Report to the Public 2006-2007



Colorado Air Quality Control Commission Report to the Public 2006-2007



Colorado Department of Public Health and Environment

The Report to the Public is issued by the Colorado Air Quality Control Commission and prepared by the Air Pollution Control Division of the Colorado Department of Public Health and Environment,

4300 Cherry Creek Drive South Denver, CO 80246, (303) 692-3108 Editor/Designer: Robert True

Statutory requirement for public report

Colorado Revised Statutes, Title 25, Health

25-7-105. Duties of the Commission

(4)(a) The commission and the state board of health shall hold a public hearing during the month of October of each year in order to hear public comment on air pollution problems within the state, alleged sources of air pollution within the state, and the availability of practical remedies therefor; and at such time the technical secretary shall answer reasonable questions from the public concerning administration and enforcement of the various provisions of this article, as well as rules and regulation promulgated under the authority of this article.

(5) Prior to the hearing required under

subsection (4) of this section, the commission shall prepare and make available to the public a report which shall contain the following specific information:

- (a) A description of the pollution problem in each of the polluted areas of the state, described separately for each such area;
- (b) To the extent possible, the identification of sources of air pollution in each separate area of the state, such as motor vehicles, industrial sources, and power-generating facilities;
- (c) A list of all alleged violations of emission control regulations which shows the status of control procedures in effect with respect to each such alleged violation.

Colorado Air Quality Control Commission

www.cdphe.state.co.us/op/aqcc/

Commissioner	Resident of:	Term expires:
Garrett Clemons	Denver	January 31, 2009
Teresa Coons	Grand Junction	January 31, 2010
Doug Lawson	Littleton	January 31, 2008
Robert Lowdermilk	Denver	January 31, 2008
Cynthia Peterson, chair	Littleton	January 31, 2008
Barbara Roberts, vice-chair	Golden	January 31, 2010
Jon Slutsky	Wellington	January 31, 2009
Jim Wilson, secretary	Superior	January 31, 2010
Julie Wrend	Silverthorne	January 31, 2009

Douglas A. Lempke, Technical Secretary

Theresa Martin, Program Assistant

STATE OF COLORADO

Bill Ritter, Governor James B. Martin, Executive Director

COLORADO AIR QUALITY CONTROL COMMISSION

http://www.cdphe.state.co.us/op/aqcc/

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Dear fellow Coloradoan,

The Colorado Air Quality Control Commission presents this annual report to share information about the quality of our air, to recognize the accomplishments that have been made to protect air quality in Colorado and to summarize the challenges that we all face.

The commission is the state agency responsible for developing and adopting regulatory programs to protect and improve air quality in Colorado. It consists of nine governor-appointed and senate-confirmed citizens with many varied backgrounds. The commission also is responsible for hearing appeals of the Air Pollution Control Division's implementation of the air quality management programs we adopt.

During the past year, the commission has worked to adopt and better understand programs that:

- Reduce air pollutant emissions from oil and gas exploration and development
- Reduce ozone pollution in the Denver area and throughout the state
- Address air pollution related ecosystem impacts in Rocky Mountain National Park
- Reduce mercury emissions at coal fired electric utilities
- Improve visibility in Colorado National Parks and Wilderness Areas
- Identify and repair high polluting motor vehicles

While much has been done during the past year, the commission believes several challenges must be addressed in the coming year. During the next 12 months the commission will focus on:

- Reducing elevated ozone concentrations in the Denver metropolitan area and northern Front Range
- Adopting a plan to improve visibility in National Parks and Wilderness Areas
- Adopting a plan to repair high polluting cars and light-duty trucks
- Investigating impacts of climate change

There are several organizations that work every day to protect air quality in our state. State agencies, federal agencies, local government organizations, and the businesses and industries to which many of the rules apply, all play a significant role in air quality protection. Colorado citizens also play an increasingly important role in the quality of air in Colorado. Everyday actions such as reduced driving, vehicle maintenance and energy conservation can significantly improve air quality.

I encourage you to attend the monthly commission meetings and express your views on these and any other issues. Commission meetings typically are conducted on the third Thursday of each month and may extend into the next day.

Agendas, minutes and more information are available on our web site: www.cdphe.state.co.us/op/aqcc/

Sincerely,

Cynthia Peterson

Chair

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A ir Quality Overview

Denver's early economy was fueled by wood, coal and oil. In 1877, six coal-fired railroads operated through Denver. Smoke stacks were accepted as the price of prosperity. Smoke was evidence of the energy that was building the area's economy, and oily soot was considered a small price to pay. For almost a century soot and smoky air in the Denver area were considered normal.

By the 1950s, the use of coal as a home heating source was replaced by natural gas. Nationally, scientists and health authorities were beginning to recognize the impact from air pollution.

By 1960, definite improvements had occurred in Denver's air. Smoke and soot were reduced noticeably and people began to realize that improvements could be made. Motor vehicle and power plant emissions were recognized as uncontrolled sources where significant reductions could be made.

The 1970 Clean Air Act was the beginning of the nationwide effort to markedly improve the health of citizens and the environment by improving the nation's air quality. In Colorado, the 1970 Air Pollution Control Act created the Air Quality Control Commission, which adopted the state's first air quality regulations.

In 1975, Denver had 177 days in which its air was in "unhealthful" categories, ranking second behind Los Angeles. High pollution areas of the state were designated "nonattainment" with the U.S. Environmental Protection Agency's National Ambient Air Quality Standards (NAAQS). The commission instituted measures to reduce pollutant levels to meet the standards.

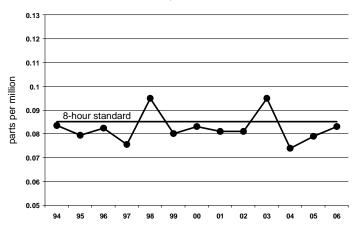
By 2002, Colorado had accomplished a milestone when the U.S. Environmental Protection Agency redesignated the Denver area as "in attainment/maintenance." Denver was the first urban area in the nation with numerous violations to be redesignated to attainment status.

Credit for this achievement should go to those who helped make it occur, including:

- automobile manufacturers who improved the emissions control systems on their vehicles;
- drivers who kept their vehicles well maintained and in good repair to pass the emissions test;
- the businesses and industries that installed and maintained emissions control equipment;

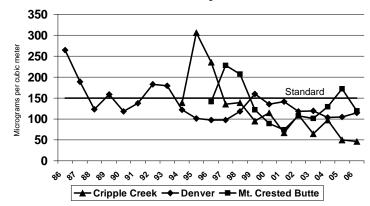
Denver Metro Ozone (O₃)Trends

NREL Golden Monitor, 4th maximum 8-hour values



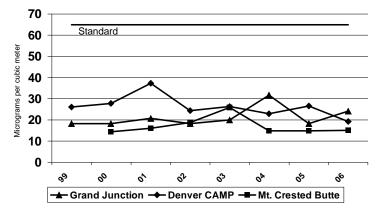
PM10 Trends

24 hour average



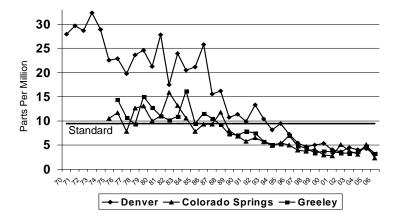
PM2.5 Trends

98th percentile value, 24-hour average



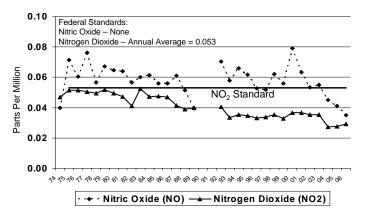
Carbon Monoxide (CO) Trends

2nd 8-hour maximum value



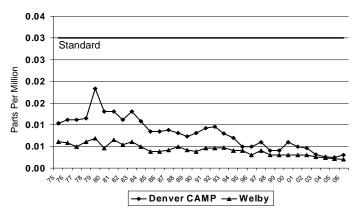
Oxides of Nitrogen (NO_X) Trends

Annual Average, CAMP station, 2105 Broadway, Denver



Sulfur Dioxide (SO₂) Trends

Annual Average



- the homeowners who have cooperated with residential burning control programs;
- those who have participated in voluntary programs to improve air quality; and,
- municipalities and agencies that have reduced road sanding and improved street sweeping.

Ozone

Ozone has been the most persistent pollutant in the Denver area. During the summer of 2007 ground-level ozone readings violated the U.S. Environmental Protection Agency's eight-hour ozone standard for the first time since 2003, according to preliminary monitoring results. The EPA likely will designate a nine-county area as "nonattainment" for ozone, which will require new stricter ozone control measures. The new measures will be developed during a detailed planning process throughout 2008.

Ground-level ozone should not be confused with natural ozone high in the atmosphere. Stratospheric ozone protects the earth from the sun's ultraviolet rays. Ground-level ozone is a summertime pollutant formed when volatile organic compounds and nitrogen oxides mix and react in the presence of sunlight. Ground-level ozone is a lung irritant.

Other Pollutants

The carbon monoxide standard has not been violated since 1995. Carbon monoxide deprives the body of oxygen.

No violations of the coarse particle (PM10) standard have occurred since 1993. PM10 can reduce lung function and cause respiratory problems. In the Denver area most PM10 is caused by dust from roads. Increased street sweeping and the use of alternative deicers as a substitute for road sanding have reduced particulate concentrations.

No violations of the federal health-based fine particle (PM2.5) standard have occurred since monitoring began in 1999. Relatively high levels of PM2.5 were monitored in February 2007, but the standard is based on a three-year average and no violations resulted. The majority of PM2.5 particles are generated from motor vehicle exhaust. The particles can be inhaled deeply into the lungs and can cause damage to the respiratory system. Fine particles also degrade visibility and largely are responsible for urban haze.

Causes of ozone pollution in Colorado

Ozone pollution is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOx) react in the presence of sunlight. Emissions from motor vehicles, industry and even vegetation contribute to ozone formation.

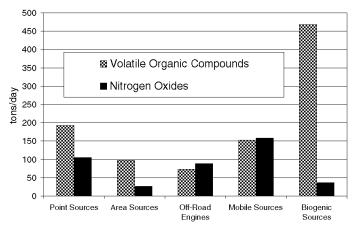
Ozone can cause breathing difficulties and respiratory infections in the elderly, the young and those with pre-existing ailments such as asthma. Even healthy people who exercise or work outdoors can experience respiratory effects from ozone.

Ozone is colorless and odorless at ambient concentrations. In the upper stratosphere, ozone helps protect the earth from ultraviolet radiation.

The highest ground-level ozone concentrations occur in the summer when sunlight is more intense and meteorological conditions are more stagnant. Hot, still days can result in reactive pollutants forming a mass of ozone.

The Air Quality Control Commission adopted an Ozone Action Plan in 2004 and will be considering another plan in 2008 to further reduce ozone levels. For more information see www.cdphe.state.co.us/ap/ozone.html.

Sources Contributing to Ozone Formation



Source: Early Action Compact Ozone Control Plan

Point Sources: Emissions that come from a stationary source such as factories and industrial sources and oil and gas production sites.

Mobile Sources: On-road motor vehicles.

Off-Road Engines: Lawn and construction equipment, off-road vehicles, locomotives, airplanes, etc.

Area Sources: Emissions that do not include point or mobile sources.

Biogenic Sources: Naturally occurring emissions from vegetation, including trees, plants and crops.

Sources of carbon monoxide pollution in Colorado

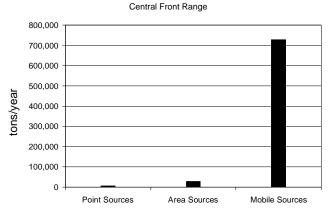
Carbon monoxide is produced primarily during incomplete combustion of fuels used in transportation and heating. It is the largest single fraction of pollutants found in urban atmospheres. About 90 percent of carbon monoxide in the Denver area comes from motor vehicles. Other sources are woodburning, aircrafts and locomotives, construction equipment, power plants and space heating.

Carbon monoxide deprives the body of oxygen and especially affects people with cardiovascular conditions.

In Denver, the daily concentration peaks occur after morning and evening rush hours. The problem is more severe in winter when cold weather causes engines to run less efficiently and meteorological conditions trap pollutants near the ground.

Denver has not violated the carbon monoxide standard since 1995. Carbon monoxide has continued to decrease due to cleaner motor vehicles and residential burning regulations.

Sources of Carbon Monoxide



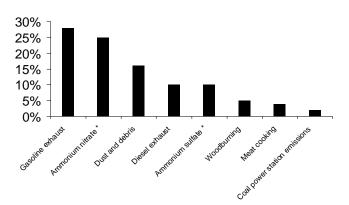
Point Sources: Emissions that come from stationary sources such as factories and industrial sources.

Mobile Sources: Both on- and off-road motor vehicles and any engines that are mobile and give off emissions.

Area Sources: Emissions that come from a broad area that do not include point or mobile sources, including emissions from heating, woodburning fireplaces, forest fires and controlled burns.

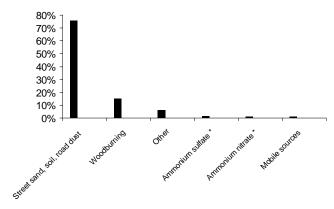
Sources of particulate matter pollution in Colorado

Denver PM2.5 Contributions



This chart represents average source and chemical contribution to the 24-hour average PM2.5 concentration at a north Denver area monitoring station during the winter.

PM10 Contributions Typical Mountain Community



This chart represents typical source and chemical contributions to PM10 during a high pollution day in the winter. Data are averaged from studies of five mountain communities in Colorado.

