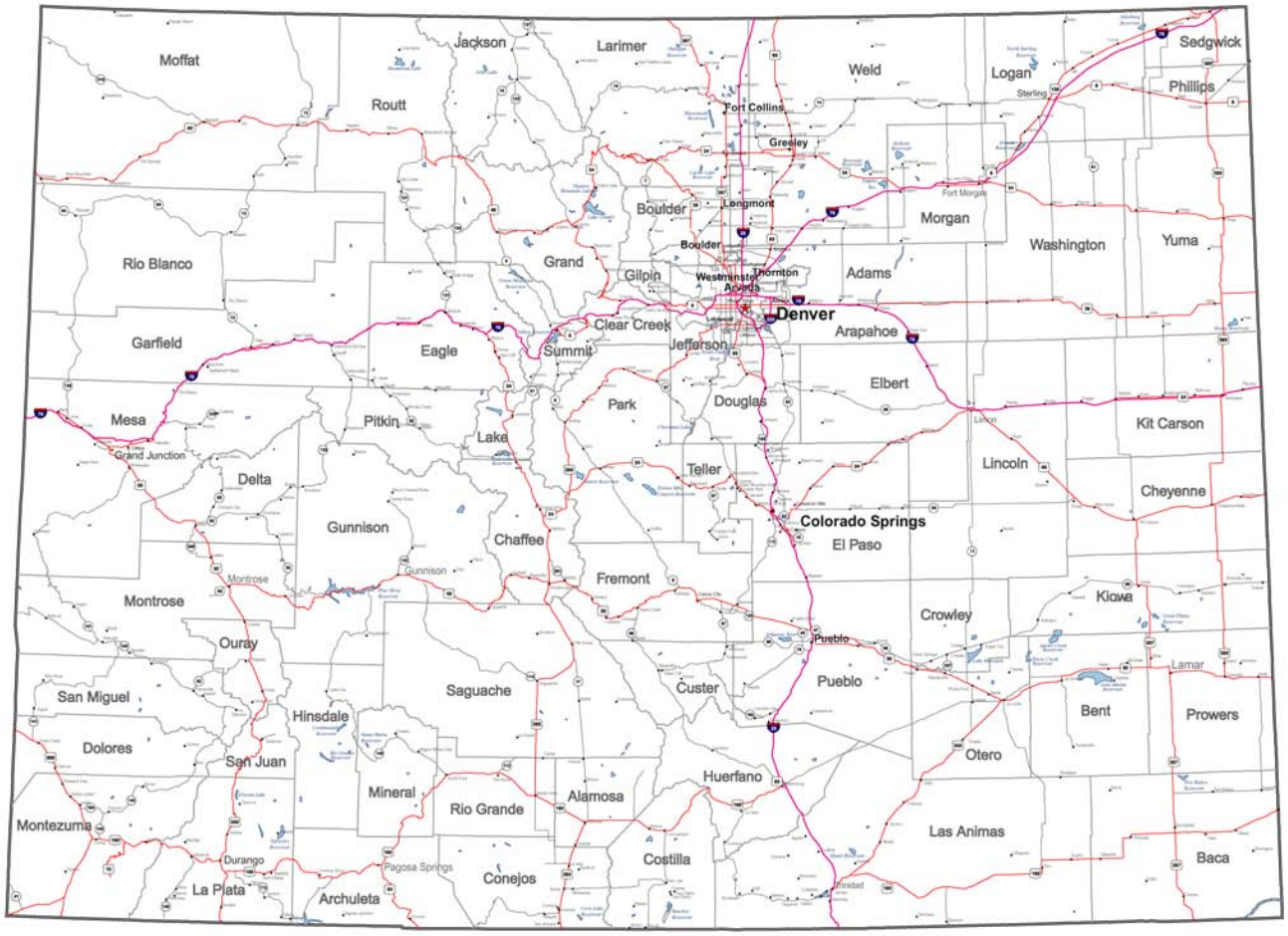
Colorado

Air Quality Control Commission



Colorado Department of Public Health and Environment

Report to the Public 2010-2011

DRAFT 10/12/11

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Colorado Department
of Public Health
and Environment

Message from the Commission . . .

Colorado Department of Public Health and Environment

Air Quality Overview

Colorado's air quality management program relies upon several organizations within the state and the country, as well as its citizens, to achieve and maintain air quality. The Commission works closely with Colorado's Air Pollution Control Division to adopt and implement air quality management programs in the state. Also closely involved in the state's air quality management program are the U.S. Environmental Protection Agency (EPA) and federal land managers, the Governor-designated air quality planning agencies, city and county health departments, the regulated community and the citizens of our great state.

Colorado, like many states, has experienced numerous issues with air quality, but has been successful in providing good public health protection and improving air quality. Since the time that air pollution monitoring began in the 1960s, we have improved air quality in areas of the state where violations of the national standards were recorded and have preserved those improvements over time.

In 2002, we accomplished a milestone by achieving compliance with all federal air quality standards. Since that time, the EPA has increased the stringency of many of these national standards, making it more difficult to maintain compliance. Now the Denver-metropolitan area and the Front Range region have violated the more stringent standard for ozone. The Commission also is closely monitoring air quality data from other parts of the state where compliance with these more stringent standards is in jeopardy.

We are working to address air pollution from a variety of sources, such as oil and natural gas development, commercial and industrial facilities, automobiles and light-duty trucks and heavy-duty diesels.

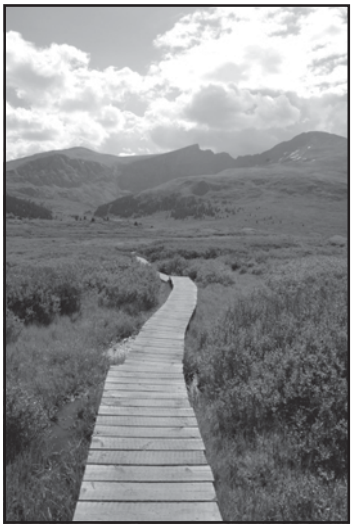
Colorado has undergone a significant increase in oil and gas development in many areas of the state. Though over-all emissions from oil and gas sources have increased, aggressive emission controls have significantly slowed this emissions growth, and additional emission reduction strategies are being evaluated. Reducing emissions from oil and gas exploration and production will help reduce ozone pollution and improve visibility, as well as reduce odors and exposure to air toxics.

We continue to improve and implement long-standing emission control requirements for commercial and industrial facilities. The consideration of cost-effective measures and federal requirements has resulted in strong emission controls for sources that generate electricity and manufacture products. Emissions reduction measures have been implemented for small commercial facilities like dry cleaners and gas stations, as well as construction and demolition activities that produce dust and asbestos.

Air pollutant emissions from cars and light-duty trucks as well as heavy-duty vehicles collectively contribute to adverse air quality in Colorado. High-emitting vehicles or vehicles with engine system malfunctions contribute dispro-

portionately large amounts of pollution. To combat these high emissions, we have expanded vehicle emissions testing in the Front Range and are exploring ways to more efficiently identify and require repairs for high-emitting vehicles. Cleaner-burning gasoline and diesel fuels will help to reduce ozone concentrations as well as carbon monoxide, particulate, and oxides of nitrogen.

We recently enacted a comprehensive plan to reduce air pollutant emissions to improve visibility improvement in our National Parks and Wilderness Areas. The gradual implementation of aggressive emission control requirements for industrial boilers, power plants and cement kilns, along with the continued implementation of smoke management measures from prescribed burning, will allow the state to improve visibility under the requirements of the federal Regional Haze Program. Impaired visibility is a regional air quality issue that will continue to require emission reductions from numerous sources across broad regions of the country.



While great strides have been made in our air quality there are challenges ahead. The Air Quality Control Commission understands that EPA will continue to revise air quality standards over time, which will require Colorado to assess and implement plans to meet any revised standards.

High elevation alpine ecosystem health is becoming an important consideration, and the Commission supports efforts to reduce the deposition of nitrogen compounds in Rocky Mountain National Park. The discussion on climate change continues on both the national and international stage, and the Commission has adopted the initial permitting framework in response to EPA guidance and requirements.

These issues and more are further discussed in this report. The focus of the Air Quality Control Commission in the coming year will be to efficiently continue the air quality improvement and management efforts underway and to effectively respond to emerging issues.

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Jon Slutsky, *secretary*	Wellington	January 31, 2012
Jim Wilson, *vice-chair*	Superior	January 31, 2013

Michael Silverstein, Administrator and Technical Secretary
Theresa Martin, Program Assistant

The major pollutants . . .

There are many types of air pollution, from blowing dust to human-caused chemical emissions. The U.S. Environmental Protection Agency has developed standards for six air pollutants that it calls "criteria pollutants." Health and environmental criteria are used to establish the standards for these pollutants. The standards indicate maximum allowable levels of the regulated pollutants in the air.

