to comply with the California Clean Air Act for purpose of meeting the requirements of the California Ambient Air Quality Standards.

ARB (California Air Resources Board). The State's lead air quality agency consisting of a nine-member board appointed by the Governor, which is fully responsible for motor vehicle pollution control and which possesses oversight authority over California's air pollution management program.

Areawide Sources. Also known as "area" sources, these include multiple stationary emission sources such as water heaters, gas furnaces, fireplaces, and woodstoves. The California Clean Air Act requires districts to include these area sources in the AQMPs.

Atmosphere. The gaseous mass or envelope surrounding the earth.

Attainment. Achieving and maintaining the air quality standards (both state and federal) for a given standard.

Attainment Area. An area that is in compliance with the National and/or California Ambient Air Quality Standards.

CAAQS (California Ambient Air Quality Standards). Specified concentrations and durations of air pollutants, recommended by the California Department of Health Services and adopted into regulation by the Air Resources Board, that relate the intensity and composition of air pollution to undesirable effects. CAAQS are the standards that must be met pursuant to the requirements of the California Clean Air Act.

California Clean Air Act. A California law passed in 1988 that provides the basis for air quality planning and regulation independent of federal regulations, and that establishes new authority for attaining and maintaining California's air quality standards by the earliest practicable date. A major element of the Act is the requirement that local APCDs/AQMDs in violation of the CAAQS must prepare attainment plans that identify air quality problems, causes, trends, and actions to be taken for attainment.

CEQA (California Environmental Quality Act). A state law intended to protect the environment of California. It is codified in Sections 21000 through 21177 of the Public Resources Code. CEQA establishes mandatory ways by which governmental (public agency) decision makers are informed about the potential significant environmental effects of proposed projects. CEQA also mandates the identification of ways to avoid or significantly reduce damage to the environment. After preliminary review or the completion of an Initial Study, the lead agency may decide to prepare an Environmental Impact Report (EIR) for a project. An EIR is an informational document used to inform public agency decision makers and the public of the significant effects of a project. The EIR also identifies possible ways to eliminate or minimize the significant effects and describes reasonable alternatives to the project. A court decision has determined that both alternatives and mitigation measures must be discussed in the EIR.

CMAQ (Congestion Mitigation and Air Quality). A special funding program for state and local governments under the 2005 enacted SAFETEA-LU, the latest federal transportation legislation. The CMAQ program funds transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards. While all CMAQ funding must go to transportation-related projects that demonstrate an air quality benefit, Metropolitan Planning Organizations and local governments are to give priority in distributing CMAQ funds for diesel engine retrofits and other cost-effective, emission reduction and congestion mitigation activities that provide air quality benefits.

CO (Carbon monoxide). A colorless, odorless gas resulting from the incomplete combustion of fossil fuels. Over 80 percent of the CO emitted in urban areas is contributed by motor vehicles. CO interferes with the blood's ability to carry oxygen to the body's tissues and results in numerous adverse health effects. CO is a criteria air pollutant.

CO₂ (Carbon dioxide). A colorless, odorless, gas that occurs naturally in the earth's atmosphere. Significant quantities are also emitted into the air by fossil fuel combustion. Emissions of CO₂ have been implicated in increasing the greenhouse effect.

Concentration. The amount of an air pollutant present in a unit sample, usually measured in parts per million (ppm) or micrograms per cubic meter (µg/m³).

Criteria Air Pollutant. An air pollutant for which acceptable levels of exposure can be determined and for which a Federal or California Ambient Air Quality Standard has been set. Examples include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM₁₀ (see individual pollutant definitions).

Emission Standard. The maximum amount of a pollutant that is permitted to be discharged from a polluting source such as an automobile or smokestack.

Emissions Inventory. An estimate of the quantity of pollutants emitted into the atmosphere over a specific period such as a day or a year. Considerations that go into the inventory include type and location of sources, the processes involved, and the level of activity.

EPA (U.S. Environmental Protection Agency). The federal agency charged with setting policy and guidelines, and carrying out legal mandates for the protection of national interests in environmental resources.

Federal Clean Air Act. A federal law, first enacted in 1970, that forms the basis for the national air pollution control effort. Last amended in 1990, the Clean Air Act establishes ambient air quality (health) standards and prescribes the requirements and dates to meet these standards (such as in State Implementation Plans).

Goal. A general ultimate purpose toward which effort is directed.

Greenhouse Effect. The warming effect of the earth's atmosphere on the earth. Light energy from the sun that passes through the earth's atmosphere is absorbed by the earth's surface and re-radiated into the atmosphere as energy. The heat is then trapped by the air, creating a situation similar to that which occurs in a greenhouse.

Hydrocarbon (HC). Any of a large number of compounds containing various combinations of hydrogen and carbon atoms. They may be emitted into the air as a result of fossil fuel combustion and fuel volatilization, and are a major contributor to smog.