PM2.5

PM2.5 is composed of a mixture of particles directly emitted into the air and particles formed in the air by the chemical transformation of gaseous pollutants. This chemical transformation principally leads to ammonium sulfate and ammonium nitrate formed in the air from gaseous emissions of sulfur dioxide (SO2) and oxides of nitrogen (NOX) reacting with ammonia. The main source of SO2 is combustion of fossil fuels in boilers, and the main source of NOX is combustion of fossil fuels in boilers and motor vehicles. Some secondary particles also are formed from semi-volatile organic compounds which are emitted from a wide range of combustion sources.

PM2.5 particles have an aerodynamic diameter of 2.5 microns or less. A micron is approximately one-seventh the width of a human hair. Particles this small can be inhaled deeply into the lungs where they can damage tissue and lead to lung cancer and other respiratory diseases. PM2.5 also results in visibility degradation and haze.

PM10

PM10 refers to particulate matter that is 10 microns in diameter or smaller. The particles, consisting of solid or semi-solid material suspended in the atmosphere, are created from road dust, automobile and diesel engine exhaust, soot, and sulfates and nitrates from combustion sources.

The dust portion of PM10 includes windblown sand and dirt from roadways, fields and construction sites. Man-made particulates are created during the burning of fuels associated with industrial processes or heating. These particles include fly ash from power plants, carbon black from automobiles and diesel engines, and soot from fireplaces and woodstoves.

When inhaled deeply into the respiratory system, PM10 can affect lung and heart function, and weaken immune system defenses. The environmental effects of PM10 range from visibility degradation to climate changes and vegetation damage.

^{*} Ammonium nitrate and ammonium sulfate are formed in the atmosphere through chemical reactions as opposed to being emitted directly into the air. The North Front Range Air Quality Study (www.nfraqs.colostate.edu) concluded that the majority of ammonium nitrate is caused by motor vehicles, and three-fourths of sulfur dioxide, a precursor to ammonium sulfate, comes from coal-fired power stations.

Sources of regional haze in Colorado

Regional haze is a term for the veil of white or brown haze that obstructs vistas in many parts of the country, including areas of Colorado. The haze is caused by fine particles including sulfates, carbon, soils and nitrates. These particles are produced by power plants, industrial sources, motor vehicles, fires, and windblown dust and dirt. The particles are carried by the wind, sometimes for hundreds or even thousands of miles (in the case of transcontinental transport of pollutants).

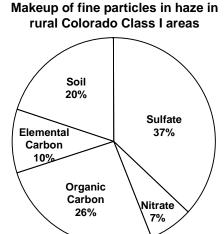
In our nation's scenic areas, the visual range has been reduced substantially by air pollution. In the West, visual range has decreased from an average of 140 miles to 35-90 miles, according to the U.S. Environmental Protection Agency (EPA).

The Colorado Air Quality Control Commission adopted a planning process in 2004 to meet the requirements of the 1999 federal Regional Haze Rule. In response, the Air Pollution Control Division is developing a Regional Haze State Implementation Plan to meet the EPA's 2008 deadline. The process requires a detailed analysis of regional haze for 12 wilderness areas and national parks in Colorado that have been designated "Class I" for visibility protection by

the EPA. The process also requires the establishment of reasonable progress goals for each of these areas, and a plan that demonstrates how the first phase of goals will be met by 2018. A major part of the federal rule requires improved emissions controls on certain types of major

industrial sources of regional haze. These emissions controls are known as Best Available Retrofit Technology, or BART. The ultimate goal of the federal Regional Haze Rule is to achieve "natural conditions" for visibility by 2064 in all Class I Areas.

The division has completed a draft section of the Regional Haze Plan that details the technical analysis of



Source: IMPROVE Report

the visibility problem for these areas. The draft and other materials can be viewed at the division's website at:

www.cdphe.state.co.us/ap/regionalhaze.html.

Sources of air toxics in Colorado

Toxic air pollutants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects. Hazardous air pollutants can increase risk of cancer, sterility and nervous system disorders.

Air toxics are a legal category of pollutants separate from the six criteria pollutants for which National Ambient Air Quality Standards have been set. While no standards have been set for air toxics, EPA has identified 33 "priority" air toxics, which are found in many urban and/or high-vehicle traffic areas.

Sources of HAPs include automobile exhaust, power plants, refineries, gas stations, and many industrial and home-use solvents, coatings, material preservatives and other chemicals.

The EPA and states are monitoring levels of air toxics, and evaluating their sources and potential control measures.

Colorado Department of Public Health and Environment staff are completing a risk assessment of air toxics at five sites in Colorado, including three sites in Denver and two in Grand Junction.

In addition to monitoring and inventory work, the Air Pollution Control Division works to reduce air toxics emissions through a variety of programs, including requiring fees for such emissions from stationary sources; automobile inspection and maintenance programs; and the Mercury-free Colorado program. A new effort to expand diesel school bus retrofitting statewide also is in development.

NOx pollution contributes to ozone, haze

Nitrogen oxides (NOx) is the generic term for a group of highly reactive gases that contain nitrogen and oxygen in varying amounts. NOx play a major role in the formation of ozone, particulate matter, haze and acid rain.

Ninety-five percent of NOx are made up of Nitrogen dioxide (NO2) and nitric oxide (NO). NO2 is a reddish brown, highly reactive gas that is formed in the ambient air through the oxidation of NO.

Reductions in emissions of NOx in some cases can lead to an increase in ozone. This is due to the complex chemistry of ozone formation. In the immediate vicinity of the NOx emissions, NO scavenges ozone. However, the NO2 that is formed can photolyze and reform ozone further downwind.

The major sources of man-made NOx emissions are high-temperature combustion processes such as those that occur in automobiles and power plants. Home heaters and gas stoves can also produce substantial amounts of NO2 in indoor settings.

Health and Environmental Effects

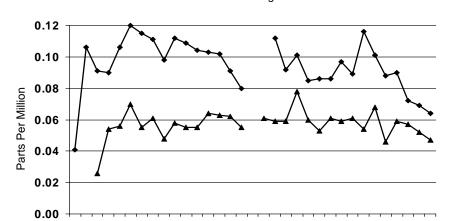
NOx react in the air to form ground-level ozone and fine particle pollution, which are associated with adverse health effects.

NOx can increase respiratory problems, cause mild symptomatic effects in asthmatic individuals and increase susceptibility to respiratory infections

NOx contribute to a wide range of environmental effects directly and when combined with other precursors in acid rain and ozone.

Increased nitrogen inputs to terrestrial and

Oxides of Nitrogen (NO_X) Trends



◆ Denver → Welby

wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems can lead to eutrophication (a condition that promotes excessive algae growth, which can lead to a severe depletion of dissolved oxygen and increased levels of toxins harmful to aquatic life). NOx also contribute to visibility impairment.

Trends in NO2 Levels and NOx Emissions

NOx are monitored at two sites in Colorado: downtown Denver's CAMP station and in Welby just north of Denver. Monitoring results show no significant trend in NOx since monitoring began in 1974, though NO2 shows a downward trend in Colorado (see additional graph on page 2).

Nationally, monitored levels of NO2 have decreased 21 percent. Nationally, average NO2 concentrations are well below the NAAQS and currently are at the lowest levels recorded in the past 20 years. During the past 20 years, national emissions of NOx have declined by almost 15 percent.

Colorado's air quality management plans

During the 1970s and 1980s, the U.S. Environmental Protection Agency (EPA) designated many Colorado cities and towns as nonattainment areas because the areas violated nationwide air quality standards. By the mid-1990s, all these areas came into compliance with the various standards. All areas have been redesignated.

The redesignations are made possible by cleaner air, and through the development and implementation of air quality management plans known as State Implementation Plans or "SIPs." These plans describe the nature of the air quality problems and the probable causes. The plans show projections of future pollutant levels and identify strategies to reduce these pollutants to acceptable levels. The plans can be viewed online at www.cdphe.state.co.us/ap/attainmaintain.html.

1-Hour Ozone Attainment Area

Location	Year of Redesignation by EPA
Denver	2001

Ozone Early Action Compact Plan

Location	Year of Appro	val by EPA
Front Range Ozone Area		2005

Nitrogen Oxide Attainment Area

Location	Year of Redesignation by EPA
Denver	1984

Lead Attainment Area

Location	Year of Redesignation by EPA
Denver	1984

Carbon Monoxide Attainment Areas

Location	Year of Redesigna	ation by EPA
Colorado Springs		1999
Denver		2002
Fort Collin	S	2003
Greeley		1999

PM10 Attainment Areas

Location	Year of Redesig	gnation by EPA
Aspen		2003
Cañon City	/	2001
Denver		2002
Lamar		2005
Pagosa Sp	orings	2001
Steamboat	t Springs	2004

Colorado Air Quality Control Commission

www.cdphe.state.co.us/op/aqcc/

The Colorado Air Quality Control Commission is responsible for developing and adopting a regulatory program to protect and improve air quality in Colorado. Typically, the commission is involved in the maintenance of the regulations through modification and revision. Much of the air quality management program currently is in place and has been adopted over time. New programs occasionally are considered by the commission.

The commission oversees the implementation of the air quality programs. The commission is responsible for hearing appeals of the Air Pollution Control Division's implementation of the programs through permit terms and conditions and enforcement actions.

Colorado's air quality management program regulates air pollutant emissions from stationary industrial sources, cars and light duty trucks, burning practices, street sanding and sweeping activities, and the use of prescribed fire.

The air quality program also is focused on visibility, odor and transportation planning impacts to future air quality.

Commission meetings typically are conducted on the third Thursday of each month and may extend into the next day. The commission encourages members of the public to attend these meetings and express their views.

Rocky Mountain National Park Initiative

www.cdphe.state.co.us/ap/rmnp.html

An initiative to address air quality at Rocky Mountain
National Park began in 2004
among the Colorado Air Quality
Control Commission (AQCC), the
Air Pollution Control Division
(APCD), the National Park
Service (NPS) and the U.S.
Environmental Protection Agency
(EPA). In March 2007, the first
draft of a Nitrogen Deposition
Reduction Plan was published by
these agencies.

For a number of years, the NPS has studied and expressed concerns about visibility degradation, increasing ozone concentrations, and nitrogen/acidic deposition at many national parks, including Rocky Mountain National Park.

During the last few years the Rocky Mountain National Park Initiative compiled and analyzed data, and discussed emission control options with decision makers. The focus of the initiative has been on nitrogen reduction. Nitrogen, in its various chemical forms, plays a key role in all three air quality issues at the park: ozone, visibility impairment and atmospheric deposition that is altering park ecosystems.

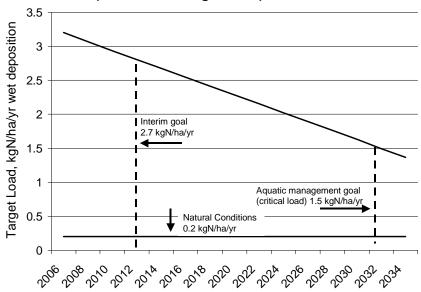
Nitrogen Deposition Concerns

After more than 20 years of research, the NPS has found that nitrogen deposition is adversely affecting the water quality, aquatic life, soils and vegetation in the park. The nitrogen enrichment is altering plant life and may be leading to eutrophication of lakes. Nitrogen comes from oxides of nitrogen (NOx) emissions from the burning of fuel, and from ammonia emissions, one-third of which comes from agricultural fertilizer use and livestock.

Nitrogen Deposition Reduction Plan

Using a collaborative approach, the participating agencies developed a Nitrogen Deposition Reduction Plan, a draft of which was





published in March 2007. A public participation process facilitated by an AQCC subcommittee helped to involve the public, and a memorandum of understanding (MOU) has been used to guide the initiative's progress in developing the plan.

The plan's goal is to reduce nitrogen deposition by the amount established under a critical load determination. The critical load for wet nitrogen deposition, set at 1.5 kilograms per hectare per year, is a threshold above which significant harmful effects to sensitive ecosystems occur. This critical load is a 52 percent reduction from current wet deposition of 3.1 kg per hectare per year, and is eqivalent to a little more than a pound per acre.

The plan relies on a "glidepath" management approach to achieve the critical load goal in the park by the year 2032 with interim milestones to be measured at five-year intervals. The first milestone for wet nitrogen deposition in the park is 2.7 kilograms per hectare per year by 2012, which is a 13 percent reduction from current levels.

The plan primarily relies upon voluntary measures and nitrogen reductions already anticipated to take effect in the first planning period. Enforceable control measures may become part of a statewide Regional Haze State Implementation Plan, but the Nitrogen Deposition Reduction Plan primarily suggests voluntary rather than enforceable measures.

The primary source of nitrogen deposited in the park are from oxides of nitrogen and ammonia, so the emission reduction strategies focus on NOx and ammonia reductions.

Oxides of nitrogen are combustion products primarily generated from the burning of fossil fuel. Therefore, reduction strategies focus on emissions of NOx from large and small stationary industrial sources and mobile sources.

Ammonia is generated from a variety of practices including agricultural operations as well as natural processes. Therefore, reduction strategies focus on ammonia emissions from agricultural sectors, including but not limited to livestock operations and application of fertilizers.

The plan will be implemented by the MOU agencies working together in a collaborative fashion. The MOU agencies will review and incorporate new data and analyses; track and assess deposition in the park and planned emission reductions; develop a contingency plan that could be implemented should the initial and any subsequent interim deposition goals not be realized and assess the need for future resources.

Ozone Concerns

In recent years, ambient concentrations of ozone measured at a monitor near the park have approached the level of the eight-hour National Ambient Air Quality Standard (NAAQS) on many occasions. While the ozone levels have not resulted in a formal violation of the standard, ozone concentrations are high enough that human health may be impacted. In addition, the NPS has found evidence of ozone effects on sensitive ecosystems at levels below the NAAQS at many parks across the country.

The emissions that cause ozone are NOx and volatile organic compounds (VOCs). Motor vehicle exhaust and commercial and industrial

activities are sources of these pollutants. Vegetation also emits large quantities of VOCs. An Ozone Action Plan adopted under EPA's Early Action Compact imposes controls for VOCs and NOx in a nine-county area along the Front Range. The modeling done for the Early Action Compact shows long-term attainment of the eight-hour ozone NAAQS in Rocky Mountain National Park.