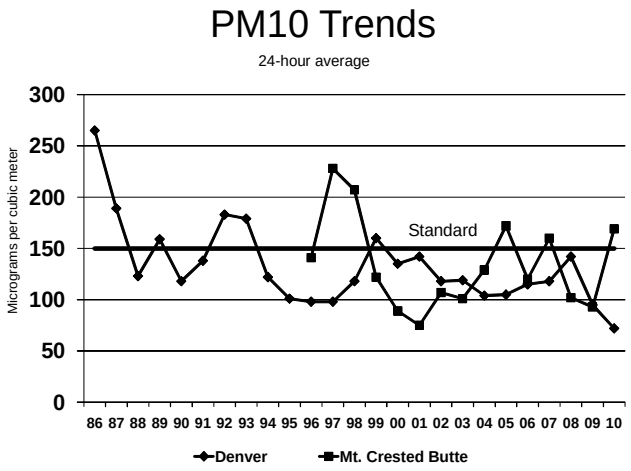
The six criteria pollutants are particulate matter, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead.

In addition to criteria pollutants, another class of regulated air pollutants is "toxic air pollutants." Toxic air pollutants, also known as hazardous air pollutants, are those that are known or suspected to cause cancer or other serious health or environmental effects.

Greenhouse gases, such as carbon dioxide and methane, are pollutants that many believe contribute to changes in our climatic environment. Climate change has been a growing concern in recent years. Colorado and the nation are reviewing methods to reduce greenhouse gases and their impacts.

Monitoring the Pollutants

The Colorado Air Pollution Control Division maintains a statewide monitoring network for all criteria pollutants as required by the federal Clean Air Act and at times conducts special studies of toxic air pollutants. Monitors are placed in areas where emissions sources and modeling suggest that air quality could be most impacted.



The following information provides more detail about the criteria pollutants of concern in Colorado. For more details on all the criteria pollutants and Colorado air monitoring, see www.colorado.gov/airquality.

Particulate Matter

Particulate matter is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Coarse particles are those with a diameter greater than 2.5 microns up to 10 microns (PM10). Fine particles are 2.5 microns and smaller (PM2.5). A micron is 1 millionth of a meter. A human hair is about 60-70 microns in diameter.

PM10

PM10 consists of solid and semisolid material up to 10 microns in size suspended in the atmosphere. More than 70 percent of PM10 is created from windblown dust and soil from roads, fields and construction sites. A smaller percentage of PM10 comes from automobile and diesel engine exhaust, soot from wood fires, and sulfates and nitrates from combustion sources such as industrial boilers.

PM2.5

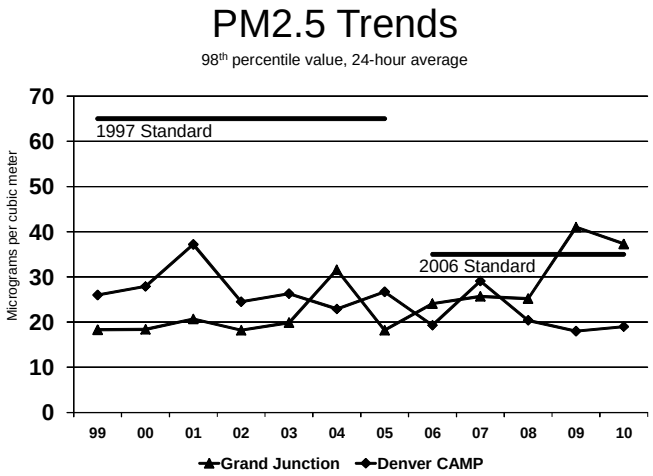
PM2.5 particles are a subset of PM10 and include those particles up to 2.5 microns in size. PM2.5 can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air.

Health and Environmental Effects

Particulate matter can enter the lungs. Once inhaled, PM10 and PM2.5 particles can affect the heart and lungs and cause serious health effects, including respiratory problems and cancer. The environmental effects range from visibility degradation to climate change and vegetation damage.

Impacts in Colorado

All of Colorado meets the federal standards for both PM10 and PM2.5 pollution. However, particle pollution at times can cause temporary, localized air quality impacts due to blowing dust or wildfires.



The chart at the right shows exceedances of the PM2.5 standard in Grand Juntion in 2009 and 2010. Strong winter temperature inversions trapped warmer, more polluted air over the city. The standard is based on a 3-year average, so 2011 air quality will determine if the standard is violated.

The chart on the opposite page shows an exceedance of the PM10 standard in Mt. Crested Butte in 2010, which was caused by a high wind event and does not count towards an official violation of the federal standard.

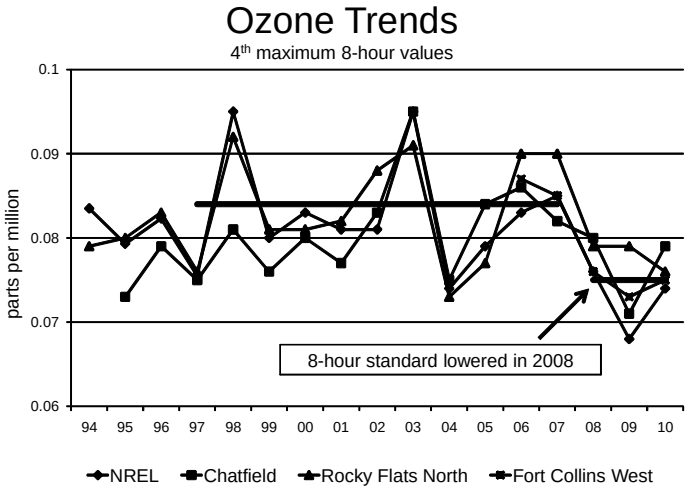
Ground-level ozone

Ozone is formed through complex photochemistry involving volatile organic compounds (VOCs) and nitrogen oxides (NOx) in the presence of sunlight. Ozone typically is not emitted directly from an individual source. Emissions from motor vehicles, industry and even vegetation contribute to ozone formation.

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 usually occur in the summer

The major pollutants . . .



when hot, still days cause reactive pollutants to form ozone. However, high ozone events have been observed in some rural areas in winter.

Health and Environmental Effects

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. Ground-level ozone also can have detrimental effects on plants and ecosystems.

Impacts in Colorado

The Denver-metropolitan and North Front Range areas became "nonattainment" for the federal ozone standard on November 20, 2007. The nonattainment designation is a result of violations of the standard. Ozone levels have shown a downard trend since that time. However, a tighter federal ozone standard was issued in 2008, and the Denver area has violated that new standard every year since then. The standard is based on a three-year average of monitoring data. The rest of Colorado presently attains the ozone standard.

For more information on ozone issues in Colorado, see the major initiatives section on page 12 of this report.

Nitrogen Oxides

Nitrogen oxides (NOx) comprise 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. NOx is an “ozone precursor.”

Ninety-five percent of NOx is 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.

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

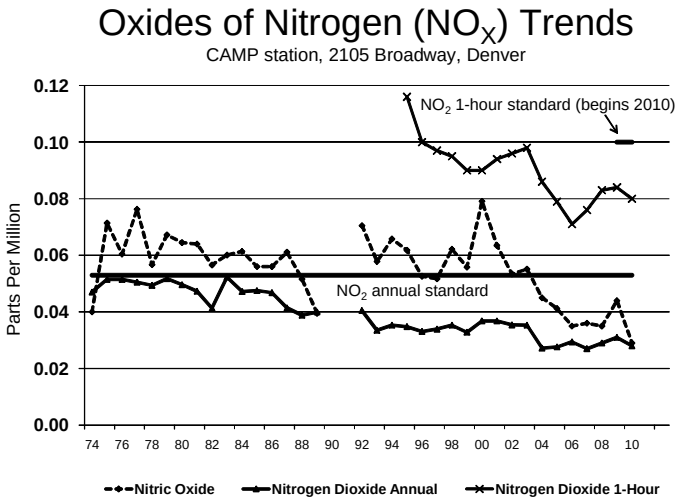
Health and Environmental Effects

NOx reacts 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 contributes to a wide range of environmental effects directly and, when combined with other precursors, to acid rain and ozone. Increased nitrogen in terrestrial and wetland systems can lead to changes in plant species composition and diversity. Nitrogen in lakes and streams can lead to eutrophication (a condition of excessive algae growth) and leads to a severe depletion of dissolved oxygen and increased levels of toxins harmful to aquatic life. NOx can also contribute to visibility impairment.



Impacts in Colorado

The state monitors NOx at two sites in Colorado: downtown Denver's CAMP station and in Welby just north of Denver. The sites show NOx values that are well below the national ambient air quality standards. Monitoring results show no significant trend in NOx since monitoring began in 1974, though NO2 shows a downward trend in Colorado.

Nationally, average NO2 concentrations are well below the National Ambient Air Quality Standards and currently are at the lowest levels recorded in the past 20 years. The federal land managers also monitor NOx in Colorado. These monitors also show levels below the NO2 standard.

Lead

Lead is a metal found naturally in the environment as well as in manufactured products. The primary historical sources of lead air emissions have been from motor vehicles burning leaded gasoline, and certain industrial sources. Since the phase-out of leaded gasoline beginning in the 1970s, today's primary sources of lead air emissions are industrial metal processing, lead smelting and aviation gasoline.

In 2008 the EPA revised the national standard for lead from 1.5 micrograms per cubic meter to .15 micrograms per cubic meter. All of Colorado meets the new standard.

Health and Environmental Effects

Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Lead exposure leads to neurological effects in children and cardiovascular effects such as high blood pressure in adults. Infants

The major pollutants . . .

and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems and learning deficits.

