Appendix B
Air Quality Management and Ambient Air Quality Standards

B.1 Introduction

This appendix summarizes air quality management responsibilities of various federal, state, regional, and local government agencies (see Table B.1). In addition, this appendix includes a summary of the major federal and State laws, regulations, and programs that establish the legal framework for protecting and improving air quality in El Dorado County. Table B.2 shows the national and state ambient air quality standards

B.2 Air Quality Management

B.2.1. Agency Responsibilities. Table B.1, below, lists the principal governmental agencies that are responsible for air quality in El Dorado County, and briefly summarizes their major responsibilities.

Table B.1 Air Quality Management Regulatory Responsibilities

Govt. Level	Legislation	Implementing Agency	Responsibilities
Federal	Clean Air Act	U.S. Environmental Protection Agency	Enforce CAA, establish national ambient air quality standards, regulate major emission sources such as on- and off-road vehicles, power plants, industrial sources, hazardous pollutants
State	California Clean Air Act (H&S § 39600 et seq.) AB 1807, Air Toxics Contaminants Act	California EPA, Air Resources Board, Office of Environmental and Health Hazard Assessment	Implement CCAA, meet state requirements of CAA, establish state ambient air quality standards, set CA vehicle emission standards
Regional	California Health and Safety Code §39000 - §44474	El Dorado County APCD	Monitor air quality, design programs to attain and maintain state and federal ambient air quality standards, develop air quality rules that regulate point source, area source, and mobile source activity emissions, establish permitting requirements for stationary sources, enforce air quality rules through inspections, education, training, or fines.
Regional	Tahoe Regional Planning Compact, as amended	Tahoe Regional Planning Agency (TRPA)	Serve as the lead air quality planning agency and regional transportation planning agency for the Lake Tahoe area; approve development consistent with TRPA plans and ordinances.

Local	Local Ordinances, Air Quality Element of General Plan	Public Agencies including Local Governments and County Transportation Commissions	Control or mitigate air pollution through police powers and land use decision-making authority, General Plan air quality elements, congestion management program, local ordinances, administrative actions, CEQA review and mitigation monitoring

B.2.2 Federal Programs

The **federal Clean Air Act** of 1970 (CAA) required the U.S. EPA to establish national ambient air quality standards (NAAQS) to protect public health and welfare. EPA has adopted NAAQS for six pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate, and lead. These pollutants are commonly referred to as "criteria" pollutants because they are the most prevalent air pollutants known to be deleterious to human health and extensive health effects criteria documents have been prepared for each of these contaminants.

The CAA required states exceeding NAAQS to prepare State Implementation Plans (SIPs) showing how the standards would be met by December 1987. The CAA was amended in 1977, and again in 1990, to extend the deadline for compliance and require that revised SIPs be prepared. Sanctions were imposed for the failure of a state to submit and implement an acceptable plan, consisting of denial of federal highway funding and more stringent permit requirements for major stationary sources. The 1990 amendments established five categories of air pollution severity for ozone nonattainment areas (marginal, moderate, serious, severe, and extreme). The SIP requirements vary, depending on degree of nonattainment severity.

The "conformity" provisions of the Act are designed to ensure that federal agencies contribute to, instead of jeopardize, efforts to achieve the NAAQS. In November 1993, the U.S. EPA issued regulations governing general conformity for non-transportation-related federal actions, followed in 1997 by regulations governing conformity of transportation projects. Further details on the federal conformity program are provided in Chapter 9.

Also, the U.S. EPA has programs for identifying and regulating hazardous air pollutants (HAPs). The 1990 Clean Air Act Amendments directed EPA to set standards for HAPs and to require facilities to reduce emissions of controlled chemicals. The 1990 Amendments specified that 174 industrial sources be regulated. An industry is classified as a major source and must be regulated if it emits ten tons per year of any of the listed HAPs or a combination of 25 tons or more of all listed HAPs.

The **National Environmental Policy Act** (NEPA) requires that major projects conducted or approved by the federal government be subject to environmental assessments. Where the potential for significant adverse environmental impacts exists, an Environmental Impact Statement must be prepared and circulated to affected jurisdictions and interested public.

The **Transportation Equity Act for the 21st Century** (TEA-21) provides funds for transportation projects and activities that contribute to meeting air quality standards, including transit, pedestrian, and bicycle-oriented projects. Under TEA-21, the Congestion Management

and Air Quality Improvement Program (CMAQ) directs funds toward transportation projects that will contribute to the attainment of NAAQS for ozone and carbon monoxide. The funds are distributed based on population size and severity of a region's air pollution problem.

B.2.3 California Programs

The **California Clean Air Act** (CCAA) of 1988, as amended in 1992, requires air districts like the El Dorado County APCD to develop and implement plans to attain statewide ambient air quality standards established by the California Air Resources Board (CARB). In general, the district plans must be designed to achieve and maintain state ambient air quality standards through emission reductions from stationary and transportation sources by the "earliest practicable date," and must reduce excessive emissions of pollutants by five percent or more per year. The District and CARB are also directed to meet the state's obligations under the federal CAA.