Visibility Concerns

At Rocky Mountain National Park, visibility has been deteriorating during the haziest days, although it has been improving on the best days. Other man-made sources of fine particles that degrade visibility at the park are NOx emissions from vehicles and industry, sulfur dioxide from burning coal and fuel, sooty carbon from industry and transportation, and organic carbon from wildfires and prescribed burns.

One effort that will address visibility problems is a regional haze plan that Colorado and other states must complete and submit to the EPA by December 2007. The plan will include timelines for improving visibility and controls for pollutants that cause regional haze, and will benefit not only visibility at Rocky Mountain National Park, but in Colorado and throughout the West.

For more information on the regional haze plan see www.cdphe.state.co.us/ap/regionalhaze.html.

Vehicle emissions inspection program

The following is a summary of the automobile Inspection and Maintenance Program for 2006. A more detailed report can be requested by calling (303) 692-3125 or viewed on-line at: www.cdphe.state.co.us/ap/down/IMreport.pdf.

The automobile Inspection and Maintenance (I/M) Program's purpose is to reduce motor vehicle-related pollution through the detection and repair of high-emitting vehicles. Motor vehicles are a major source of pollution and a predominant source of carbon monoxide.

Program Requirements

Emissions testing of gasoline vehicles is required when registering, renewing registrations, or selling vehicles more than three model years old, within the I/M Program areas in seven Denver-metropolitan area counties.

Two types of vehicle emissions tests are utilized. Inspection and Maintenance 240(I/M240) is for 1982 and newer vehicles in the Denver area. I/M 240 utilizes a test on a treadmill called a dynamometer, which places the vehicle under load to simulate actual driving conditions. The other test is a two-speed tailpipe idle test. Denver-area vehicles older than 1982 are subject to the idle test.

In February 2005, the Air Quality Control Commission voted to discontinue the idle test in Larimer, El Paso and Weld counties. This element of the program was discontinued as scheduled on Jan. 1, 2007. Those areas have been in compliance with the carbon monoxide standard for many years.

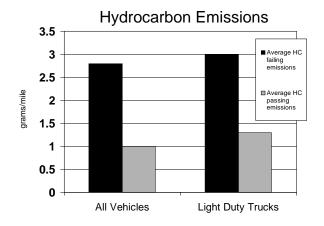
Program Results

Vehicles in the Denver program area had a failure rate of 5.9 percent for the I/M 240 test and 12.6 percent for the idle test. The rate of failure in the basic program areas of Larimer, El Paso, and Weld counties was 7.7 percent in 2006. The net cost of the total program during 2006 is estimated at \$31.8 million. Estimates of the cost-effectiveness of the Denver-area program range from \$200 to \$700 for each ton of carbon monoxide eliminated.

The Colorado Air Quality Control Commission estimates a carbon monoxide reduction

benefit of 10 to 16 percent from I/M depending on the methodology used.

Data indicates that repairs to failing vehicles significantly reduced the emissions of hydrocarbons, a group of pollutants that contribute to ground-level ozone pollution. There is a 60 percent reduction in the amount of hydrocarbons emitted by all repaired vehicles.



In 2006, approximately 36,000 vehicles were screened and received I/M passes in the Denvermetropolitan and North Front Range areas, which was up from 16,041 screened and passed in 2005. This number should continue to increase in future years.

Future Changes

Legislation passed in 2006 provided impetus to find successful solutions to motor vehicle emission controls with a minimum impact on the public. HB06-1302 mandates the increased use of remote sensing, including a high-emitter identification program in the Denver-metro area. A plan implementing the program was presented to the Air Quality Control Commission in December 2006 that included an expanded remote sensing program in Denver. The program currently identifies clean vehicles and screens them out of the traditional inspection program. A regulatory hearing before the Air Quality Control Commission is scheduled to occur in October 2007 for the purpose of adding a pilot program to identify high-emitting vehicles.

Implementing effective air quality programs The Air Pollution Control Division

www.cdphe.state.co.us/ap/

The Air Pollution Control Division is responsible for implementing the air quality management programs adopted by the Air Quality Control Commission and acts as staff in the regulatory development process. The division is housed within the Colorado Department of Public Health and Environment. This section of the report includes a description of each of the air quality management programs and highlights of recent work.

Mobile Sources

- Automobile Inspection and Maintenance Program
- Alternative Fuels
- RapidScreen Program
- Diesel Emissions Control
- Oxygenated Gasoline Program

The Mobile Sources Program is involved in controlling emissions from motor vehicles. The program evaluates and investigates strategies aimed at reducing vehicular emissions, and conducts research, modeling and planning on the causes and effects of mobile source air pollution.

The staff jointly administers the Automobile Inspection and Readjustment program with the Colorado Department of Revenue, and administers two diesel inspection and maintenance programs.

The group also manages the oxygenated gasoline program in Denver and the north Front Range in winter months. The program was phased out in Colorado Springs in 2000 due to improved air quality.

The Mobile Sources Program's Aurora Vehicle Emissions Technical Center conducts nationally-recognized vehicle emissions testing in support of the program's strategies and in support of the U.S. Environmental Protection Agency's vehicle testing programs.

In May 2002, a program using remote sensing began screening out clean vehicles in Larimer and Weld counties from traditional inspection and maintenance. The program transitioned to the Denver area in 2003. The Larimer and Weld counties program was discontinued as scheduled on Jan. 1, 2007.

Planning and Policy

- Emissions Program Public Information
- Community-Based Air Quality Protection
- Environmental Education
- High Pollution Advisory Program
- Natural Events Action Plan
- Nonattainment/Maintenance Air Quality Planning
- Oil and Gas Team
- Pollution Prevention
- Transportation Planning

The Planning and Policy Program is responsible for a cross-section of air quality planning, policy, education and community outreach tasks. Included among the program's responsibilities are: air quality plan development and implementation; assisting in the development of transportation conformity analysis; participating in airquality-related transportation planning; policy development; community-based environmental protection; pollution prevention; public information; and air quality education in schools.

An oil and gas team was created within the Planning and Policy Program in 2006 to focus on permitting, planning, and regulatory and compliance issues related to the fast-growing oil and gas industry in Colorado.

Stationary Sources

- Construction Permit Program
- Field Services Program
- Hazardous Air Pollutants
- Operating Permit Program
- Regulatory and Compliance Assistance Program
- Burning Controls

The Stationary Sources Program evaluates and develops permits for stationary sources such as gas stations, dry cleaners, auto finishers, industries, mining operations and construction projects. Staff members inspect these sources to determine their compliance with regulations and permit conditions, and maintain a computerized inventory of air pollution emissions in Colorado. The program controls open burning and implements a residential burning program to ensure that emission standards are met.

More than 6,000 sources are registered in Colorado, and the Stationary Sources Program administers an inventory of sources and permit conditions to ensure federal and state regulations are met. In recent years, greater emphasis has been placed on compliance assistance, support to small businesses and pollution prevention as key tools to ensure stationary sources remain in regulatory compliance.

Indoor Air Program

- Asbestos Control Program
- Chlorofluorocarbon Program
- Indoor Air Quality
- Lead Based Paint Abatement Unit

The Indoor Air Program provides technical assistance on indoor air pollutants. The program also regulates ozone-depleting compounds (chlorofluorocarbons). Asbestos activities are included within the program through the regulation of asbestos removal and demolition activities, and the review of school asbestos management plans. The program also regulates the removal of lead-based paint from child-occupied facilities.

Technical Services

- Ambient Air Monitoring
- Modeling, Meteorology and Emission Inventory Unit
- Visibility Program

The Technical Services Program is responsible for the collection and analysis of ambient air quality data throughout the state. Particulate and gaseous monitors are operated in many Colorado communities to keep track of air quality trends, population exposure to pollutants and compliance with air quality standards.

The program also is responsible for providing complex air quality modeling analysis to determine the impacts various sources of air pollution will have on air quality. These models are used to create and evaluate air pollution control strategies for State Implementation Plans which were developed for areas of the state that did not meet federal health-based air quality standards. The modeling provides a basis for health risk assessments.

The program manages the state's visibility program, which works to protect visual air quality in both urban and rural areas, including national parks and wilderness areas.

The program maintains real-time and historic air quality data on the Internet at http://apcd.state.co.us/psi/.

Administrative Services

- Manages fiscal and business matters.
- Develops a comprehensive budget.
- Interacts with legislative processes.
- Ensures payment of bills.
- Develops contracts.
- Coordinates hiring.

The Administrative Services Program manages the business services of the division, including budgeting, billing, contracts, hiring and computer support.

Air quality management program highlights

Mercury Rule

Air pollution from mercury emitted by coalfired power plants in Colorado will be reduced under the Colorado Mercury Reduction Program, which was adopted by the Air Quality Control Commission in February 2007. The U.S. EPA under the Clean Air Mercury Rule of 2005 required a national mercury reduction program that states must comply with through adoption of state-specific rules. The national rule seeks to cap and reduce mercury emissions from coalfired power plants by 70 percent below 2000 levels by 2018.

The rule relies on an allocation and allowance system to limit and reduce mercury emissions. Power plants in Colorado will be required to meet emission requirements by using pollution control technologies and by using coal that meets mercury limits.

The Air Quality Control Commission held several stakeholder meetings in 2006 as part of a public process to develop the rule. The final rule received consensus support from state and local government representatives, industry and environmental groups. For more information see www.cdphe.state.co.us/ap/reg6.html.

The Colorado Department of Public Health and Environment is involved in several crossmedia initiatives under the "Mercury-Free Colorado Campaign." For more information see www.cdphe.state.co.us/hm/mercury/.

Regional Haze State Implementation Plan

A detailed plan for reducing regional haze in the state's national parks and wilderness areas has continued to move forward and is due to be submitted to the U.S. Environmental Protection Agency on Dec. 17, 2007. The state Regional Haze Plan is part of a national process to restore visibility in scenic areas.

The Colorado Regional Haze Plan has been in development since 2004 when the Colorado Air Quality Control Commission adopted a planning process to meet the requirements of the 1999 federal Regional Haze Rule.

A significant step during 2006 and 2007 has been the development of new emissions controls for large industrial sources of regional haze that

meet certain criteria for age and level of pollution. These controls, known as Best Available Retrofit Technology (BART) will need to be installed on several Colorado power plants and one cement plant. The pollution controls will reduce oxides of nitrogen and sulfur dioxide, both of which contribute to regional haze.

Throughout the planning process the AQCC has provided a forum for stakeholders to participate in the technical and rulemaking hearings that have been part of the development of the Regional Haze Plan.

For more information on regional haze see page 5, or visit the APCD's regional haze website at www.cdphe.state.co.us/ap/regionalhaze.html.

Ozone Reduction

In 2006 the Air Quality Control Commission adopted stricter control measures for the oil and gas industry to keep Colorado in compliance with federal ozone standards. New emission limits were placed on condensate storage tanks to reduce volatile organic compounds, which lead to ozone formation.

Ozone is a health hazard because it leads to respiratory problems and is especially harmful to those with respiratory problems such as asthma, emphysema or reduced lung function.

The Denver-metro area violated the federal eight-hour ozone standard in 2003 and since then has implemented an Ozone Action Plan to bring the area into compliance with federal standards by the end of 2007. The plan includes emission controls on large natural gas fired industrial engines and on tanks and dehydration units used by the oil and gas industry. The plan also requires lower volatility gasoline in the nine-county ozone control area.

Controls placed on the oil and gas industry in 2006 included both statewide controls as well as more strict controls in the nine-county ozone control area. The additional controls were needed due to unprecedented growth in the industry.

The Air Pollution Control Division is participating with the Regional Air Quality Council (RAQC) in an Ozone Action Alert program that

informs the public when ozone levels are expected to reach elevated levels. The RAQC uses the alerts as part of a voluntary ozone reduction program that relies on large-scale public outreach and education.

If the ozone control area has not attained the federal ozone standard by the end of 2007, EPA will require a federally enforceable ozone state implementation plan. The plan would impose additional control measures on industry and on transportation.

For more information on ozone control efforts see the APCD's ozone website at www.cdphe.state.co.us/ap/ozone.html and the Regional Air Quality Council's site at www.raqc.org.

Four Corners Air Quality Task Force

Air quality issues in southwest Colorado and neighboring states are being addressed by the Four Corners Air Quality Task Force. The Task Force is made up of federal land managers, federal and state environmental regulators, representatives from industry and tribal nations, and interested residents.

Originally convened by the states of Colorado and New Mexico, the Task Force held its' first public meeting in November 2005 to discuss the impacts that oil and gas production, existing and planned coal-fired power plants, growth and other factors are having on air quality in the area.

The full Task Force Report is due by the end of 2007. The full report will identify options for policymakers to consider for addressing air quality issues and concerns in the region.

At the time of publication, the public comment period for the full Task Force Report had concluded. Two more Task Force meetings were planned for 2007 before the report was finalized and the Task Force adjourned.

For more information, see the Task Force website at www.nmenv.state.nm.us/aqb/4C/index.html.

Remote Sensing

Remote sensing of motor vehicle emissions has continued to move forward since passage of House Bill 1302 in May 2006. The legislation requires increased use of remote sensing in the Denver area. The Air Quality Control Commission held a public hearing in December 2006 and approved an eight-point plan presented by the division that has increased the use of remote sensing in the Denver area.

Since then, the number of cars being clean screened through remote sensing has increased from about six percent of the vehicles due for emissions testing in the summer of 2006 to about 16 percent in the summer of 2007. The target is for 50 percent of motor vehicles to be clean screened.

Owners of vehicles that pass a roadside remote sensing van receive a notice in the mail if their vehicle was clean screened. They can then pay the fee through the mail and skip the centralized testing station.

The remote sensing plan includes doubling the number of vans on the street to 18 by the end of 2007 and increasing operating hours. The plan also calls for expedited processing of data and administrative work.