Ecosystems near point sources of lead have demonstrated a wide range of adverse effects including losses in biodiversity, changes in community composition, decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

Impacts in Colorado

Since the phase-out of leaded gasoline, lead levels monitored in Denver have decreased by more than 95 percent since 1979. Lead at the Denver monitoring site is now at or near the minimum levels of detection. A lead monitor was added at Centennial Airport in Arapahoe County to meet new federal lead monitoring requirements. Small engine aircraft use leaded fuel and the air traffic at the airport is great enough to require analysis for compliance with the new standard. That analysis began in 2010 and has shown the Centennial monitor is in compliance with the new lead standard.

Toxics

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. Examples include benzene, which is found in gasoline; perchloroethylene, which is emitted from some dry cleaning facilities; and methylene chloride, which is used as a solvent and paint stripper by a number of industries. Examples of other listed air toxics include dioxin, asbestos, toluene, and metals such as cadmium, mercury, chromium, and lead compounds.

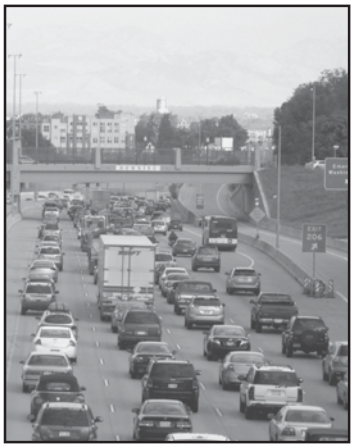
While no ambient air quality standards have been set for air toxics, the EPA has published a list of 188 air toxics and has developed standards for specific industries. These standards are called the National Emission Standards for Hazardous Air Pollutants, or NESHAPS. NESHAPS are commonly addressed through maximum achievable control technology (MACT) requirements. MACT requirements are technology-based controls or practices for specific industries and are designed to reduce hazardous air pollutants to a maximum achievable degree, taking into consideration the cost of reductions and other factors.

After the EPA adopts a MACT standard at the federal level, the same standard is proposed for adoption at the state level by the Air Quality Control Commission on a semi-annual basis.

Air toxics also are reduced through automobile inspection and maintenance, ozone reduction measures to reduce volatile organic chemicals, chlorofluorocarbon reduction and phase-out, the Mercury-free Colorado Campaign (www.cdphe.state.co.us/HM/mercury), a diesel school bus emissions control retrofit program (www.cdphe.state.co.us/ap/cleandiesel.html), and pollution prevention in industries and communities statewide.

Health and Environmental Effects

People that experience prolonged exposure to toxic air pollutants at significant concentrations may have an increased chance of experiencing serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive, developmental, respiratory and other health problems. Some toxic air pollutants such as mercury can deposit onto soils or surface waters, where they are taken up by plants and ingested by animals, and eventually accumulated up through the food chain. Like humans, animals may experience health problems if exposed to sufficient quantities of air toxics over time.



Impacts in Colorado

In general, studies have shown that air toxics levels are similar in urbanized areas across the nation. People are exposed to air toxics primarily through transportation, as motorists or passengers. Several air monitoring studies of toxics in Colorado have been done, including in Denver, Pueblo, Grand Junction and Garfield County. In general, the studies have found that most air toxics levels are low with a few localized exceptions related to specific sources. Urban areas where motor vehicles and industries are concentrated have the most impacts in Colorado. Rural areas where oil and gas development occurs may also be impacted.

Greenhouse Gases

Greenhouse gases are necessary to life because they keep the planet's surface warmer than it otherwise would be and are important in photosynthesis. However, it is theorized that as these gases increase in the atmosphere the Earth's average temperature also increases. Greenhouse gases absorb the sun's heat and trap that heat in the atmosphere.

Colorado's greenhouse gas emissions are projected to grow to 81 percent above 1990 levels by the year 2020, according to the 2007 Colorado Climate Action Plan (www.cdphe.state.co.us/climate/climateactionplan.html).

In the U.S., energy-related activities account for three-quarters of our human-generated greenhouse gas emissions, mostly in the form of carbon dioxide emissions from burning fossil fuels. More than half the energy-related emissions come from large stationary sources such as power plants, while about a third come from transportation. Industrial processes (such as the production of cement, steel, and aluminum), agriculture, forestry, other land use, and waste management also are significant sources of greenhouse gas emissions in the United States.

The major pollutants . . .

Environmental Effects

The Colorado Climate Action Plan cites a number of environmental effects from increased greenhouse gases. Elevated levels of greenhouse gases are widely considered to alter rainfall patterns, reduce snow and ice cover, and cause sea levels to rise. Glaciers, snowpack and sea ice are shrinking, oceans are rising, and droughts are longer and more intense in some areas. Weather extremes, such as heavy downpours that cause flooding, intense hurricanes and wildfires appear to be more frequent.

Due to the complexity of climate science and the multiple causal effects on climate, the level and magnitude of greenhouse gas impacts on climate remain controversial and under study.

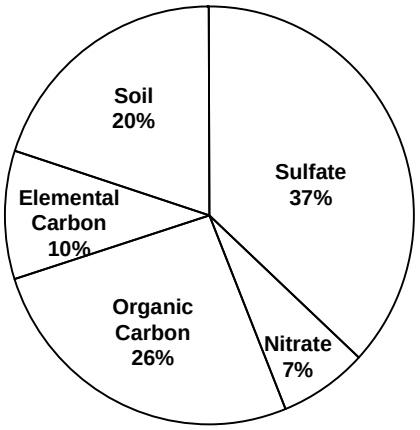
Impacts in Colorado

A number of climatic changes have been observed in Colorado in recent decades, according to the Climate Action Plan, including:

- Shorter and warmer winters, with a thinner snowpack and earlier spring runoff.
- During some years, less precipitation, and more falling as rain than snow.
- Longer periods of drought.
- More wildfires, now burning each year twice as many acres than before 1980.

Scientists project that future impacts in Colorado will be more extreme than what we have experienced. These projected impacts are detailed in the Colorado Climate Action Plan.

Makeup of fine particles in haze in rural Colorado Class I areas



Source: IMPROVE Report

Regional Haze

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 emissions from 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. More than half the regional haze in Colorado is believed to originate from sources outside of the state.

Health and Environmental Effects

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, according to the EPA.

Some of the pollutants which form haze also have been linked to serious health problems and environmental damage. Exposure to very small particles in the air has been linked with respiratory illness, decreased lung function, and even premature death. In addition, particles such as nitrates and sulfates contribute to acid rain formation which makes lakes, rivers, and streams unsuitable for many fish, and erodes buildings, historical monuments, and paint on cars.

Impacts in Colorado

The federal Regional Haze Rule focuses on National Parks and Wilderness (Class I) Areas. Colorado has 12 Class I areas designated for regional haze reduction. Haze reduction in these areas will have the complementary effect of improving visibility and air quality throughout Colorado, including reducing nitrogen deposition at Rocky Mountain National Park.

The Colorado Air Quality Control Commission (AQCC) adopted a Regional Haze State Implementation Plan in January 2011. The process required a detailed analysis of regional haze and its sources, and the establishment of emissions controls for major industrial sources of haze. For more information see "Regional haze reduction" on page 13 and the regional haze website listed below.

More detailed information on-line:

- **Air quality home page**:
  www.cdphe.state.co.us/ap
- **Criteria pollutants in general**:
  www.colorado.gov/airquality/brochure.aspx
- **Ozone:**
  www.cdphe.state.co.us/ap/ozoneindex.html
- **Greenhouse gas/climate change:**
  www.cdphe.state.co.us/climate
- **Regional haze:**
  www.cdphe.state.co.us/ap/regionalhaze.html
- **Toxics:**
  www.cdphe.state.co.us/ap/toxics

Major initiatives . . .

Ozone reduction

Colorado has taken a number of steps to reduce ground-level ozone in recent years, and may need to make further reductions to meet and maintain current standards. An ozone action plan approved by the Air Quality Control Commission in 2008 placed new control measures on motor vehicles and on VOC emissions from the oil and gas industry. The plan expanded the motor vehicle inspection and maintenance program from the Denver area to the North Front Range to include Fort Collins, Greeley and nearby areas.

Colorado may need to make further emission reductions to meet the 2008 standard of 75 parts per billion. Since 2008, some monitors in the Denver-metropolitan area have violated the standard.

The Denver-metro area's lead air quality planning agency, the Regional Air Quality Council (RAQC), is working with a number of agencies to develop any additional control measures necessary to manage ozone levels. These control measures will address sources of volatile organic compounds and oxides of nitrogen emissions, which combine in the atmosphere to form ozone.

The RAQC will submit a plan known as a state implementation plan (SIP) to the Air Quality Control Commission in 2013 or 2014. The Commission will then review and act on the plan, which would be reviewed and approved by the Colorado Legislature prior to submittal to the EPA.

In 2010, the RAQC convened work groups to look at potential emission control strategies from the transportation sector. The work groups included participation from the Colorado Department of Public Health and Environment, the Commission, the Denver Regional Council of Governments, the Colorado Department of Transportation, the North Front Range Metropolitan Planning Organization, The Department of Local Affairs, the Regional Transportation District, the Metro Mayor's Caucus, local governments and industry.