Implementation. The enactment of policies, usually through the use of zoning and land division ordinances.

ISR (Indirect Source Review). A rule or regulation that governs entities such as stationary facilities, buildings, structures, properties, and/or roads that, through their construction to operation, indirectly contribute to air pollution. This includes projects and facilities that attract or generate mobile sources activity (autos and trucks), such as shopping centers, employment sites, schools, and housing developments, which results in the emissions of any regulated pollutant.

KCAG. Kings County Association of Governments. A voluntary association of local governments, designated by the State of California. KCAG is the Regional Transportation Planning Agency for Kings County.

Mobile Sources. Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes (contrast with stationary sources).

Monitoring. The periodic or continuous sampling and analysis of air pollutants in ambient air or from individual pollutant sources.

NAAQS (National Ambient Air Quality Standards). Standards set by the federal EPA for the maximum levels of air pollutants that can exist in the ambient air without unacceptable effects on human health or the public welfare.

Non-attainment Area. An area identified by the EPA and/or ARB as not meeting either NAAQS or CAAQS standards for a given pollutant.

NSR (New Source Review). The mechanism to assure that new and modified stationary sources will not interfere with the attainment or maintenance of any ambient air quality standard, or prevent reasonable further progress towards the attainment or maintenance of any ambient air quality standard. A program used in a non-attainment area to permit or site new permit or site new industrial facilities or modifications to existing industrial facilities that emit non-attainment criteria air pollutants. The two major requirements of NSR are Best Available Control Technology and Offsets.

Objective. The object of a course of action, midway in specificity between a goal, or general purpose, and a policy, or specific action statement.

Ozone (O₃). A pungent, pale, blue, reactive toxic gas consisting of three oxygen atoms. It is a product of the photochemical process involving the sun's energy. Ozone exists in the ozone layer as well as at the earth's surface. Ozone at the earth's surface causes numerous adverse health effects and is a criteria air pollutant. It is a major component of smog.

Ozone Layer. A layer of ozone 12 to 15 miles above the earth's surface that helps to filter out harmful ultraviolet rays from the sun. It may be contrasted with ground-level ozone, which exists at the earth's surface and is a harmful component of photochemical smog.

Ozone Precursors. Compounds such as hydrocarbons and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, the principal component of smog.

Pedestrian-Oriented Development (POD). Any of a number of design strategies that emphasize pedestrian access over automobile access. They typically provide pedestrian amenities such as sidewalks, street trees, commercial buildings at street frontage, safe street crossings, etc.

PM₁₀ (Particulate Matter). A major air pollutant consisting of solid or liquid matter such as soot, dust, aerosols, fumes, and mists less than 10 microns in diameter (1 micron = 1/1,000,000 meter = 0.00003937 inch). PM₁₀ causes visibility reduction and adverse health effects, and it is a criteria air pollutant.

Policy. A specific action statement intended to guide future decision-making.

ROG (Reactive organic gas). Hydrocarbon compounds that are reactive and may contribute to the formation of smog. Also sometimes referred to as volatile organic compounds (VOCs) and non-methane organic compounds (NMOCs).

Smog. A combination of smoke, ozone, hydrocarbons, nitrogen oxides, and other chemically reactive compounds that, under various conditions of weather and sunlight, may result in a murky brown haze that causes adverse health effects. A primary source of smog is automobiles.

Smoke. The gaseous products of incomplete burning of carbonaceous materials made visible by the presence of small particles of carbon.

State Implementation Plan. A document prepared by each state describing existing air quality conditions and measures that will be taken to attain and maintain National Ambient Air Quality Standards. In California, districts prepare non-attainment area plans to be included in California's State Implementation Plan.

Stationary Sources. Non-mobile sources such as refineries, power plants, and manufacturing facilities that emit air pollutants (contrast with mobile sources).

Sulfur dioxide (SO₂). A pungent, colorless gas that is formed by the combustion of fossil fuels. Power plants, which may use coal or oil high in sulfur content, have traditionally been major sources of SO₂. SO₂ is a criteria pollutant.

Sulfur oxides. Acrid, corrosive, poisonous gases produced chiefly when fuel containing sulfur is burned. The principal sources of sulfur oxides are electric generating plants and industrial plants.

Transit-Oriented Development (TOD). Mixed-use neighborhoods, up to 160 acres in area, which are developed around a transit stop and core commercial area. The entire TOD must be within an average of 2,000 feet of walking distance of a transit stop. Secondary areas of lower density housing, schools, parks, and commercial and employment uses surround TODs for up to 1 mile.

VMT (vehicle miles traveled). A term that reflects the number of miles traveled by all types of vehicles on a particular roadway or in a specific area such as a city, county, or region.

Volatile organic compounds (VOCs). Any organic compound containing at least one carbon atom except for specific exempt compounds found to be non-photochemically reactive.