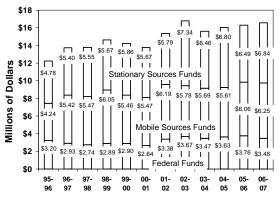
In June 2007, the AQCC further bolstered the remote sensing plan by adopting a rule to allow cars to pass the drive-by test with only one clean score. Previously, two clean scores were required. The vehicle must also be part of a class that typically meets emission standards to qualify for the single screen. The rule took effect in September 2007.

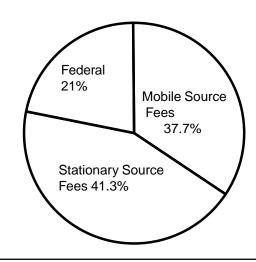
The remote sensing plan also will include a high emitter program. High-emitting vehicles will be identified and their owners will receive notices to obtain repairs or face fines. A pilot high emitter program is being developed for a rulemaking hearing before the AQCC later in 2007. Once a rule is approved, implementation of the program can begin.

Air program fiscal data: July 2006-June 2007

Revenues: \$16.57 million

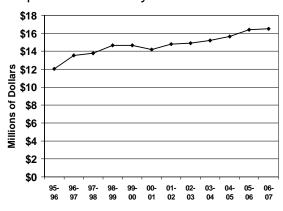
Revenue History

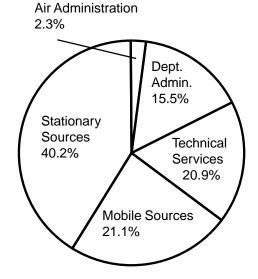




Expenditures: \$16.50 million

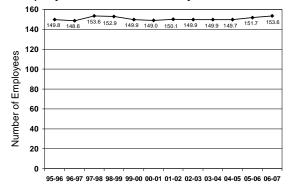
Expenditure History

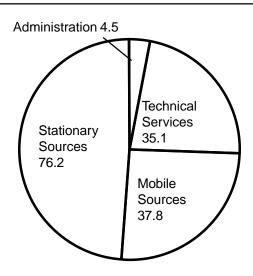




Number of Employees: 153.6

Employment Level History





Regional air quality perspectives

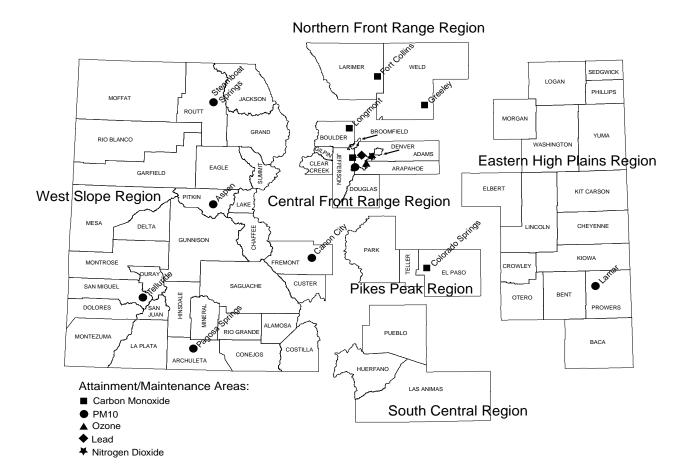
Areas of the state differ greatly from one another in landscape, weather conditions, population, motor vehicle traffic, amount of industry and burning practices.

This section of the report separates Colorado into six regions to more clearly address each region's specific air quality conditions and activities. Many local and regional environmental and planning agencies have submitted information for this section of the report.

The Air Pollution Control Division is the lead agency for implementing the state's air quality management program. However, it could not accomplish its work alone. Many local health departments and planning agencies throughout the state have air quality management programs which they operate either independently or under contract with the Colorado Department of Public Health and Environment.

Currently, the following local health departments have contracts with the department and division to perform specific air quality activities in their respective areas: Boulder County, City and County of Denver, El Paso County, Jefferson County, Larimer County, Mesa County, Pueblo City-County and Weld County.

In addition, the following organizations have been designated as the lead air quality planning entities in their respective areas: the Regional Air Quality Council (Denver-metro area), the Pikes Peak Area Council of Governments (Pikes Peak Region) and the North Front Range Transportation and Air Quality Planning Council (Fort Collins and Greeley areas).

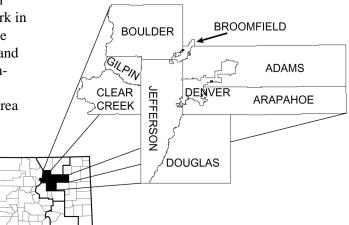


Central Front Range Region

The Central Front Range Region includes Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Gilpin and Jefferson counties. It has a population of 2.4 million (2000 census), most of whom live and work in the Denver-Boulder area. This region is the most densely populated in the state. The land varies from rolling prairie to rugged mountains.

In the past, the Denver-metropolitan area has violated health-based air quality standards for carbon monoxide, fine particles and ozone.

In response, the Regional Air
Quality Council, the Colorado Air
Quality Control Commission and the
Air Pollution Control Division have
developed, adopted and implemented
air quality improvement plans to reduce each of
the pollutants.



Air Pollution Sources

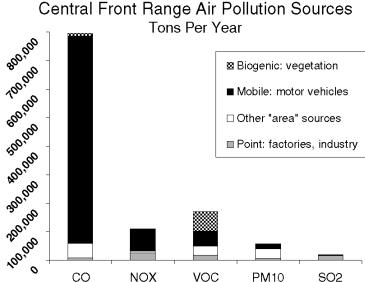
In the Central Front Range Region, air pollution comes from a variety of sources. Substantial emissions occur as a result of motor vehicle

In this area, the Regional Air Quality Council and a number of local health departments have air quality control programs.

Air Pollution Control Measures

The control of air pollution in the Central Front Range region has been the result of local, state, and federal programs that target emissions from automobiles and mobile sources, power plants and industrial sources, woodstoves,

and emissions from street sanding and sweeping.



CO: Carbon Monoxide NOx: Oxides of Nitrogen

VOC: Volatile Organic Compounds

PM10: Particles less than 10 microns in diameter

SO2: Sulfur Dioxide

Boulder County Public Health

www.BoulderCountyAir.org

Boulder County Public Health (BCPH) staff inspects a variety of stationary sources of air emissions to ensure compliance with state and federal regulations, and responds to air quality complaints such as odor, emissions, open burning, residential burning and fugitive dust through a contract with the Colorado Air Pollution Control Division.

Staff also inspects chlorofluorocarbon sources, such as motor vehicle repair shops, stationary and building air conditioning repair shops, and stationary air conditioning and refrigeration equipment.

BCPH issues open burning permits and prescribed fire permits to residents and land management organizations within Boulder County.

BCPH operates and maintains an air quality monitoring network in the cities of Boulder and Longmont, as well as near Eldorado Springs in conjunction with the division and the U.S. Environmental Protection Agency (EPA). The network monitors ozone, particulate matter and carbon monoxide.

Boulder County Public Health utilizes an integrated pollution prevention strategy in its work with businesses. Staff assists with permitting, inspections and enforcement.

In 2006, BCPH received a \$500,000 grant from the EPA to study air toxics. Five monitoring locations across the county will provide information on the impact of upslope winds and mountains at the urban/rural interface. Previous studies have shown higher concentrations of hazardous air pollutants along the mountain ranges than in the urban plains and corridors. Monitoring has begun and preliminary results are pending.

In partnership with the Boulder County Clean Air Consortium, which includes members from the private and public sectors, BCPH coordinates the annual Clean Air Challenge contest. Participants leave their cars at home during the high-ozone season or summer months (June through August). The contest provides cash and other prizes to participants. Last year, participants reduced 134,000 miles of vehicle travel in three months.

BCPH provides consultation regarding indoor air quality issues, assists other municipalities in resolving indoor air quality concerns, provides the community with information seminars on indoor air quality and makes recommendations on land use reviews regarding indoor air quality improvement options.

Boulder County Public Health's Air Quality/ Radon Program continued research on radon in homes in Boulder County. In 2006, with a grant from Colorado Department of Public Health and Environment, BCPH staff evaluated existing radon mitigation systems in 20 homes.

Boulder County Public Health promotes employee travel reduction programs, including walk/bike to work events, telecommuting/ teleworking, Ecopass mass transit passes and flexible work schedules.

BCPH also participates in the Regional Air Quality Council's ozone outreach program and in the Rocky Mountain National Park Initiative Subcommittee with the Colorado Air Quality Control Commission.

Denver Department of Environmental Health

www.denvergov.org/DEH/

Denver's air quality management program is conducted by the Environmental Quality Division (EQD). The EQD engages in technical advisory services for businesses; inspection and surveillance of air pollution sources; enforcement of city, state and federal environmental laws; and pollution prevention activities.

EQD staff manage the city's air quality improvement programs; conduct air quality improvement research projects; and respond to complaints about violations of the Colorado Indoor Air Quality Act for tobacco smoke.

The EQD implements state regulatory activities on behalf of the Colorado Air Pollution Control Division by contract. These activities include inspections and enforcement of air emission sources, chlorofluorocarbon sources and asbestos projects; operation of air quality

monitoring stations; issuance of open burning permits; and response to air pollution complaints.

Denver also protects ambient air quality through its smoking and idling vehicle and residential burning ordinances, as well as a GreenFleets Executive Order, which reduces greenhouse gas emissions and fuel consumption through efficient management of the municipal fleet.

Denver continues to implement an industrial environmental review process that began in 1991. The process minimizes the community and environmental impact of pollutant emissions from new and expanding industrial operations.

The EQD also has received grants to perform ambient air toxics monitoring, refine air quality modeling, and conduct education and outreach about vehicle idling.

Finally, EQD supports Mayor John Hickenlooper's Greenprint Denver Initiative. Greenprint Denver is a long-term, citywide initiative to promote the importance of sustainable development and ecologically-friendly practices throughout the community. The ECD has partnered with the University of Colorado at Denver to develop a greenhouse gas inventory and support development of a draft climate action plan that was released in May 2007.

Jefferson County Department of Health and Environment

www.co.jefferson.co.us

Jefferson County is the second most populous county in Colorado, with more than 527,000 residents. More than 770 square miles in size, the county stretches from suburban plains to the mountainous foothills more than 10,000 feet in elevation. Within this diverse area are a variety of potential air pollution sources, from large-scale manufacturing plants to dusty, unpaved mountain roads.

Each year, the Jefferson County Department of Health and Environment inspects a variety of stationary sources of air emissions to ensure compliance with state and federal regulations. Staff also inspect asbestos removal projects, and refrigeration and air conditioning businesses that use or handle chlorofluorocarbons. The department investigates citizen concerns about radon gas, indoor air quality and fugitive dust. Staff also issue open burning permits.

Regional Air Quality Council

www.raqc.org

The Regional Air Quality Council (RAQC) is the air quality-planning agency for the seven county Denver-metropolitan area. The RAQC's mission is to develop effective and cost-efficient air quality planning initiatives with input from local governments, the private sector, stakeholder groups and citizens of the Denver-metro region. Its primary task is to prepare state implementation plans for compliance with federal air quality standards for ozone, carbon monoxide and particulate matter.

The council consists of 11 members appointed by the Governor. Five are citizen members selected for their knowledge of and interest in air quality and related issues. Two are local government representatives in the Denver area and one is a local government representative from the North Front Range area. One locally elected official represents the Denver Regional Council of Governments. The two remaining members are executive directors of the Colorado Department of Public Health and Environment and the Colorado Department of Transportation.

The RAQC also coordinates several voluntary emissions reductions programs. One of those is a summer ozone outreach, awareness and education program in place since 1999 in an effort to keep the Denver area in compliance with the federal ozone standard. In addition, the RAQC also coordinates a large diesel emissions reduction program focused on retrofitting large diesel engines including both on- and off-road vehicles.

Air Quality Index for metro Denver

The Air Pollution Control Division uses an air quality reporting method called the Air Quality Index (AQI). The Air Quality Index provides health officials with a simple, uniform way to report daily levels of air pollution.

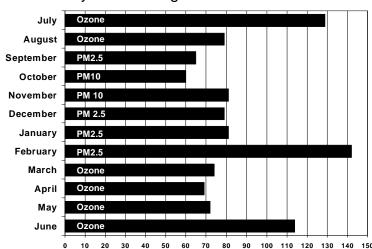
Year round, division staff collect current information about the levels of carbon monoxide, ozone and fine particles for index reporting.

After analyzing the data, staff convert the information into numbers on the Air Quality Index scale. On this scale, the National Ambient Air Quality Standards equal 100 for carbon monoxide, ozone and PM10, and 150 for PM2.5. Air Quality Index readings greater than these values indicate exceedances of a pollutant's standard.

The bar chart on the right shows the monthly maximum index levels recorded during a recent 12-month period in the Denver-metro area. In each bar is the pollutant that caused the monthly maximum.

Denver-metro maximum AQI readings with predominant pollutant identified

July 2006 through June 2007



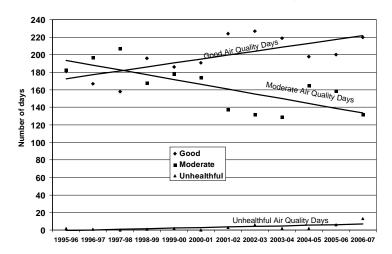
Denver-metro area Air Quality Index readings

The Air Quality Index (AQI) is divided into six air quality categories. These include good, moderate, unhealthy for sensitive groups, unhealthy, very unhealthy and hazardous.

According to the index, any reading between 0-50 indicates good air quality, 51-100 moderate air quality, 101-150 unhealthy for sensitive groups, 151-200 unhealthy, 201-300 very unhealthy and above 300 hazardous air quality.

The chart to the right summarizes and compares index readings for the past 12 years.