The groups looked at emission reductions from the transportation sector in five overall areas:

- Fuel reformulation for reduced emissions
- Stricter motor vehicle emission standards
- Alternative transportation
- Land use planning to reduce vehicle miles traveled
- Transportation pricing to create incentives to reduce driving

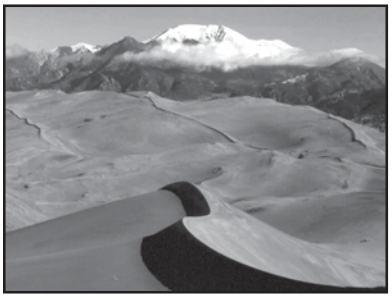
In 2011 the RAQC has led a process to evaluate ozone control measures from stationary and area sources. Subcommittees are evaluating emission reduc-

tions from the oil and gas industry, energy industry, refineries, gasoline dispensing stations, boilers, bottling facilities and cement kilns. The committees also are looking at emission reductions from off-road equipment, lawn and garden equipment, paints and industrial coatings, solvents and consumer products.

The Commission, through its approval of a regional haze improvement plan in 2011 (described below), adopted substantial NOx emission reductions that will improve ozone throughout the state. More than 35,000 tons per year of NOx reductions will occur by the year 2018.

For more information see: www.cdphe.state.co.us/ap/ozone.html

Regional haze reduction



Colorado has completed an unprecedented multi-year effort in developing a plan to control emissions from major industrial sources of regional haze. The Air Quality Control Commission approved the state's regional haze plan on January 7, 2011. The plan was reviewed by the legislature before being submitted to the U.S. Environmental Protection Agency in May.

This plan was developed with wide participation from industry and environmental groups. It included, among other things, the 2010 state legislation known as the Clean Air Clean Jobs Act, which outlines how Public Service Company of Colorado will shut down older coal-fired power plants, convert certain plants to natural gas operation, and add advanced pollution control technology to the state's largest coal-burning power units.

The Regional Haze Plan adopted by the Commission represents a comprehensive, highly technical planning document designed to meet the elaborate and exacting federal requirements governing the Regional Haze Program. The plan will reduce the emission of approximately 71,000 tons of visibility-impairing pollutants in Colorado every year, including both nitrogen oxide (NOx) and sulfur dioxide (SO2). The reduction of NOx emissions also will be beneficial to reducing ground level ozone in Colorado.

The regional haze plan is designed to achieve gradual and continuous visibility improvements in areas of great scenic importance such as National Parks and Wilderness Areas. Colorado has 12 such areas that fall under the program, including Rocky Mountain National Park, Mesa Verde National Park,

Major initiatives . . .

the Great Sand Dunes, the Black Canyon of the Gunnison, and state wilderness areas.

Details in the Regional Haze Plan include the establishment of pollution control approaches known as Best Available Retrofit Technology (BART) for certain large sources of regional haze pollutants. Alternatives to BART that can achieve greater overall emission reductions also are included in the plan. The plan also shows "reasonable progress" emission control requirements for other large sources. Reasonable progress requirements show how these sources will reduce their emissions over time.

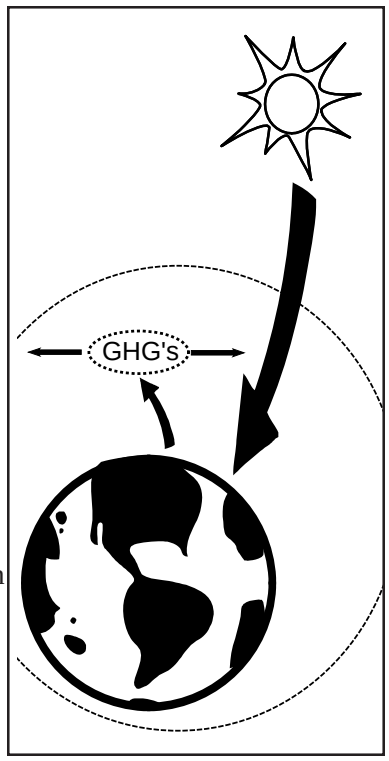
The Regional Haze Plan also includes extensive and exacting technical documentation describing, among other things, Colorado's visibility monitoring strategy, the sources of visibility impairment in Colorado, how Colorado established BART and reasonable progress requirements in accordance with federal law, and Colorado's long term strategy to achieve ongoing visibility improvements.

For more information see: www.cdphe.state.co.us/ap/regionalhaze.html

Climate change

New state and federal regulations took effect in 2011 that require some of Colorado's largest industries to obtain permits if their greenhouse gas (GHG) emissions are above a certain level. GHGs have been linked to climate change, and the U.S. Environmental Protection Agency (EPA) found, through a series of court and agency actions, that GHGs qualify as an "air pollutant" under the Clean Air Act (CAA) and pose a threat to public health and welfare. Subsequently, new emissions standards for automobiles were promulgated, followed by federal GHG reporting and permitting rules for stationary sources.

The Colorado Air Quality Control Commission incorporated the federal GHG permitting requirements into the state's permitting program on October 21, 2010. Certain large industrial sources of GHGs began submitting permit applications to the Air Pollution Control Division in 2011. Under the permitting program, the sources may need to limit their emissions of GHGs or utilize emission control equipment known as Best Available Control Technology.



The Greenhouse Effect:
Reflected solar radiation is absorbed by greenhouse gasses and trapped in the atmosphere.

GHG Permitting

The GHG permitting program falls under the federal "tailoring rule," so called because the GHG emission thresholds are "tailored" to apply to only the largest sources of GHGs, such as power plants, refineries, and cement production facilities. The large facilities covered by the tailoring rule are responsible for about 70 percent of GHG emissions, which are primarily carbon dioxide (CO2) and methane (CH4), though there are a number of other less prevalent regulated GHGs.

Without the modification to permit threshold level incorporated into the tailoring rule, many smaller sources of GHGs would have been subject to permit requirements, such as schools, restaurants and farms, all of which emit GHGs

The GHG permitting requirements are being phased in to allow industry time to analyze their emissions and comply with the new regulations. During the first half of 2011, large sources that already had applied for permits for other non-GHG pollutants were required to include their GHG emissions in the analysis. During the second half, all sources that emit 100,000 tons per year of CO2 equivalent are potentially required to obtain a permit for their GHG emissions, however, in July 2011, the EPA deferred for a period of three years, permitting requirements for CO2 emissions from bioenergy and other biogenic sources, including landfills, some agricultural operations and electric energy utilities burning biomass.

Major initiatives . . .

GHG Reporting

Another rule that took effect in 2011 requires facilities that emit 25,000 or more metric tons per year of CO2 equivalent to submit annual reports of their GHG emissions to the EPA. The rule is administered directly by the EPA and does not affect Colorado's permitting program.

The rule will provide a better understanding of the sources of GHGs and will guide development of federal policies and programs to reduce emissions. The data will allow the reporting facilities to track their own emissions, compare them to similar facilities, and aid in identifying methods to reduce emissions in the future.

Non-regulatory initiatives

Colorado has participated as a member of The Climate Registry for several years. The Climate Registry is a nonprofit collaboration among North American states, provinces, territories and tribes that sets standards to calculate, verify and publicly report greenhouse gas emissions into a single registry. The registry supports both voluntary and mandatory reporting programs and provides comprehensive, accurate data to reduce greenhouse gas emissions.

The Colorado Department of Public Health and Environment works closely with the Governor's Energy Office, primarily with its Greening Government Initiative that seeks to reduce energy usage from state buildings and fleets. The Air Pollution Control Division has helped analyze energy usage data to better understand where state government can reduce its emissions of GHGs.

The Division also participates in Clean Cities, a national coalition of government agencies and private businesses that works to reduce petroleum use in the transportation sector. Colorado has supported a Clean Cities grant application that, if awarded, would provide the state with funding to plan for development of its electric vehicle fleet.

Statewide air quality forecasting

The Air Pollution Control Division issued the first-ever ozone health advisory for an area outside of the Front Range Urban Corridor on February 14, 2011, for western Rio Blanco County. Two subsequent advisories for Rio Blanco County, including Rangely, were issued later in February and in March. An ozone health advisory for southwestern Colorado, including Cortez and Durango, was issued on July 1.

The Air Pollution Control Division expanded its abilities to issue statewide air quality advisories in 2009 in anticipation of the need to issue ozone and other air quality advisories for areas outside the Front Range Urban Corridor. Smoke and blowing dust advisories have been issued statewide for many years.

Advisories are sent by e-mail to local officials, local health organizations and the media. Advisories and Air Quality Index summaries are published on the Division's website at http://www.colorado.gov/airquality/colorado_summary.aspx.

Advisories include an appropriate public health message for the affected population. For example, on a day which ozone levels are expected to climb into the "Unhealthy for Sensitive Groups" category, the Division recommends that "active children and adults, and people with lung disease, such as asthma, should reduce prolonged or heavy exertion outdoors." (For more about the Air Quality Index and associated public health messages, see http://airnow.gov/index.cfm?action=aqibasics.aqi.)

The State's ability to issue statewide air quality advisories has been enhanced by technology that provides better access to a variety of monitoring and satellite data, and the ability to quickly send out health advisories through email lists, telephone hotlines and the internet.