Under the **California Motor Vehicle Emission Control Program**, implemented by CARB, new on- and off-road vehicles must meet stringent exhaust and evaporative emission standards. In general, California motor vehicle emission standards are more stringent than the federal standards; however, other states may voluntarily impose California standards. CARB regulations require manufacturers selling new vehicles in California to phase in "low emission" light- and medium-duty vehicles, including a specified number of "zero-emission" vehicles, beginning in 2003. When fully implemented, these regulations will reduce emissions from vehicles by over 99% compared to uncontrolled vehicles. CARB has also set requirements for the sale and distribution of low-emission gasoline and Diesel fuels, and implements a heavy-duty vehicle inspection program, which applies to Diesel-powered trucks and buses. In 2000, CARB declared Diesel particulate exhaust emissions a toxic air contaminant (TAC), thus triggering further emission control measures for Diesel vehicles.

The California Bureau of Automotive Repair administers the vehicle inspection and maintenance program (I/M or "Smog Check" Program), which requires in-use vehicles with excessive emissions to be repaired.

California Planning Law and Guidelines do not require an air quality element for general plans. However, the El Dorado County general plan, as part of its Public Health, Safety and Noise Element, does include specific air quality objectives. Among the objectives are reductions in the number of vehicle trips, clean fuels, expanded use of transit, project designs that minimize direct and indirect emissions, separation of pollution sources from sensitive receptors, reduced emissions from construction activities, and protection of vegetation. California requires that general plans be consistent with any air quality policies and programs established by local jurisdictions like the APCD. Local plans must also be consistent with regional air quality plans such as the Sacramento Area Regional Ozone Attainment Plan.

The **Sacramento Area Regional Ozone Attainment Plan** is a regional plan required by the federal government. It was prepared jointly by the air districts in the Sacramento area to address how the Sacramento Region will attain the NAAQS. The plan covers the Mountain Counties Air Basin of El Dorado County (i.e., the western slope of the Sierras), and El Dorado County is a participant in

the plan. The plan contains stationary source controls, motor vehicle emission controls, and transportation system improvement measures that would reduce the amount of air pollutants released into the atmosphere; with assistance from state programs implemented by CARB, the participating air districts must undertake emission control measures as needed to attain the NAAQS for ozone by 2005.

The **Tahoe Regional Planning Agency**, or TRPA, has adopted a Regional Plan that includes an Air Quality Element that focuses on achieving the national and state ambient air quality standards as well as special TRPA-adopted regional and subregional visibility standards, and the reduction of nitrate deposition from vehicle NOx emissions. TRPA has jurisdiction within the Lake Tahoe Air Basin portion of El Dorado County. TRPA's ordinances and Regional Transportation Plan contain specific measures designed to monitor and achieve the air quality objectives of its Regional Plan. The APCD's rules and regulations are also governing in the Lake Tahoe area.

Motor Vehicle Fees. Since 1988, California law (AB 2766, Sher) allows the district to impose a $4.00 surcharge fee on vehicles registered within its jurisdiction. These surcharge revenues are collected by the Department of Motor Vehicles and are allocated to programs that reduce air pollution from motor vehicle activity in the county.

B.3 Ambient Air Quality Standards

Table B.2, below, shows the national and state ambient air quality standards. As explained further in Chapter 3, the District uses the national and state ambient air quality standards as part of its objective or quantitative criteria for determining significance under CEQA for all pollutants other than reactive organic compounds (ROG) and oxides of nitrogen (NOx), i.e., a project that has emissions other than ROG or NOx that cause or contribute to a violation of any national or state ambient air quality standard is considered to have a "significant" air quality impact.

Table B.2 Ambient Air Quality Standards

Pollutant	Unit of Measure	California	National
Ozone	1-Hour 8-Hour	0.09 N/A	0.12 ppm 0.08 ppm
Carbon Monoxide	1-Hour 8-Hour	20.0 ppm 9.0 ppm	35.0 ppm 9.0 ppm
Carbon Monoxide (Lake Tahoe Air Basin)	8-Hour	6 ppm	N/A
Nitrogen Dioxide	1-Hour Annual	0.25 ppm N/A	N/A 0.053 ppm
Sulfur Dioxide	1-Hour 24-Hour Annual	0.25 ppm 0.04 ppm N/.A	N/A 0.14 ppm 0.030 ppm
Respirable Particulates (PM_{10})	24-Hour Annual Average[1]	50 µg/m^3 30 µg/m^3	150 µg/m^3 50 µg/m^3
Fine Particulate Matter ($_{PM2.5}$)	24-Hour Annual Average[1]	N/A N/A	65µg/m^3 15µg/m^3
Sulfates	24-Hour	25 µg/m^3	N/A
Lead	30-Day Average Calendar Quarter	1.5 µg/m^3 N/A	N/A 1.5 µg/m^3
Hydrogen Sulfide	1-Hour	0.03 ppm	N/A
Vinyl Chloride	24-Hour	0.010 ppm	N/A
Visibility Reducing Particles	1-Observation	Visibility >10 Miles (>30 miles for Lake Tahoe) w/ relative humidity <70%	N/A

[1] The state PM_{10} annual standard is for the geometric mean of all measurements. The national PM_{10} and $PM_{2.5}$ annual average standards are based upon the arithmetic mean of all measurements; ppm = parts per million. µg/m^3 = micrograms per cubic meter. The NAAQS shown serve as both primary (health-related) and secondary (welfare-related) standards, except that for SO_2 the standards shown are the primary NAAQS; there is also a separate secondary NAAQS for SO_2 of 0.5 ppm. Implementation of the 8-hr NAAQS for ozone and the NAAQS for fine particulate has delayed by litigation and is pending further implementation guidance from the federal court and EPA.
SOURCE: California Air Resources Board.