Denver-metro maximum AQI values



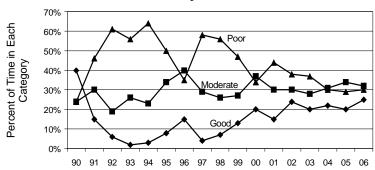
The Visibility Standard Index for metro Denver

The visible aspect of air quality is reported by the Visibility Standard Index. The visibility standard is set at an extinction of 7.6 percent or more of light in a kilometer of air over a four-hour average from 8 a.m. to 4 p.m. The standard was set by 200 Denver area citizens and adopted by the Colorado Air Quality Control Commission in 1989.

A monitor called a transmissometer measures visibility. Readings between 0-50 are good, 51-100 fair, 101-199 poor and 200-plus extremely poor. The chart at right shows the percentage of time in each category. On the visibility scale, a value of 101 is "poor" and equates to the .076/km standard.

Determining the Visibility Standard Index

Visibility Trends



reading can be complicated by precipitation, relative humidity of 70 percent or greater, fog, blowing dust, smoke, etc. When such conditions are present, readings are excluded.

Trends Show Improvement in Visibility Over Time

While Denver and other Front Range cities continue to experience visibility problems and haze, visible air pollution has decreased in recent years and more improvements can be expected in the future.

In 2003 the Air Pollution Control Division reprocessed its visibility data and

determined that a 28 percent improvement in visibility had occurred since 1991. This improvement can be attributed to cleaner burning motor vehicles and fuels, reductions in residential burning, reduced wintertime street sanding and voluntary emissions reductions at area power plants.

In the future, visibility should continue to improve as stricter emissions standards for gasoline and diesel motor vehicles are put in place.

Five major studies of Denver area visibility have occurred since the 1970s, with the most recent study done by Colorado State University from 1996-98 (See www.nfraqs.colostate.edu for more information).





Clear visibility and impaired visibility in the Denver basin — a view looking south into the metro area from a division monitoring site during two days of June 2000.

The studies have shown that the Denver "brown cloud" is caused by local, not regional emissions, and that chemical reactions in the atmosphere turn sulfates, nitrates and organic carbon into particles that cause the brown cloud. Denver's meteorology and topography contribute to the brown cloud when pollutants are trapped in the Denver basin by air inversions. The largest single source of the brown cloud is motor vehicle use.

The Colorado Air Quality Control Commission and the Air Pollution Control Division will continue to analyze and monitor visibility to better understand what we can do to improve the visible aspect of air quality.

Eastern High Plains Region

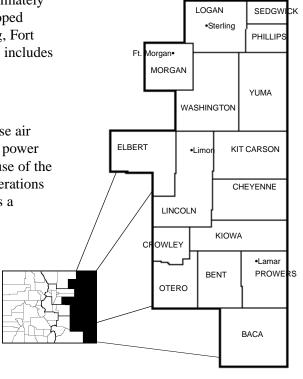
The Eastern High Plains Region encompasses the counties on the plains of eastern Colorado. The area's population is approximately 138,447 (2000 census). Its major urban centers have developed around farming, ranching and trade centers such as Sterling, Fort Morgan, Limon, La Junta and Lamar. The agricultural base includes both irrigated and dryland farming.

Air Pollution Sources

There are a number of industries in this region that cause air pollution. These include agricultural processes, gravel pits, power plants and natural gas pipeline compression stations. Because of the region's semiarid nature, fugitive dust from agricultural operations dominates air pollution in the region. Residential burning is a minor contributor to air pollution in the region.

Air Pollution Control Measures

In this region, the control of air pollution is accomplished through the cooperative efforts of state and local health departments in enforcing state emission regulations on stationary sources. In addition, the City of Lamar has taken steps to maintain and improve its air quality.



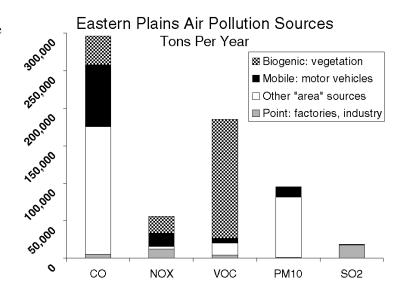
City of Lamar

This past year, the City of Lamar's role in air quality was to continue addressing dust abeyance at its source, continue planting trees and grass, and implement programs to encourage cleaner yards and streets.

Lamar was approved in 2001 by the Colorado Air Quality Control Commission as an attainment area for the federal particulate matter standard. The area has not violated the standard since 1992.

Additionally, the City of Lamar has joined efforts with the Air Pollution Control Division and Prowers County to develop a community survey that will gauge public perception of air quality and the public's willingness to utilize public funds to improve local air quality.

Prowers County also works closely with the City of Lamar to ensure that developments within close proximity of the city do not impact air quality.



CO: Carbon Monoxide NOx: Oxides of Nitrogen

VOC: Volatile Organic Compounds

PM10: Particles less than 10 microns in diameter

SO2: Sulfur Dioxide

North Front Range Region

The North Front Range Region is comprised of Larimer and Weld counties. The population of these two counties is approximately 500,732 (State Demography Office, 2005). The two major urban areas are Fort Collins in Larimer County and Greeley in Weld County. The city of Loveland also is included in this region. Larimer County has irrigated farmland in its eastern half and mountains in its western half. Weld County is predominantly grassland and irrigated farmland.

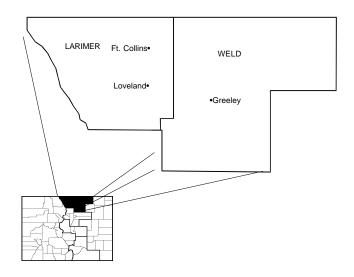
Air Pollution Sources

There are two pollutants of concern in the North Front Range. The first is carbon monoxide (CO), which predominantly is from motor vehicle emissions and is the major source of pollution in Greeley and Fort Collins. Emission inventories compiled in these areas also indicate pollution influences from industry, manufacturing, power plants, cement plants and mining.

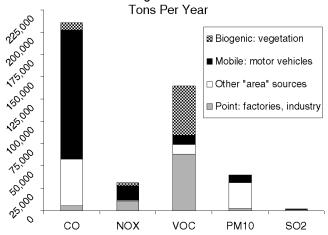
Residential burning, dust from unpaved roads and agricultural operations also contribute to air pollution in the Fort Collins and Greeley areas.

The North Front Range continues to grow and add new businesses. Some of these businesses are minor air pollution sources that require emission permits from the Air Pollution Control Division. The Fort Collins and Greeley areas have been designated as attainment/maintenance areas for CO. Emissions from this pollutant have been reduced dramatically.

The second pollutant of concern is ground-level ozone. Large portions of Weld and Larimer Counties are included within a nine-county Early Action Compact (EAC) area, along with Denver, to reduce the ozone emissions and bring the area into compliance quickly. Contributors to ground-level ozone in Weld and Larimer counties are predominantly oil and gas field emissions.







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VOC: Volatile Organic Compounds

PM10: Particles less than 10 microns in diameter

SO2: Sulfur Dioxide

Air Pollution Control Measures

In Fort Collins and Greeley a number of strategies are being implemented to control air pollution. The Larimer County and Weld County health departments and the cities of Fort Collins and Greeley all have worked toward implementing these strategies.

The North Front Range Transportation and Air Quality Planning Council is the air quality planning agency in the Fort Collins and Greeley areas and partners with other agencies to determine strategies to reduce air pollution.

City of Fort Collins

www.fcgov.com/airquality/

The Natural Resources Department takes a lead role in addressing air pollution problems in Fort Collins in accordance with the city's Air Quality Plan. The plan focuses on air pollution caused by motor vehicles, commerce and industry, residential burning and indoor air pollutants. The Air Quality Plan is implemented primarily through education and outreach. Data collection and monitoring help assess current programs and provide guidance for periodic reviews and updates. The city strives to demonstrate clean air practices in its own operations. A regulatory approach is employed when necessary.

The city has taken actions to reduce traffic growth through alternative transportation choices and land use planning to reduce dependency on automobiles. The city's education and outreach efforts provide information about the connection between air quality and automobile use.

The city has an action plan to reduce green-house gas emissions from Fort Collins. The plan identifies strategies to lower greenhouse gas emissions to 30 percent of the predicted 2010 levels, and save money for the city, its citizens and businesses. In addition, the city is working with 29 area businesses that have committed to reduce greenhouse gas emissions through a local voluntary program called Climate Wise.

The city's air quality education and outreach efforts target diverse audiences through various methods. Students participate in activities such as the DriveLess Contest. The contest is an incentive program for high school students and school staff to use alternative modes of transportation. Also, the Air Care Trunk is available for checkout by teachers. The kit contains materials and lesson plans to teach elementary students about clean air. Regular articles, advertisements, and participation in public events keep air quality messages in public view.

Larimer County Department of Health and Environment

www.larimer.org/

The Air Quality Program for the Larimer County Department of Health and Environment includes ambient air quality monitoring, source inspection, enforcement actions, planning, educational presentations, and public information and outreach efforts.

Staff work as agents for the Colorado Air Pollution Control Division. Cooperation with other local agencies including the North Front Range Transportation and Air Quality Planning Council occurs regularly. A county air quality control review is conducted for all new land development.

Larimer County personnel perform inspections and enforcement activities for minor stationary sources and chlorofluorocarbons, and conduct on-going ambient air quality monitoring for criteria pollutants. Air quality complaints received from the public are investigated. Larimer County operates the PM2.5 and PM10 particle samplers in the Ft. Collins area along with carbon monoxide and ozone monitors.

North Front Range Transportation and Air Quality Planning Council

The North Front Range Transportation and Air Quality Planning Council was established in 1988 as the metropolitan planning organization for the Greeley and Fort Collins areas. In 1993 the council was designated by the governor as the lead air quality planning organization for both of these areas. The council is responsible for the development and implementation of the Fort Collins and Greeley elements of the state implementation plan (SIP) for attainment of air quality standards and for other transportation related air quality planning projects in the North Front Range region.

Voting membership on the Council includes Larimer and Weld counties, Berthoud, Eaton, Evans, Fort Collins, Garden City, Greeley, Johnstown, LaSalle, Loveland, Milliken, Severance, Timnath, Windsor, the Colorado Air Quality Control Commission, and the Colorado Transportation Commission.

Weld County Department of Public Health and Environment

www.co.weld.co.us/

The Environmental Health Services of the Weld County Department of Public Health and Environment implements many of the air quality programs for the Colorado Air Pollution Control Division. The Weld County programs listed here help protect ambient air quality and keep Weld County in attainment of state and federal air quality standards.

Services

Inspections of air pollution sources are conducted.

Weld County residents' complaints about air quality are investigated and resolved.

Residents' requests for open burning permits are evaluated and either issued or denied. The program is discouraging burning while encouraging composting.

Colorado Air Pollution Control Division monitoring equipment for particulate matter, carbon monoxide and ozone in Greeley and Platteville are maintained and operated jointly by staff members of Weld County Environmental Health Services.

Assistance is provided to small businesses that need help in complying with air regulations.

Environmental Health Services works with communities within the county and recommends air quality-related land use provisions which may then be adopted by county and local governments.

Greeley and Weld County participate in a Clean Cities program that promotes alternative modes of transportation and the use of cleaner burning fuels.

Environmental Health Services conducts investigations of asbestos and chlorinated hydrocarbon issues.

Pikes Peak Region

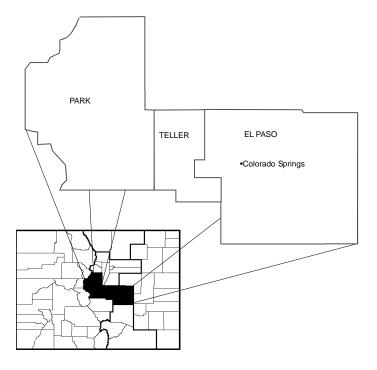
The Pikes Peak Region includes El Paso, Teller and Park counties. The area has a population of approximately 552,007 (2000 census). The Colorado Springs-metro area is one of the more rapidly growing areas in the state. Eastern El Paso County is rural prairie, while the western part, along with Park and Teller counties, is mountainous.

Air Pollution Sources

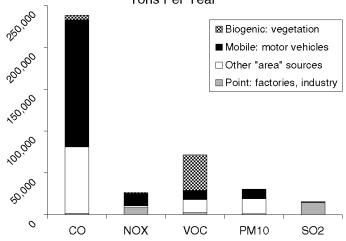
As in other urbanized areas in Colorado, pollutants in the Pikes Peak Region originate primarily from stationary and mobile sources. Major sources in the region include power plants, ready-mix concrete plants, electronics manufacturing facilities, quarries and extensive military operations. Other sources include motor vehicle emissions, residential burning, street sanding operations, PM10 emissions from unpaved roads and construction activities.

Air Pollution Control Measures

In this region, the management of air pollution is led by the Pikes Peak Area Council of Governments. In addition, the El Paso County Department of Health and Environment provides air quality monitoring, and enforcement and public education activities in accordance with the Colorado Air Pollution Prevention and Control Act.



Pikes Peak Region Air Pollution Sources Tons Per Year



CO: Carbon Monoxide NOx: Oxides of Nitrogen

VOC: Volatile Organic Compounds

PM10: Particles less than 10 microns in diameter

SO2: Sulfur Dioxide

Pikes Peak Area Council of Governments

www.ppacg.org

The Pikes Peak Area Council of Governments (PPACG) is designated as the metropolitan planning organization and lead air quality planning agency for the Pikes Peak Region.

PPACG reviews current and emerging air quality issues, develops plans to improve air quality, and is responsible for development and implementation of the carbon monoxide maintenance plan to ensure the region meets federal carbon monoxide standards.

Voluntary programs are implemented to reduce ozone concentrations, and an ozone white paper was developed to provide background information on ozone issues in the Colorado Springs Region.