The State analyzes data daily from monitors throughout Colorado and issues health advisories if monitors show exceedances of air quality standards, or worsening conditions that could lead to exceedances, are likely. Advisories are possible any day of the year.

The State also issues smoke and blowing dust advisories statewide when conditions indicate that such an event is imminent or in process.

Roles of government and the public . .

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Protecting air quality is a cooperative effort among many parties. Government agencies are responsible for assuring that air quality meets health and environmental standards. The public has an important role through lifestyle habits, consumer choices and energy usage.

Colorado Air Quality Control Commission

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

The Colorado Air Quality Control Commission has among other responsibilities the development and adoption of a regulatory program to protect and improve air quality in Colorado. Typically, the Commission is involved in the development of program requirements from concept through implementaiton. 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 as needed to address specific problems along with modifications to existing programs.

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

Colorado's air quality management program regulates air pollutant emissions from:

- stationary industrial sources,
- gasoline cars and light-duty trucks,
- diesel vehicles,
- asbestos,
- wood stoves,
- odor,
- lead paint, and
- open burning and the use of prescribed fire.

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

The Commission is comprised of nine citizen volunteers appointed by the governor. 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.

Excerpt from the Commission's Procedural Rules:

"The Commission is composed of nine citizen members appointed by the Governor and confirmed by the Colorado State Senate. They reflect a wide variety of professional backgrounds and individual interests. Colorado has chosen the citizen board approach to developing and overseeing the implementation of its air quality management program as a means to help keep regulatory agencies responsive to the public."

Air Pollution Control Division Programs

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 to the Commission in the regulatory development process. The Division is housed within the Colorado Department of Public Health and Environment.

Mobile Sources Program

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

The Mobile Sources Program evaluates, investigates, and administers the requirements aimed at reducing emissions from vehicles. It conducts research, modeling and planning on the causes and effects of mobile source air pollution.

The staff jointly administers the Automobile Inspection and Readjustment (AIR) Program in the Denver-metropolitan and North Front Range areas with the Colorado Department of Revenue, along with solely administering two separate diesel opacity inspection programs, one designed for large fleets and the other for individual diesel vehicles. As part of the vehicle emissions testing program, the Mobile Sources Program is effectively using a remote sensing technology to "screen out" about 38 percent of the fleet from a requirement to visit the testing station.

The Mobile Sources Program also operates a series of vehicle technical centers to provide customer assistance to motorists failing emissions inspections. The center's technicians are recognized experts in their field and contribute to ensuring that the motor vehicle repair industry has access to the latest technical information on vehicle emissions repair procedures and technology.

Planning and Policy Program

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

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: developing plans to return areas with poor air quality to compliance with federal standards; ensuring transportation plans are consistent with air quality requirements; policy development; community-outreach; pollution prevention; public information; environmental assessments; and air quality education in schools.

The Planning and Policy Program coordinates the division's three high-profile issues: ozone planning, regional haze plan development and the Rocky Mountain National Park Initiative.

Roles of government and the public . . .

Stationary Sources Program

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

The Stationary Sources Program evaluates and develops permits for stationary sources such as gas stations, dry cleaners, auto finishers, electric utilities, mining operations, construction projects, and oil and gas development sites. More than 14,000 sources are registered in Colorado. Staff members inspect sources to determine their compliance with regulations and permit conditions, and maintain a computerized inventory of air pollution emissions in Colorado. The Stationary Sources Program is working to streamline permitting through the use of general permits and improve compliance by using self-certification programs in conjunction with traditional inspection programs.

Compliance assistance and small business assistance programs emphasize pollution prevention to improve regulatory compliance.

Indoor Environment Program

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

The Indoor Environment Program provides technical assistance on indoor air pollutants. The program regulates the use of ozone-depleting compounds (chlorofluorocarbons), the abatement of asbestos and the removal of lead-based paint. The Indoor Environment Program certifies abatement workers/professionals, issues permits and conducts regular inspections to ensure compliance with the requirements, including the regulation of asbestos removal and demolition activities, and the review of school asbestos management plans.

Technical Services Program

www.colorado.gov/airquality

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.

Air quality forecasting is conducted statewide throughout the year for potential exceedances of standards, with a focus on winter high pollution season, summer ozone season, and impacts from wildfires and blowing dust.

The program also manages smoke through a burn permit process and by working with fire managers to review and approve plans and practices for controlled burns.

Federal Government

The U.S. Environmental Protection Agency (EPA)

The U.S. EPA has established a regulatory framework for state's to follow through the Clean Air Act. The act was first established in 1970 to improve the nation's air quality. Colorado implements the requirements of the Clean Air Act through regulations adopted by the Colorado Air Quality Control Commission. The Commission's air quality management program incorporates the requirements of the federal Clean Air Act.

The U.S. EPA provides Colorado with policy directives and guidance, oversight, and funding to assist with meeting the requirements of the Clean Air Act.

Federal Land Managers

Federal lands in Colorado are managed by various branches of the federal government, such as the Bureau of Land Management, the U.S. Forest Service, and the National Park Service. Major activities on these lands that impact air quality may come under review through the National Environmental Policy Act (NEPA). Examples of major activities may include highway transportation projects, military base expansions and activities, oil and gas development, or mining activities.

Federal agencies must prepare either environmental assessments or detailed environmental impact statements for major federal actions that affect the environment. Colorado is a partner agency in reviewing these actions, and the public has a role in commenting on such actions through the NEPA process.

Alternatives may be evaluated in the process before a final decision is made on implementing major projects on federal lands.

Local Government

Counties and Municipalities

Many air quality programs are implemented at the county and municipal level. In some cases, the state contracts with counties to implement state programs related to air quality monitoring, inspections of pollutant sources, open burning, and the control of asbestos and chlorofluorocarbons.

Most municipalities in the Denver-metropolitan area have ordinances in place to enforce the state's residential burning restrictions in the winter. Aspen, Grand Junction, Eagle County and San Miguel County have implemented their own residential woodburning controls. Many local jurisdictions have ordinances to control open burning of trash and debris.

Many communities have established controls for fugitive dust and odor. These controls may include dust mitigation plans for construction activities,

street sweeping, projects to pave or treat dirt roads, and inspection and enforcement provisions for odors.

In addition to specific air quality efforts, many counties and municipalities additionally have developed a variety of environmentally beneficial programs to reduce traffic, conserve energy and recycle.

Tribes

Tribes in Colorado have authority to protect and improve air quality on tribal lands. Colorado has established an effective, collaborative relationship with the Southern Ute Indian Tribe through the Four Corners Air Quality Task Force activities and other interactions in recent years. The tribe actively monitors air quality at a number of sites and is working vigorously toward the establishment of its own air quality permitting programs.

An intergovernmental agreement signed in 1999 between the Southern Ute Indian Tribe and the state of Colorado created the Southern Ute Indian Tribe/ State of Colorado Environmental Commission. It is dedicated to overseeing the development and implementation of a comprehensive and effective program for the protection of air quality throughout the Southern Ute Indian Reservation.

Local Planning Agencies

Local planning agencies exist in several metropolitan areas. The agencies have a variety of functions, including air quality and transportation planning.

Regional Air Quality Control Council

www.raqc.org

The Regional Air Quality Council (RAQC) was established in 1989 to serve as the lead air quality planning agency for the Denver metropolitan area.

The mission of the Regional Air Quality Council is to develop and propose effective and cost-efficient air quality planning initiatives with input from government agencies, the private sector, stakeholder groups, and citizens of the Denver metropolitan region. Its primary task is to prepare state implementation plan elements that demonstrate and ensure long-term compliance with state and federal air quality standards and provide acceptable public health and environmental protections to those residing in the Denver metropolitan area, as well as the North Front Range area, as appropriate.

North Front Range Transportation and Air Quality Planning Council

www.nfrmpo.org

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 providing input to the state Air Quality Control Commission and Air Pollution Control Division regarding mobile source emissions as they affect the development and implementation of the state implementation plan (SIP) for attainment of air quality standards. The council also provides planning oversight for transportation related air quality projects in the North Front Range region. Transportation projects must demonstrate that they will not cause or contribute to a violation of the national air quality standards.

Denver Regional Council of Governments

www.drcog.org

The Denver Regional Council of Governments (DRCOG) has been in existence for more than 50 years and focuses on a variety of quality of life planning priorities for a nine-county area. These issues include mobility, service to older adults, environmental concerns, planning for the future, public safety, and the provision of information for sound decision-making.

In terms of air quality, DRCOG develops transportation plans that indicate the air quality impacts of transportation projects. The transportation plans must demonstrate that they will not cause or contribute to a violation of the national air quality standards. This process requires detailed analysis of the impacts of transportation projects and traffic on air quality.

Pikes Peak Area Council of Governments

www.ppacg.org

The Pikes Peak Area Council of Governments (PPACG) is the metropolitan planning organization (MPO) and lead air quality planning agency for the Colorado Springs urbanized area.

The 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. The PPACG also develops transportation plans. The plans must demonstrate that they will not cause or contribute to a violation of the national air quality standards.

Roles of government and the public . . .

The public

Everyone has an important part to play in reducing air pollution. Here are a few suggested ways you can make a difference in your own community.