All transportation related projects are reviewed to demonstrate compliance with air quality standards and their ability to manage congestion.

PPACG is governed by a board of directors composed of elected officials from El Paso, Teller and Park counties; cities of Colorado Springs, Fountain, Monument, Manitou Springs, Palmer Lake, Woodland Park, Alma, Cripple Creek, Victor, Calhan and Green Mountain Falls; the Colorado Air Quality Control Commission and the Colorado Transportation Commission.

El Paso County Air Quality Section

www.elpasocountyhealth.org

The Air Quality Section of the El Paso County Department of Health and Environment has the responsibility for enforcement, monitoring and educational aspects of the Colorado Air Pollution Prevention and Control Act.

Inspections are conducted on minor sources of air pollution such as auto body repair shops, earth-moving activities and chlorofluorocarbon sources.

Complaint investigations are conducted on asbestos, odors, fugitive dust and general air quality sources.

The department also is responsible for the operation and maintenance of the air-monitoring network in El Paso County in cooperation with the Air Pollution Control Division. The department collects air quality data from the monitoring sites in accordance with the U.S. Environmental Protection Agency requirements.

An air quality index report is prepared by staff and reported to the public twice a day via a website and a telephone hotline.

Presentations about local and state air quality issues are given to civic groups and schools in El Paso County.

The department also is responsible for enforcement of a local air quality regulation which covers emissions from fugitive dust sources such as earth moving, demolition, sandblasting and open burning.

South Central Region

The South Central Region is comprised of Pueblo, Huerfano and Las Animas counties. Its population is approximately 164,541 (2000 census). Major urban centers include Pueblo, Trinidad and Walsenburg. The region has rolling semiarid plains to the east and is mountainous to the west.

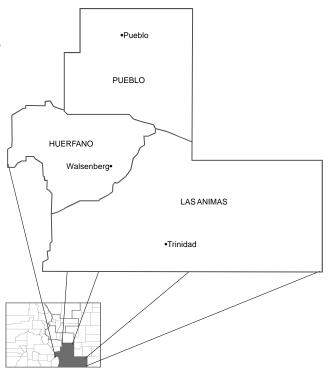
Air Pollution Sources

Pollution in this area comes from various sources, including fugitive dust (area contribution), mobile sources and stationary sources. The criteria pollutants including carbon monoxide, nitrogen oxide, sulfur dioxide and PM10, and volatile organic compounds have been modeled for the region. Modeling shows that the two significant contributors to air pollution are mobile and area sources. Point sources are a minor contributor. Examples of mobile sources are motor vehicle emissions. Area sources are dust from unpaved roads and open burning. Point sources include facilities such as power plants, concrete batch plants, and sand and gravel mining and processing operations.

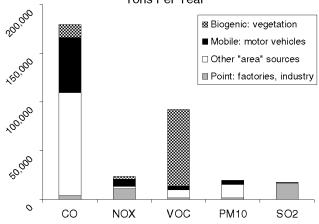
Air Pollution Control Measures

The Pueblo City-County Health
Department, under a contract with the
Colorado Air Pollution Control Division,
conducts inspections of more than 20
stationary sources annually. This contract
also provides for chlorofluorocarbon
(CFC) and asbestos field inspections. CFC
inspections include air conditioning and
appliance service and repair shops. Asbestos inspections primarily are in response to
citizen complaints. Monitoring occurs for
particulate matter in two size ranges:
PM10 and PM2.5.

Historically and currently, all of the South Central Region is in compliance with the National Ambient Air Quality Standards (NAAQS) through past and current efforts in inspection, monitoring, enforcement and education.



South Central Region Air Pollution Sources Tons Per Year



CO: Carbon Monoxide NOx: Oxides of Nitrogen

VOC: Volatile Organic Compounds

PM10: Particles less than 10 microns in diameter

SO2: Sulfur Dioxide

Pueblo City-County Health Department

www.co.pueblo.co.us/pcchd

The community in Pueblo continues to show an interest in a variety of air quality related issues. The announcement in 2000 of the construction of a large cement manufacturing plant, a major expansion of the Comanche Power Plant in 2004 and the ongoing plans to destroy the mustard agent stored at the Pueblo Chemical Depot have increased public awareness and concerns about numerous air quality issues.

A 2006 mercury warning posted at Brush Hollow Lake in a nearby county also has increased public concern surrounding mercury and mercury emissions from local industries. Rocky Mountain Steel Mills, a local industry which contributes mercury air emissions, has been participating in a program to receive scrap metal from facilities that participate in a mercury removal program. In this program, automobile

dismantlers remove the mercury-containing light switches from scrap vehicles prior to the vehicles being flattened and then shredded at scrap recycling facilities.

For the past several years, the local air quality program also has focused on dealing with fugitive dust originating from land development and construction activities by adjusting the municipal code. The local fugitive dust ordinance has been modified to address these issues more effectively. Recent drought conditions in the state have influenced the ability for effective dust control, especially when combined with gusty winds.

In the city, land developers whose activities involve from one acre to less than 25 acres are required to submit an application with a dust control plan and are issued a permit that requires them to adhere to the dust control plan.

Construction activities typically occur on areas less than one acre, which requires an agreement that commits the developer to reasonably control dust on their site.

Western Slope Region

The Western Slope Region for air quality planning is composed of the counties lying west of the Continental Divide, and several counties just east of the Divide. The population of this area is approximately 579,312 (2000 census). The Rocky Mountains are the predominant feature in much of this region.

Air Pollution Sources

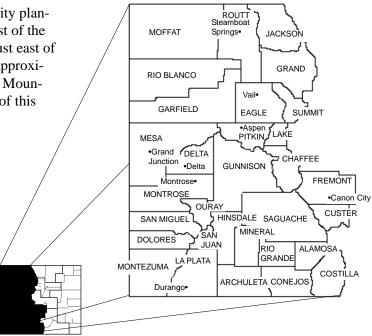
Air quality concerns in this region primarily are from the impacts of a recent surge in energy development. In the 1990s, air quality concerns primarily were related to woodstoves, unpaved roads and street sanding. These "area" sources were addressed in many Western Slope communities and are no longer as significant as the impacts from energy development, including direct emissions, support service impacts and associated growth.

Controlled and uncontrolled burns are a significant source of air pollution in this region.

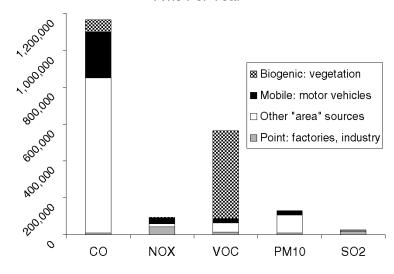
Air Pollution Control Measures

Many Western Slope communities have taken aggressive action to control residential burning emissions. The municipalities of Aspen, Crested Butte, Steamboat Springs, Telluride and Vail, and Pitkin, San Miguel, Summit, Mesa and Eagle counties have adopted either mandatory or voluntary control measures to reduce residential burning pollution during winter seasons. Increased awareness of visibility impacts and fine particle levels spurred the installation of new a

levels spurred the installation of new air monitoring equipment to gauge those impacts. The region also has a number of local agencies that conduct air quality control programs.



Western Slope Air Pollution Sources Tons Per Year



CO: Carbon Monoxide NOx: Oxides of Nitrogen

VOC: Volatile Organic Compounds

PM10: Particles less than 10 microns in diameter

SO2: Sulfur Dioxide

City of Aspen Environmental Health Department

www.aspenpitkin.com

With 83 percent of Aspen's PM10 on high pollution days coming from traffic, the city has expanded its free bus system. Parking fees provide a financial incentive to carpool or take the bus.

A bus-only high occupancy vehicle lane was added to Main Street so buses can quickly head out of town, passing cars stuck in traffic.

The city council has directed staff to prepare an impact fee ordinance that would assess developments for their share of air pollution and traffic improvements.

The Canary Initiative

The Departments newest air quality program is the Canary Initiative; a greenhouse gas emission reduction program. This initiative will encompass Aspen's efforts to reduce its impact on global warming. Under the Canary Initiative, Aspen has proposed a community action plan to reduce greenhouse gas emissions, inform the public of their effects, and advocate for regional, state and national action on the topic.

Under the initiative, Aspen has completed an inventory of greenhouse gas pollutants, will conduct an assessment of the environmental and economic impacts of global warming, will invest in a new hydropower plant and has joined the Chicago Climate Exchange.

Aspen hosted a global warming conference in October 2006 at which business and community leaders discussed successful greenhouse gas emission reduction programs.

Cañon City

www.canoncity.org

In March 1988, Cañon City officially adopted a series of local measures to reduce particulate matter produced from street sanding. Street sand was the city's main source of particulate pollution. The program of street sweeping on a regular basis began in the winter of 1987-1988 and has continued since.

Cañon City has shown attainment of the National Ambient Air Quality Standards for particulate pollution. Cañon City has been awarded a Congestion Mitigation/Air Quality Program grant for the past five years. These funds have been used each year for the paving of unpaved streets. Since 1999, these grant funds have been used to pave almost three miles of gravel streets.

In addition, Cañon City annually treats more than three miles of gravel streets with magnesium chloride to further reduce fugitive dust.

Delta County

www.deltacounty.com/

The Delta County Environmental Health Division acts in a supportive role to the Colorado Air Pollution Control Division in the following areas:

- A community-based task force for air quality discusses air quality issues and makes plans to improve air quality in Delta County.
- The Delta County Health Department offers rebates for old woodburning stoves that are replaced with clean burning units.
- The Environmental Health Division operates a PM 2.5 sampler and a PM10 sampler located in Delta.
- The Environmental Health Division works with the Mesa County Health Department to issue "No-Burn Advisories" during the winter heating season.
- The Environmental Health Division enforces the Delta County Open Burning Regulations.
- Stationary source pollution complaints for fugitive dust control, odors and stack emissions are investigated and referred to the Colorado Air Pollution Control Division.

Eagle County

www.eaglecounty.us/envHealth/

Eagle County considers clean air one of its most valuable assets. By being proactive, the county remains in attainment of ambient air quality standards as established by the U.S. Environmental Protection Agency.

Woodburning

Eagle County's Board of County Commissioners adopted a regulation to control pollution caused by wood smoke in 1992, virtually eliminating conventional, open-hearth fireplaces in new construction. The regulation limits the number of residential woodburning devices while requiring cleaner burning, more energy efficient technologies. In addition to these requirements, partnerships between Eagle County and its municipalities -- especially Vail, Avon, Eagle and Basalt -- continue to promote change-out programs and provide public information on how to burn a clean, hot fire.

Open Burning

Open burning permits are coordinated by the county wildfire mitigation specialist along with local fire districts. Permits are issued for virtually every open burn, even agricultural irrigation ditch burning, which enables better management of air quality impacts relative to smoke dispersal while allowing emergency response coordination, if necessary.

Fugitive Dust

Eagle County has many sources of fugitive dust, from industrial aggregate mining to large development projects. The Environmental Health Department is directly involved in the local land use approval process to ensure locally-enforceable fugitive dust abatement plans are implemented for site disturbance.

The road and bridge department has an ongoing road surfacing program which includes either paving or treatment with magnesium chloride to control dust emissions.

Transportation

ECO Transit contributes to protecting air quality by providing public transportation opportunities to the commuting population, and getting visitors from the Eagle County Regional Airport to their resort destinations. Eagle County continues to pursue cleaner-burning fuels and vehicles for its bus system and motor pool fleet.

Other Efforts

Eagle County created an ad-hoc Air Quality Forum whose membership currently consists of representatives of the gravel and gypsum mining industries as well as local governments. The group is developing mutually agreed-upon industry standards of operation that raise the bar in Eagle County for cleaner air. The Air Quality Forum is broadening its scope by researching Best Available Demonstrated Technologies for other industries, and lobbying local governments to take regulatory action aimed at controlling emissions to the best of their ability.

Other actions taken by Eagle County under the ECO Green Initiative program have air quality benefits. Some efforts to reduce greenhouse gas emissions and save money include purchasing 20 Toyota Prius hybrid vehicles for the motor pool fleet; implementing an ECO Build program; making regulatory changes to encourage the use of clean, renewable resources; and conducting energy audits of major facilities.

Garfield County Public Health

www.garfield-county.com

Explosive growth of natural gas development and supporting businesses in Garfield County during recent years along with local concerns about air quality resulted in a two-year ambient air quality monitoring study to be completed during 2007.

Both PM10 and volatile organic compounds (VOC) currently are monitored in rural and urban areas, and in active and planned natural gas fields. In addition to ambient air sampling, staff and citizens also are attempting to characterize odor from oil and gas facilities by taking grab samples in detectable odor plumes.

Air monitoring will continue through 2007. Local citizens and industry representatives expressed support for long-term air monitoring to the Board of County Commissioners.

The Saccomanno Research Institute of St. Mary's Hospital in Grand Junction is working to conduct a Human Health Risk Assessment. This study group is working with Garfield County to integrate air quality monitoring data with actual and potential environmental exposures to gain a better understanding of human health risks from all emission sources. The assessment is due to be completed at the end of 2007.

The Garfield County Air Quality Technical Work Group, assembled by the Garfield County Public Health Department in early 2006, examines air quality issues in the county. This group is made up of individuals from federal, state and local government, the oil and gas industry, and the private consulting sector. The group meets

regularly to discuss matters involving air monitoring data, monitoring systems, emission inventories and human health risks.

Garfield County Public Health partnered with the U.S. Forest Service (USFS) during the summer of 2006 on a regional ozone monitoring project. This project sampled ozone levels near Class I wilderness areas and along the Colorado River corridor between Glenwood Springs and Battlement Mesa. The data showed that current ozone concentrations across the region are below the national ambient air quality standards but that some areas are nearing levels of concern. As a result of elevated ozone levels in the Colorado River Valley south of Silt, the USFS installed a continuous monitor in that area for the 2007 summer season.

Environmental health staff also work closely with local land use agencies, the Colorado Air Pollution Control Division and the Colorado Oil and Gas Conservation Commission on evaluating land use proposals and investigating local air quality complaints. Efforts are underway to provide community information and education regarding alternatives and best practices for open burning. Garfield County Public Health has partnered with local fire authorities to develop and distribute educational materials about open burning for county residents.

In 2006 the Garfield County Energy Advisory Board established an education committee and an air quality committee. These committees are working together to develop community outreach, and educational programming and materials to assist the community to better understand air quality issues and data.

Routt County

www.co.routt.co.us/

The Routt County Department of Environmental Health maintains an air monitoring program on behalf of the Colorado Air Pollution Control Division for the Steamboat Springs air shed. The department manages five PM10 monitors (one real-time monitor) and one PM 2.5 monitor.

The Steamboat Springs airshed has been in PM10 compliance since 1996. An air quality attainment plan has been developed and approved by the Colorado Air Quality Control Commission. Required approvals by the legislature, the governor's office, and the U.S. Environmental Protection Agency were completed and Steamboat Springs was designated an attainment area in 2004.

San Miguel County

www.sanmiguelcounty.org/environm.htm

The San Miguel County Planning and Environmental Health Departments administer regulations aimed at protecting county air quality.

The county has banned installation of solidfuel burning devices in a 27-square mile area around Telluride to limit particle emissions. Paving is required for all new streets in this area to prevent pollution from vehicle re-entrained dust. The county also has approved plans to pave existing roads as necessary to protect air quality and has installed permanent traffic counters at its most active highway segments to aid in correlating traffic volumes with pollution levels.

A computer model ("Wyndvalley 3") is being developed to help the county understand pollutant dispersion in the Telluride airshed and improve prediction of future pollution levels. A recently-installed Graseby Beta Gauge, which provides real-time air quality monitoring, already has proven beneficial in charting daily patterns of accumulation and dispersion of particles.

Telluride became a demonstration site for the state's PM2.5 monitoring network in 2000.

Improved street sweeping, sanding and chemical de-icing practices by the town of Telluride, and a free gondola system linking Telluride and Mountain Village that opened in late 1996 have helped reduce particle emissions to the lowest levels measured in the region since monitoring began in 1973.

Telluride was redesignated as an attainment are for the federal PM10 standards in 2001.

2006 Air Pollution Levels

Central Front Range: counties of Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Gilpin, Jefferson.

Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See appendix for standards)
Carbon Monoxide	1300 Blake St., Denver	5.7 ppm 16% of 1-hour standard
	2105 Broadway, Denver	3.1 ppm 33% of 8-hour standard
Ozone	12400 W. Hwy. 285	.112 ppm 90% of 1-hour standard
	11500 N. Roxborough Park Rd.	.081 ppm 95% of 8-hour standard
Nitrogen Dioxide	2105 Broadway, Denver	.029 ppm 54% of annual average standard
Sulfur Dioxide	78th Ave. & Steele St., Denver 2105 Broadway, Denver 2105 Broadway, Denver	.026 ppm 5% of 3-hour standard .009 ppm 6% of 24-hour standard .003 ppm 9% of annual standard
PM10	7101 Birch St., Commerce City 7101 Birch St., Commerce City	115 ug/m ³ 74% of 24-hour standard 35.0 ug/m ³ 64% of annual average standard
DM2 5	2105 Broadway, Denver	25.5 ug/m³ 30% of 24-hour standard
PM2.5	7101 Birch St., Commerce City	9.9 ug/m ³ 64% of annual average standard
Lead	5400 N. Washington, Denver	.16 ug/m³ 10% of calendar quarter standard

Eastern High Plains: counties of Baca, Bent, Cheyenne, Crowley, Elbert, Kiowa, Kit Carson, Lincoln, Logan, Morgan, Otero, Phillips, Prowers, Sedgwick, Washington, Yuma.

Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See appendix for standards)
PM10	Lamar Power Plant, 100 N. 2nd Ave. Lamar Power Plant, 100 N. 2nd Ave.	136 ug/m³ 88% of 24-hour standard 24.0 ug/m³ 44% of annual average standard
PM2.5	Vicinity of Roads 5 and 98, Elbert County Vicinity of Roads 5 and 98, Elbert County	10.5 ug/m ³ 16% of 24-hour standard 4.3 ug/m ³ 28% of annual average standard

Northern Front Range: counties of Larimer, Weld.

Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See appendix for standards)
Carbon Monoxide	905 10th Ave., Greeley 905 10th Ave., Greeley	5.6 ppm 16% of 1-hour standard 3.3 ppm 35% of 8-hour standard
Ozone	3416 LaPorte Ave. Ave., Fort Collins 3101 35th Ave., Greeley	.109 ppm 87% of 1-hour standard .076 ppm 89% of 8-hour standard
PM10	251 Edison Dr., Fort Collins 1516 Hospital Rd., Greeley	130 ug/m ³ 84% of 24-hour standard 22.4 ug/m ³ 41% of annual average standard
PM2.5	1516 Hospital Rd., Greeley 1004 Main St., Platteville	23.4 ug/m ³ 36% of 24-hour standard 8.6 ug/m ³ 55% of annual average standard

Pikes Peak Region: counties of El Paso, Park, Teller.

Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See appendix for standards)
Carbon Monoxide	690 W. Hwy. 24, Colorado Springs 690 W. Hwy. 24, Colorado Springs	4.0 ppm 11% of 1-hour standard 2.4 ppm 25% of 8-hour standard
Ozone	101 Bank's Place, Manitou Springs Road 640, USAF Academy	.089 ppm 71% of 1-hour standard .073 ppm 86% of 8-hour standard
PM10	101 W. Costilla, Colorado Springs 101 W. Costilla, Colorado Springs	101 ug/m³ 65% of 24-hour standard 24 ug/m³ 44% of annual average standard
PM2.5	101 W. Costilla, Colorado Springs 101 W. Costilla, Colorado Springs	17.6 ug/m ³ 27% of 24-hour standard 8.1 ug/m ³ 52% of annual average standard
Lead	101 W. Costilla, Colorado Springs	.006 ug/m³4% of calendar quarter standard
South Centra	II: counties of Huerfano, Las Anim	as, Pueblo.
Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See appendix for standards)
PM10	211 D St., Pueblo 211 D St., Pueblo	58 ug/m ³ 37% of 24-hour standard 23.2 ug/m ³ 42% of annual average standard
PM2.5	211 D St., Pueblo 211 D St., Pueblo	15.4 ug/m³ 24% of 24-hour standard 7.5 ug/m³ 48% of annual average standard

Western Slope: counties of Alamosa, Archuleta, Chaffee, Conejos, Costilla, Custer, Delta, Dolores, Eagle, Fremont, Garfield, Grand, Gunnison, Hinsdale, Jackson, Lake, La Plata, Mesa, Mineral, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Rio Grande, Routt, Saguache, Summit, San Juan, San Miguel.

Pollutant	Monitoring Site with Highest Level*	Percent of Standard ** (See appendix for standards)
Carbon Monoxide	Stocker Stadium, Grand Junction Stocker Stadium, Grand Junction	2.8 ppm 8% of 1-hour standard 1.7 ppm 18% of 8-hour standard
PM10 ***	425 4th St., Alamosa 100 E. 2nd St., Parachute	213 ug/m³ 137% of 24-hour standard 30.2 ug/m³ 55% of annual average standard
PM2.5	650 South Ave., Grand Junction 650 South Ave., Grand Junction	24.8 ug/m ³ 38% of 24-hour standard 9.5 ug/m ³ 61% of annual average standard
Lead	510 Harrison, Leadville	.02 ug/m³ 1.3% of calendar quarter standard

^{*} For carbon monoxide, the site with the highest second maximum value is used for consistency with standards. For the eight-hour ozone standard, the site with the highest three-year average of the fourth-maximum value is used for consistency with standards. For PM2.5 the site with the highest three-year average of the 98th percentile concentration is used for comparison to the standard.

^{* *} All values are directly comparable to actual standards. For example, particulate matter and eight-hour ozone values are the three-year average values for consistency with standards. In addition, the 24-hour PM2.5 standard was changed effective December 18, 2006 from 65 to 35 micrograms per cubic meter. Comparisons to the PM2.5 standard in these tables are based on the 65 micrograms per cubic meter standard since it was in effect for most of 2006. See the appendix for complete descriptions of standards.

^{* * *} High winds resulted in levels of PM10 above the standard during 2006 on February 10 and 15, April 28 and June 26 in Alamosa, and February 15 in Grand Junction. These values were excluded from this table because they were due to a "natural event" and not used to determine compliance with standards.

Regional Air Quality Agencies

Central Front Range Region

Regional Air Quality Council 1445 Market St., Ste. 260 Denver, CO 80202 (303) 629-5450

Boulder County Health Department 3450 Broadway Boulder, CO 80304 (303) 441-1100

Clear Creek County Environmental Health Specialist P.O. Box 2000 Georgetown, CO 80444 (303) 679-2335

Denver Department of Environmental Health Environmental Protection Division 1391 Speer Blvd., Ste. 700 Denver, CO 80204 (303) 285-4053

Gilpin County Environmental Health Officer County Courthouse Central City, CO 80427 (303) 582-5214

Jefferson County Department of Health and Environment 1801 19th St. Golden, CO 80401 (303) 271-5755

Tri-County Health Department (Adams, Arapahoe and Douglas counties) 7000 E. Belleview, Ste. 301 Englewood, CO 80111 (303) 220-9200

Eastern High Plains Region

City of Lamar 102 E. Parmenter Lamar, CO 81052 (719) 336-4376

Southeastern Land and Environment 109 W. Lee Ave., Ste. 1 Lamar, CO 81052 (719) 336-8988

Northeast Colorado Health Department 700 Columbine St. Sterling, CO 80751 (970) 552-3741

Otero County Health Department County Courthouse, Rm 110 La Junta, CO 81050 (719) 384-2584

Northern Front Range Region

North Front Range Transportation and Air Quality Planning Council 210 East Olive St. Fort Collins, CO 80524 (970) 221-6608

City of Fort Collins Natural Resources Division 281 N. College Fort Collins, CO 80522 (970) 221-6600

City of Greeley 1000 10th St. Greeley, CO 80531 (970) 350-9783

Larimer County
Department of Health and Environment
1525 Blue Spruce
Fort Collins, CO 80524
(970) 498-6775

Weld County Department of Health 1555 N. 17th Ave. Greeley, CO 80631 (970) 304-6415

Pikes Peak Region

Pikes Peak Area Council of Governments 15 S. Seventh Ave. Colorado Springs, CO 80905 (719) 471-7080

El Paso County Department of Health and Environment 301 S. Union Blvd. Colorado Springs, CO 80910 (719) 578-3137

Park County Environmental Health Officer P.O. Box 216 Fairplay, CO 80441 (719) 836-2771

Teller County Environmental Health Officer P.O. Box 118 Woodland Park, CO 80863 (719) 687-3048

South Central Region

Pueblo City-County Health Department 151 Central Main Pueblo, CO 81003 (719) 583-4323

Las Animas-Huerfano
District Health Department
412 Benedicta Ave.
Trinidad, CO 81082
(719) 846-2213
--and-119 E. 5th St.
Walsenberg, CO 81089
(719) 738-2650

Western Slope Region

Archuleta County Box 1507 Pagosa Springs, CO 81147

City of Aspen 130 S. Galena Aspen, CO 81611 (970) 920-5075

Chaffee County Environmental Health Officer P.O. Box 699 Salida, CO 81201 (970) 539-2124

Delta County Health Department 255 W. 6th St. Delta, CO 81416 (970) 874-2165

Eagle County Environmental Health Division P.O. Box 850 Eagle, CO 81631 (970) 328-8755

Fremont County and Cañon City P.O. Box 1460 Cañon City, CO 81215-1460 (719) 269-9011

Garfield County Environmental Health Officer 109 8th St., Ste. 303 Glenwood Springs, CO 81601 (970) 945-2339

Gunnison County Environmental Health Officer County Courthouse Gunnison, CO 81230 (970) 641-4100 Lake County
Environmental Health Department
P.O. Box 513
Leadville, CO 80461
(719) 486-1796

Mesa County Health Department P.O. Box 2000 Grand Junction, CO 81502 - or -510 29 1/2 Rd. Grand Junction, CO 81504 (970) 248-6960

Moffat County and Rio Blanco County Sanitarian 221 Victory Way Craig, CO 81624 (970) 824-2643

Montezuma County Health Department County Courthouse Cortez, CO 81321 (970) 565-3056

Montrose County Environmental Health Officer P.O. Box 1289 Montrose, CO 81401

Pitkin County 0405 Castle Creek Rd. Aspen, CO 81611 (970) 920-5070 Routt County Environmental Health Department Box 770087 Steamboat Springs, CO 80477 (970) 879-0185

San Juan Basin Health Unit P.O. Box 140 Durango, CO 81302 (970) 247-5702

San Miguel Environmental Health Department P.O. Box 4130 Telluride, CO 81435 (970) 728-0447

Summit County Environmental Health Department Box 626 Frisco, CO 80443 (970) 668-0727

Town of Vail 75 S. Frontage Rd. Vail, CO 81657-509 (970) 479-2138

Appendix

Colorado Air Quality Regulations Health-Related Air Pollutants Enforcement Report Summary, 2006-2007

Colorado Air Quality Regulations

www.cdphe.state.co.us/ap/regoverview.html

Procedural Rules

The rules that the commission operates under for its regular monthly meetings and public hearings.

Ambient Air Quality Standards Regulation

This regulation establishes ambient air quality standards for the state of Colorado and dictates monitoring procedures and data handling protocols. It also defines nonattainment area boundaries for locations in the state which historically have violated federal and state air quality standards. In addition, the regulation contains the state's urban visibility standard and sets emission budgets for nonattainment areas.