On the road

- Drive a fuel efficient and low-polluting vehicle.
- Keep your car tuned up and tires inflated to the recommended pressure to increase mileage and reduce the need for refueling.
- Refuel in the evening, so fuel vapors will not have a chance to "cook" into ozone.
- When refueling, stop at the click — when the nozzle clicks off. Don't overfill or drip fuel. Fuel creates ozone-causing vapors as it evaporates.
- Reduce Driving.
    - Delay trips.
    - Combine errands into one trip.
    - Shop close to home.
    - Carpool.
    - Walk or bike.
    - Use public transportation.
    - Telecommute or teleconference.

Around the Yard

- Wait till evening to mow when cooler temperatures create less ozone.
- Use a new earth-friendly lawn mower — an electric- or battery-powered mower, a non-motorized push mower, or a new gasoline-powered mower.
- Maintain your mower to help it run cleaner — change the air filter, oil and spark plugs at least once each season. Keep the underside of the mower free of grass buildup.
- Avoid using two-stroke gasoline-powered yard equipment, such as weed trimmers, since they emit a disproportionate share of air pollution.
- Use a funnel to refuel equipment — avoid even small spills and drips.
- Reduce lawn watering and fertilizing to discourage excessive lawn growth.
- Xeriscape to reduce lawn area, or change to native Western grasses to reduce the need for irrigation and mowing.
- Plant trees. Trees not only add oxygen, they reduce dust and act as natural heat controllers, providing shade in the summer and allowing sunlight in the winter.
- Choose an alternative to charcoal grilling.
- Don't use charcoal lighter fluids, which emit harmful vapors. Use an electric starter or charcoal chimney instead.

Around the house

- Avoid solvent-based products, which have pollution causing vapors. Use water-based paint, stain and sealants.
- If you must use a solvent-based product, avoid using it on Action Days for ozone or use it in the evening.
- Avoid spray paints, most of which are solvent based. Very fine spray also can become airborne. Use paint brushes and rollers instead.
- Tightly cap all solvents (gasoline, paint thinners, strippers, and degreasers) and store in a cool place to avoid evaporation.
- Plan major painting, stripping and refinishing projects for spring and fall to avoid summer heat and sun which react with vapors to create ozone pollution.
- Avoid use of flammable household products, such as some floor wax, furniture polish, fabric cleaners and insect foggers, most of which contain solvents.
- Don't burn wood, including in-home woodburning stoves or outdoor burning devices. If you must burn, use only EPA-certified devices for low emissions.
- Conserve energy. If we use less energy power plants burn less coal and natural gas.
    - Insulate and weatherstrip.
    - Take quick showers. They use less hot water than baths.
    - Close doors to unused rooms and don't heat or cool them.
    - Keep your home cooler in the winter and warmer in the summer.
    - Wash clothes in cold water.
    - Hang laundry out to dry instead of using a clothes dryer.
    - Run dishwashers and washing machines only when there is a full load.
    - Turn off unused lights and appliances.
    - Use fluorescent lights instead of incandescent bulbs.
    - Recycle everything you can (paper, glass, metal cans, aluminum and plastic). It takes less energy to recycle than to create new material.

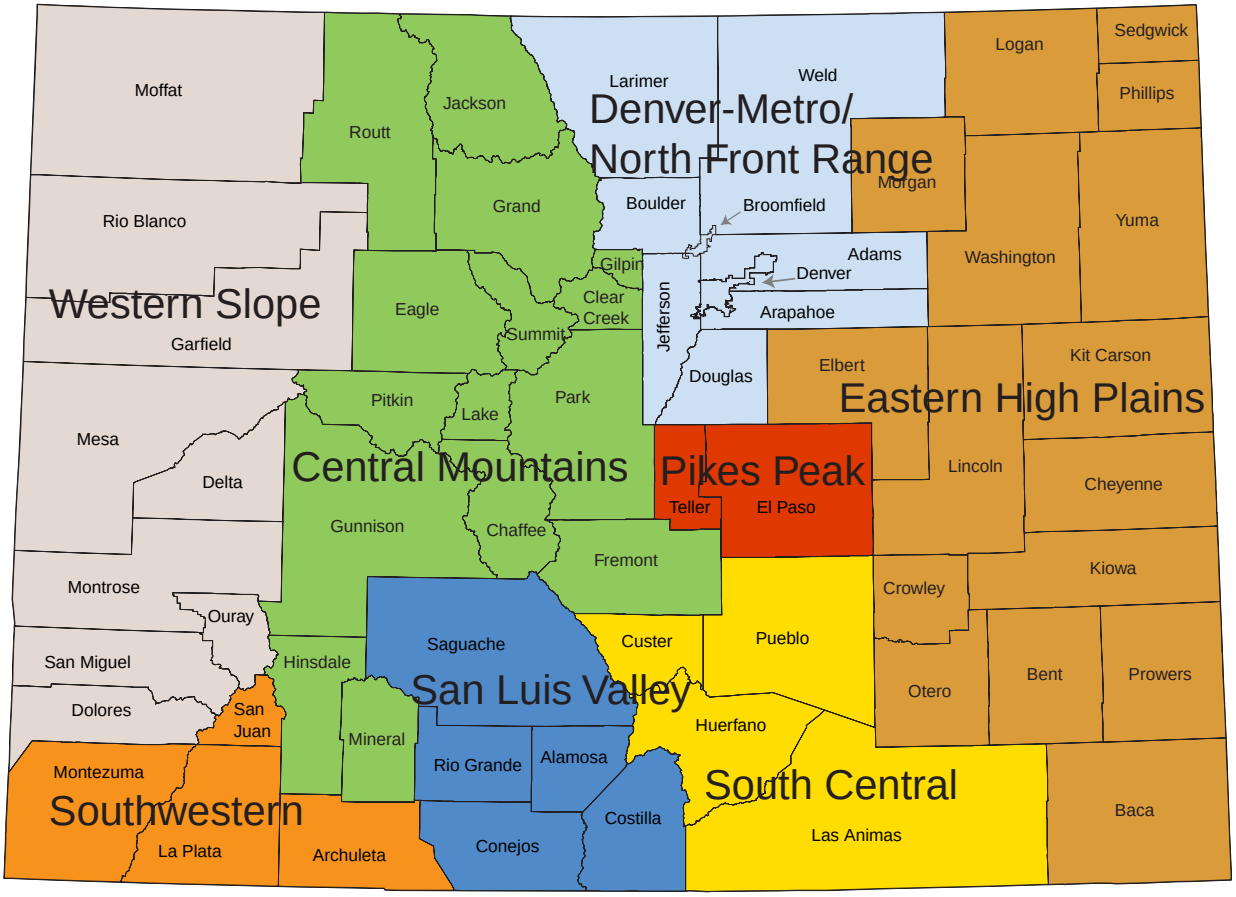
Get involved

- Get involved in your local government processes related to air pollution and offer your input.
- Visit websites listed in this report to learn more about air pollution.
- Pay attention to news reports about air pollution and follow the suggestions listed here on high pollution or Action Days for ozone.
- Report problems. If you think you see an air pollution problem report it to your local or state agency.

Regional air quality . . .

Areas of the state differ greatly from one another in landscape, weather, population, motor vehicle traffic, amount of industry and potential of wood smoke from residential fires, wildfires and controlled burns. This section of the report separates Colorado into eight regions to more clearly address each region's specific air quality conditions and activities.

State Air Quality Planning Regions



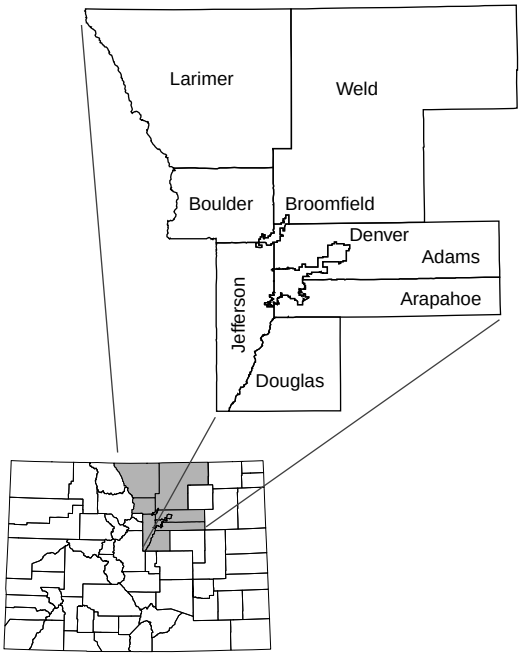
Denver-Metro/ North Front Range Region

The Denver-Metro/North Front Range Region includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer and Weld counties. It includes the largest population area of the state, with 2.8 million people living in the seven-county Denver-metro area and another half-million living in the northern Colorado area of Larimer and Weld counties. This area includes Rocky Mountain National Park and several wilderness areas.

In 2002 the area came into compliance with all federal air quality standards. However, in 2004 the area violated the federal ozone standard and entered into an Early Action Compact with EPA, an agreement that was to lead to attainment of the ozone standard. However, in 2007 the area violated the ozone standard and was designated a federal nonattainment area. (See the ozone information under Major Initiatives.)

In the past, the Denver-metropolitan area violated health-based air quality standards for carbon monoxide and fine particles. In response, the Regional Air Quality Council, the Colorado Air Quality Control Commission and the Air Pollution Control Division developed, adopted and implemented air quality improvement plans to reduce each of the pollutants.