State Implementation Plan Specific Regulation

This regulation defines specific requirements concerning air quality control strategies and contingency measures for nonattainment areas in the state.

Particles, Smoke, Carbon Monoxide and Sulfur Oxides Regulation No. 1

Regulation No. 1 sets forth emission limitations, equipment requirements and work practices (abatement and control measures) intended to control the emissions of particles, smoke and sulfur oxides from new and existing stationary sources. Control measures specified in this regulation are designed to limit emissions into the atmosphere and thereby minimize the ambient concentrations of particles and sulfur oxides.

Odor Control

Regulation No. 2

Regulation No. 2 sets standards for allowable odor contaminants for different land-use areas in the state and outlines control measures that can be taken to bring violators into compliance.

Air Pollution Emission Notices-Permits

Regulation No. 3

Regulation No. 3 requires air pollution sources to file Air Pollution Emission Notices. It also requires that new or modified sources of air pollution – with certain exemptions – obtain preconstruction permits. Very large facilities also are required to obtain operating permits.

Woodburning Controls

Regulation No. 4

Regulation No. 4 requires new stove and fireplace inserts to meet federal certification in specified areas of the state.

New Source Performance Standards

Regulation No. 6

Regulation No. 6 sets standards of performance for specific new stationary sources in Colorado. The regulation is designed to bring new sources into compliance with the U.S. Environmental Protection Agency's New Source Performance Standards. In addition, the regulation sets standards for new industries that are unique to Colorado for which the EPA has not yet set standards.

Volatile Organic Compounds Control

Regulation No. 7

Regulation No. 7 controls the emissions of volatile organic compounds, primarily in the Denver-metro area. It sets standards and mandates controls for specific types of volatile organic compound sources.

Hazardous Air Pollutants Control Regulation No. 8

Regulation No. 8 sets forth specific work practices, emission control requirements and standards for hazardous air pollutants.

Open Burning, Prescribed Fire and Permitting

Regulation No. 9

Regulation No. 9 applies to all open burning activities throughout the state to control smoke and emissions from such fires. The regulation sets forth requirements for permitting including prescribed fires, controlled burns and significant users of prescribed fires.

Transportation Conformity Regulation No. 10

Regulation No. 10 defines the criteria the Colorado Air Quality Control Commission uses to evaluate the consistency between state air quality standards/objectives, and transportation planning and major construction activities across the state, as defined in state implementation plans.

Motor Vehicle Inspection Program Regulation No. 11

Regulation No. 11 requires automobile emission inspection and maintenance programs to be implemented in specified areas of the state for gasoline-powered on-road vehicles. These programs apply to businesses, industry and the general public.

Diesel Vehicle Inspection Program Regulation No. 12

Regulation No. 12 defines the state's dieselpowered vehicle emission inspection and maintenance program for on-road vehicles.

Oxygenated Fuels Program Regulation No. 13

Regulation No. 13 requires the use of oxygenated fuels in gasoline-powered motor vehicles in Colorado's Automobile Inspection and Readjustment program areas, except Colorado Springs, from Nov. 1 through Feb. 7.

Chlorofluorocarbons

Regulation No. 15

Regulation No. 15 identifies the requirements to control emissions of ozone-depleting compounds from both stationary and mobile sources.

Street Sanding and Sweeping Regulation No. 16

Regulation No. 16 sets specification standards for street sanding material and street sweeping practices in the Automobile Inspection and Readjustment program area, and the Denvermetro fine particle nonattainment area.

Acid Rain Control

Regulation No. 18

Regulation No. 18 sets forth the requirement for implementing the state's acid rain program. This program is adopted by reference from the federal program found in 40 C.F.R., Part 72 as in effect on Jan. 6, 1994.

Lead Based Paint

Regulation No. 19

Regulation No. 19 defines the requirements for certifying lead abatement professionals and work practice measures.

Pollutants	Health Effects	Areas Affected in Colorado
Carbon Monoxide (CO) is a colorless, odorless and tasteless gas. It results from incomplete combustion; its major sources in urban areas are motor vehicle emissions and woodburning.	Carbon monoxide affects individuals by depriving the body of oxygen. It enters the body through the lungs and inhibits the body's ability to transport oxygen. Carbon monoxide can reduce a healthy person's ability to perform manual tasks, and it can affect pregnant women, fetuses, anemic individuals and persons with cardiovascular diseases.	No violations statewide since 1995.
Particulate Matter (PM) describes the tiny particles of solid or semi-solid material found in the atmosphere, often referred to as dust. It is classified according to size: •TSP= total suspended particles •PM10 = particles smaller than 10 microns •PM2.5= particles smaller than 2.5 microns	Particulate matter can reduce lung function, aggravate respiratory conditions and may increase the long-term risk of cancer or development of respiratory problems.	Elevated PM levels occur in high-density urban areas and communities where blowing dust or residential burning is a problem. The most recent exceedances were in Alamosa and Lamar in 2002 and Denver in 2001.
Ozone (O ₃) is a highly reactive form of oxygen; it is not emitted directly from a source, rather it is formed from the reaction of pollutants with sunlight. Ground-level ozone (photochemical smog) should not be confused with stratospheric ozone – the protective ozone layer located in the upper atmosphere.	Exposure to high concentrations of ozone can impair the function of lungs; it may induce respiratory symptoms in individuals with asthma, emphysema or reduced lung function; it potentially can reduce immune system capacity; and it can act as an irritant to mucous membranes of eyes and throat.	Suburban areas down- wind of urban areas are most affected. Violation of the eight-hour standard in the Denver- metro area last occurred during the summers of 2007 and 2003.
Sulfur Dioxide (SO₂) is a colorless gas with a pungent odor at high concentrations; it is highly soluble with water and is a major contributor to "acid rain." It is emitted primarily from combustion sources.	Sulfur dioxide can aggravate an individual's respiratory tract, impair pulmonary functions and increase the risk of asthma attacks.	All of Colorado has met the standard.
Lead (Pb) exists in the atmosphere primarily as an inhalable particulate; its primary source is motor vehicles that burn leaded gasoline.	Lead can impair an individual's production of hemoglobin; cause intestinal cramps, peripheral nerve paralysis, anemia and severe fatigue.	All of Colorado has met the standard.
Asbestos is a mineral fiber found in building materials and automobile brake linings.	Asbestos can cause respiratory problems and increase the risk of lung cancer. It can cause asbestosis – a scarring of the lung tissue which restricts breathing; it also can cause mesothelioma – cancer of the lung and intestinal lining.	Buildings where asbestos has been used are of primary concern, particu- larly during removal or renovation.
Nitrogen Dioxide (NO₂) is a gas contributing to photochemical smog (ozone) production. It is a by-product of oxides of nitrogen emitted from combustion sources and motor vehicles.	Nitrogen dioxide can increase respiratory problems, cause mild symptomatic effects in asthmatic individuals and increase susceptibility to respiratory infections.	All of Colorado has met the standard.
Hazardous Air Pollutants are pollutants known or suspected of causing cancer or other serious health effects.	Hazardous air pollutants can increase risk of cancer, sterility and nervous system disorders.	Statewide

State & Federal Air Pollutant Standards

State & Local Programs/Strategies To Reduce Air Pollutants

Two state and federal carbon monoxide standards exist. Both standards average the concentration of carbon monoxide across specified time periods – one hour and eight hours. The 1-hour standard is set at 35 parts per million and the 8-hour standard is set at 9 parts per million.

Enhanced Automobile Inspection and Maintenance Program, Oxygenated Gasoline Program, transportation planning, travel reduction programs, residential burning controls, stationary source controls and pollution prevention programs, High Pollution Advisory Program.

PM2.5 Standards:

Annual mean standard must not exceed 15 micrograms per cubic meter averaged over three years.
24-hour standard is 35 micrograms per cubic meter applied to the 3-year average of the 98th percentile value.

PM10 Standards

• 24-hour standard of 150 micrograms per cubic meter cannot be exceeded more than once per year on average over three years

Diesel Emissions Control Program, street sanding and street sweeping improvements, transportation planning, Basic and Enhanced Automobile Inspection and Maintenance Programs, travel reduction programs, residential burning controls, stationary source controls and pollution prevention programs, High Pollution Advisory Program.

Eight-hour standard: An area will attain the standard when the 4th highest daily maximum 8-hour concentration, averaged over three years, is equal to or below 0.085 parts per million.

One-hour standard: An area violates the standard when the hourly peak ozone concentration is 0.125 ppm or greater more than three times in three years.

Enhanced Automobile Inspection and Maintenance programs, gasoline transfer controls, substitution of non-reactive hydrocarbons, solvent control and pollution prevention programs, stationary source controls and summertime Ozone Advisory Program.

Three state and federal sulfur dioxide standards exist. Each considers average concentration levels across specified time periods. An annual standard is set at 0.03 parts-per-million, a 24-hour standard is set at 0.14 ppm and a 3-hour standard is set at 0.5 ppm.

Colorado Air Quality Control Commission regulations control sulfur dioxide emissions from industry.

The federal lead standard is averaged across 3-month time periods. During any three months, the lead concentration is not to exceed 1.5 micrograms per cubic meter. The state lead standard is averaged across 1-month time periods and is not to exceed 1.5 micrograms per cubic meter.

Leaded gasoline phase out and stationary source controls.

The state standard for asbestos is set at 0.01 fibers per cubic centimeter or 70 structures per square millimeter depending on the measurement method.

Colorado Air Quality Control Commission Regulation No. 8 controls asbestos removal and abatement statewide.

The nitrogen dioxide standard averages concentration levels on an annual basis and allows up to 0.053 parts per million of nitrogen dioxide per year.

Colorado Air Quality Control Commission regulations control the emissions of oxides of nitrogen.

Approximately 20 federal and state standards exist and are control technology based.

Residential burning controls and state/local pollution prevention programs reduce the prevalence of hazardous air pollutants.

Stationary Sources and Indoor Air Program Enforcement Update

Purpose

This portion of the report is intended to satisfy the requirement in section 25-7-105(5)(c), CRS, which requires the Colorado Air Quality Control Commission to prepare and make available to the public a report that includes a list of all alleged violations of emission control regulations, and show the status of control procedures in effect with respect to each such alleged violation.

The full enforcement report is available on-line at www.cdphe.state.co.us/ap/enforcerept.html. A summary of enforcement statistics is provided on the following page.

Enforcement Program

The Field Services Unit regulates stationary sources, including open burning and odors. The unit has been focusing more on early settlement agreements in lieu of issuing Notices of Violation and Compliance Orders. Upon discovery of a violation, the inspector typically will draft and send a Compliance Advisory (CA) to notify the source of the noncompliance issues. The Compliance Advisory includes a statement that the company should contact the inspector to discuss the noncompliance issues. Upon discussing the issue internally and with the company, unit staff will decide whether to dismiss the violation, issue a Warning Letter, proceed with early settlement discussions or proceed with a formal enforcement action (issue a Notice of Violation). Many of the cases are settled prior to issuance of a Notice of Violation.

The Chlorofluorocarbon Unit enforces Regulation No. 15 concerning the control of chlorofluorocarbons. Most of the enforcement actions by this unit involve notification and certification requirements. As a result, the Chlorofluorocarbon Unit often sends out early settlement agreement offers and Compliance Advisories. It issues few Notices of Violation.

The Asbestos Unit regulates companies involved in the abatement of asbestos. Building owners and schools also are affected by asbestos control rules. In regulating schools, the Asbestos Unit issues Notices of Noncompliance (NONs) which require the school to take certain steps to come into compliance. Typically, if the school comes into compliance within the stated time period, the division does not require the school to pay a civil penalty. The Asbestos Unit is not legally required to, but typically does issue a Notice of Violation (NOV) at the onset of an enforcement action. After a Notice of Violation conference is held, the Asbestos Unit issues a Warning Letter, dismisses the action, attempts to reach an early settlement agreement in the form of a Compliance Order on Consent (COC), or issues a Compliance Order (CO).

The table on the following page is a summary of the number of enforcement documents.

Enforcement Statistics July 2006 - June 2007

Actions	Field Services Unit	Asbestos Unit	CFC Unit	
Warning Letters	20	28	1	
Compliance Advisories	77	0	0	
Notices of Violations	13	28	0	
Notices of Noncompliance (schools	only) 0	30	n/a	
Compliance Orders	0	14	0	
Compliance Orders on Consent and Early Settlement Agreements	66	7	0	
AQCC Hearings	0	0	0	
Referrals to Attorney Generals Office	e 0	0	0	
Referrals to EPA	0	0	0	

Glossary of Terms

Compliance Advisory (CA): The division issues these to provide timely notice to a facility of apparent violations found during an inspection. The division may or may not initiate a formal enforcement action, depending on the type of violation and the response of the facility.

Compliance Order (CO): If the division determines that a violation or noncompliance did occur after a notice of violation conference, it may issue a compliance order. The order includes the final determinations of the division regarding the violation or noncompliance, a summary of the proceedings at the notice of violation conference, and an evaluation of the evidence considered by the division in reaching its final determination of law.

Compliance Order on Consent (COC): A settlement agreement or express terms, mutually agreed upon in writing, between the recipient of an informal notice of noncompliance, notice of violation, or compliance order and the division, resolving the discovered noncompliance issues.

Noncompliance Penalty (NCP): A penalty assessed pursuant to § 25-7-115(5), C.R.S., to ensure a source does not reap the economic benefit of noncompliance with a federal requirement, as required under 42 U.S.C. § 7420.

Notice of Noncompliance (NON): Issued to a school and requires the school to take certain steps to come into compliance. Typically, if the school comes into compliance within the stated time period, the division does not require the school to pay a civil penalty.

Notice of Violation (NOV): Issued by the division to provide specific notice to a company of the provisions alleged to have been violated, and the division's factual basis and legal conclusions for the allegations.

Warning Letter: A written notification to a source that the division has documented a violation, that further recurrence could result in enforcement action being taken, but that no further enforcement action will result directly from the instant violation.