Fort Collins, Longmont and Greeley were nonattainment areas for carbon monoxide in the 1980s and early 1990s, but have met the federal standards since 1995. Air quality improvement plans have been implemented for each of these communities.



Regional air quality . . .

Air Pollution Sources

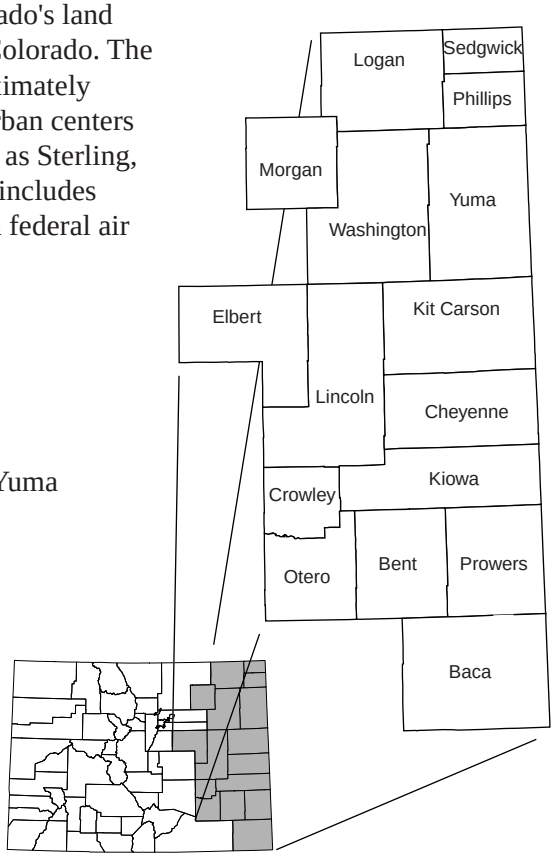
- Motor vehicles
- Road dust
- Oil and gas exploration and production
- Large commercial breweries
- Petroleum refining
- Asphalt production
- Cement manufacturing
- Sand and gravel operations
- Glass bottle manufacturing
- Commercial seating manufacturing
- Area-wide remediation at Rocky Mountain Arsenal
- Coal and natural gas power plants

Air Pollution Control Measures

- Automobile emissions inspection and maintenance program
- Street sweeping
- Controls on oil and gas production tanks, equipment and engines
- Permitting program limiting emissions from industrial sources
- Lime spray dryers to reduce sulfur oxide emissions from power plants
- Baghouses to reduce particulate matter emissions from power plants
- Non-selective catalytic reduction to reduce NOx at cement plant
- At power plants, low NOx burners, fuel switching to natural gas, and unit shutdown

Eastern High Plains Region

The Eastern High Plains region makes up 40 percent of Colorado's land area and encompasses the counties on the plains of eastern Colorado. The area is semiarid and often windy. The area's population is approximately 157,000 according to U.S. Census Bureau estimates. 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. All of the area complies with federal air quality standards.



Air Pollution Sources

- Motor vehicles
- Windblown dust
- Odors from confined animal feeding operations
- Natural gas processing and transmission in Cheyenne and Yuma counties
- Pawnee Power Plant near Brush
- Western Sugar beet sugar processing in Fort Morgan
- Cargill Meat packing plant in Fort Morgan
- Lamar Power Plant in Lamar

Air Pollution Control Measures

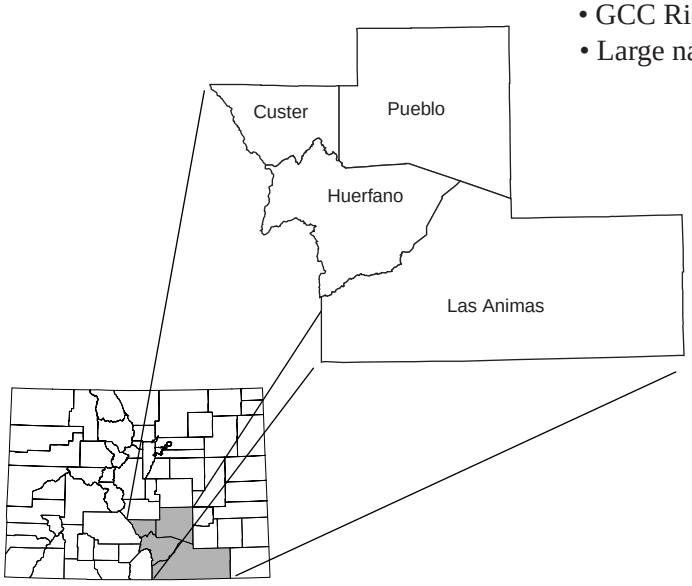
- Alamosa Natural Events Action Plan for windblown dust mitigation, which includes elements such as:
  - Blowing dust advisories and forecasting
  - Public outreach on dust mitigation
  - Dust control measures, such as street sweeping, curtailing construction activities that disturb soil, applying water to disturbed soils, planting vegetation and wind breaks, reducing or postponing tilling and plowing
- State odor control regulation for hog farms
- Statewide oil and gas controls
- Scrubbers, baghouses, dust collectors and area dust suppression at Western Sugar
- Lime spray dryer, low NOx burners, and selective catalytic reduction at Pawnee Power Plant
- Low NOx burners, packed scrubber and flare device, along with other permit conditions to limit emissions at the Cargill meat packing plant
- Baghouse to control particulate matter and limestone combustion injection to control sulfur dioxide at Lamar Power Plant

South Central Region

The South Central Region is comprised of Pueblo, Huerfano, Las Animas and Custer counties. Its population is approximately 184,800 according to U.S. Census Bureau estimates. Urban centers include Pueblo, Trinidad and Walsenburg. The region has rolling semiarid plains to the east and is mountainous to the west. All of the area complies with federal air quality standards.

Air Pollution Sources

- Motor vehicles
- Fugitive dust
- The Comanche Power Plant near Pueblo
- Evraz Rocky Mountain Steel Mills in Pueblo
- GCC Rio Grande Cement Plant in Pueblo
- Large natural gas compressor stations in Las Animas County



Air Pollution Control Measures

- Local dust control plans
- Selective catalytic reduction, low NOx burners and lime spray dryers at Comanche Power Plant to reduce NOx and SO2 emissions.
- Compliance actions, monitoring and mercury reduction program at Evraz Rocky Mountain Steel Mills
- VOC controls on natural gas compressor stations

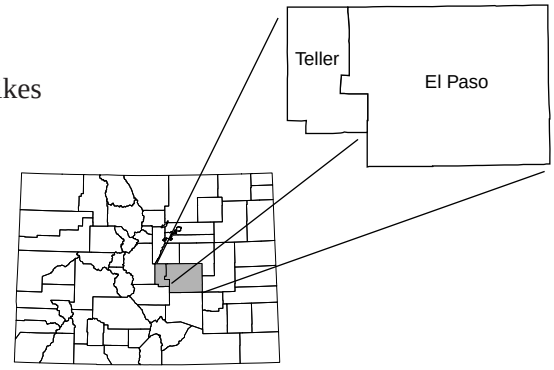
Pikes Peak Region

The Pikes Peak Region includes El Paso and Teller counties. The area has a population of approximately 626,200 according to U.S. Census Bureau estimates. Eastern El Paso County is rural prairie, while the western part of the region is mountainous. All of the area complies with federal air quality standards.

Air Pollution Sources

As in other urbanized areas in Colorado, pollutants in the Pikes Peak Region originate primarily from stationary and mobile sources.

- Motor vehicles
- Road dust
- Area dust from construction activities
- The Drake and Nixon power plants and Fountain Valley Electric Generating Station
- Sand and gravel operations



Air Pollution Control Measures

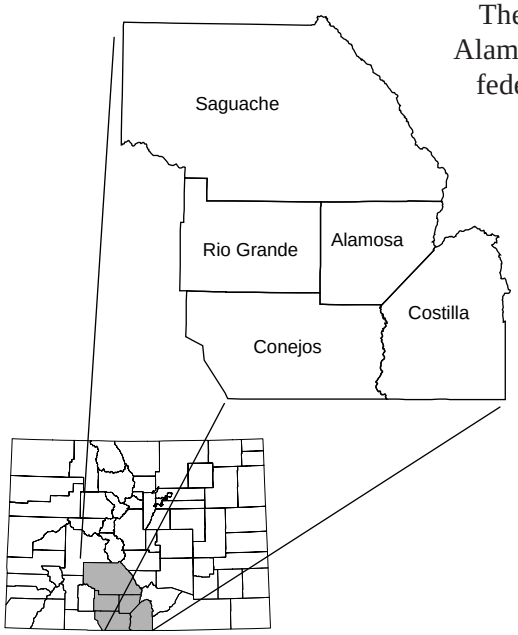
- Street sweeping
- Dust control plans
- Lime spray dryers and low NOx boilers at power plants to control NOx and SO2 emissions

Regional air quality . . .

San Luis Valley Region

Colorado's San Luis Valley Region is in the south central portion of Colorado and includes a broad alpine valley situated between the Sangre De Cristo Mountains on the northeast and the San Juan Mountains of the Continental Divide to the west. The valley is some 71 miles wide and 122 miles long, extending south into New Mexico. The average elevation is 7,500 feet. Principal towns include Alamosa, Monte Vista and Del Norte. The population is about 45,100 according to U.S. Census Bureau estimates. Agriculture and tourism are the primary industries. The valley is semiarid and croplands of potatoes, head lettuce and barley are typically irrigated. The valley is home to Great Sand Dunes National Park.

The air quality planning region consists of Saguache, Rio Grande, Alamosa, Conejos and Costilla counties. All of the area complies with federal air quality standards.



Air Pollution Sources

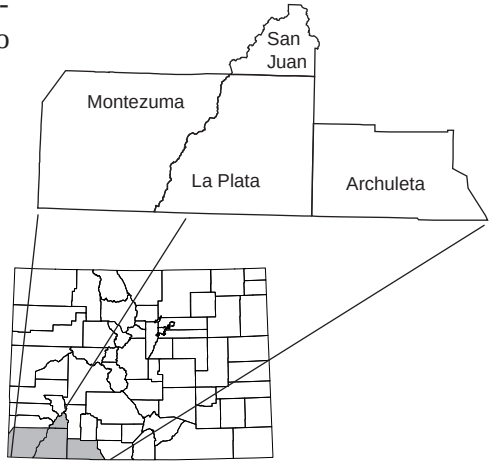
- Blowing dust
- Motor vehicles

Air Pollution Control Measures

- Alamosa Natural Events Action Plan for windblown dust mitigation, which includes elements such as:
  - Blowing dust advisories and forecasting
  - Public outreach on dust mitigation
  - Dust control measures, such as street sweeping, curtailing construction activities that disturb soil, applying water to disturbed soils, planting vegetation and wind breaks, reducing or postponing tilling and plowing

Southwestern Region

The Southwestern Region includes the Four Corners area counties of Montezuma, La Plata, Archuleta and San Juan. The population of this region is about 89,800, according to U.S. Census Bureau estimates. The landscape includes mountains, plateaus, high valleys and canyons. Durango and Cortez are the largest towns. Lands of the Southern Ute and Ute Mountain Ute tribes make up large parts of this region. The region is home to Mesa Verde National Park. Tourism and agriculture are dominant industries. The oil and gas industry is growing in this area. All of the area complies with federal air quality standards.



Air Pollution Sources

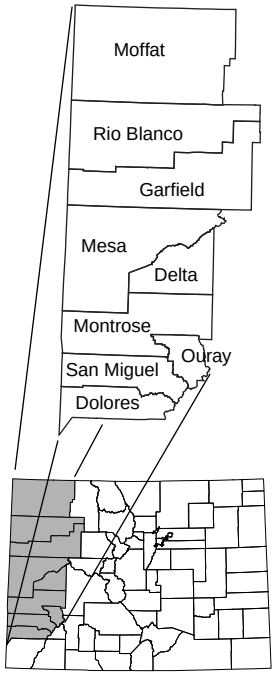
- Motor vehicles
- Natural gas processing and transmission
- Two coal-fired power plants in New Mexico
- Gas field development in Colorado, Southern Ute Indian Reservation, and New Mexico
- Wildfires
- Durango & Silverton coal-fired steam locomotive tourist train

Air Pollution Control Measures

The main air pollution control measures in this region include:

- Statewide oil and gas emission controls
- Smoke management program
- Durango Train Smoke Task Force
- Tribal permitting and control of emission sources
- Federal controls for NOx and SO2 reductions at New Mexico power plants
- Particulate matter control plan for Pagosa Springs includes: street sweeping and sanding controls, use of chemical deicers, and paving of dirt roads

Western Slope Region



The Western Slope Region includes nine counties on the far western border of Colorado. A mix of mountains on the east, and mesas, plateaus, valleys and canyons to the west form the landscape of this region. Grand Junction is the largest city. Other cities include Telluride, Montrose, Delta, Rifle, Glenwood Springs, Meeker, Rangely and Craig. The population of this region is about 309,700, according to U.S. Census Bureau estimates. Primary industries include ranching, agriculture, mining, energy development and tourism. Dinosaur and Colorado National Monuments are located in this region. The Western Slope, along with the central mountains, are projected to be the fastest growing areas of Colorado through 2020 with greater than two percent annual population increases, according to the Colorado Department of Local Affairs. All of the area complies with federal air quality standards.

Air Pollution Sources

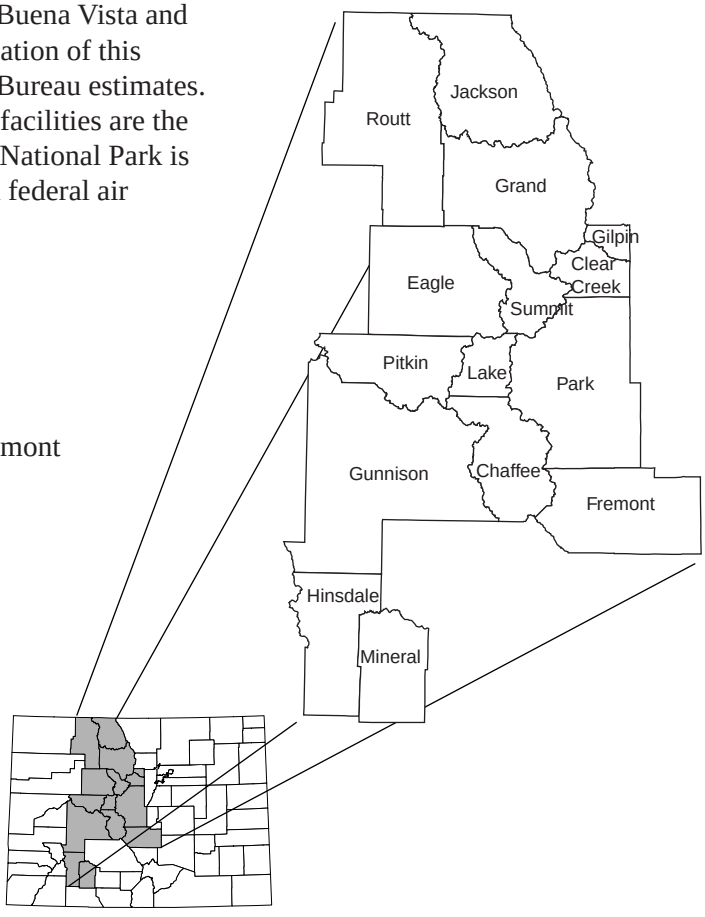
- Motor vehicles
- Oil and gas development
- Cameo, Nucla and Craig coal-fired power plants
- Coal mines in Delta, Mesa, Moffat and Montrose counties
- Sand and gravel operations
- Windblown dust
- Wildfires
- Prescribed fire

Air Pollution Control Measures

- Power plant fluidized bed combustion for sulfur dioxide control, unit shutdown
- Statewide controls on oil and gas production
- Natural Events Action Plan for wildfires
- Smoke Management Program for prescribed fire
- Fugitive dust control plans
- Particulate matter control plan for Telluride includes: woodburning control measures, street sweeping and sanding controls, use of chemical deicers, and paving of dirt roads

Central Mountains Region

The Central Mountains Region consists of 15 counties in the central area of the state. The Continental Divide passes through much of this region. Mountains and mountain valleys are the dominant landscape. Leadville, Steamboat Springs, Cañon City, Salida, Buena Vista and Aspen represent the larger communities. The population of this region is about 256,800, according to U.S. Census Bureau estimates. Skiing, tourism, ranching, mining and correctional facilities are the primary industries. Black Canyon of the Gunnison National Park is located in this region. All of the area complies with federal air quality standards.



Air Pollution Sources

- Motor vehicles
- Holcim Portland Cement in Fremont County
- Sand and gravel operations
- Black Hills Electric Generating Station in Fremont County
- Hayden power plant
- Climax Molybdenum Mine
- Oxbow and Mountain Coal mining facilities in Gunnison County
- Wildfires
- Controlled burning

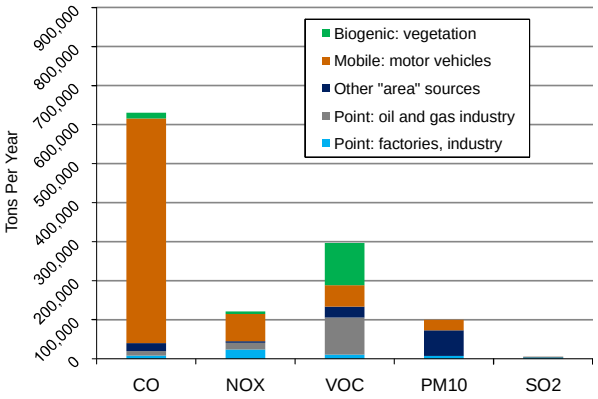
Air Pollution Control Measures

- Power plants: dry limestone scrubbers to reduce SO2 emissions, fabric filter baghouse to control particulate emissions, low-NOx burners/Selective Catalytic Reduction (by 2018) to control NOx emissions, unit shutdowns
- Holcim cement plant: Selective non-catalytic reduction emissions for NOx reduction, wet limestone scrubbers for SO2 reduction.
- Smoke management program for large controlled burns
- Air Pollution Control Plans for Aspen, Cañon City and Steamboat Springs to control particulate matter through woodburning controls in each town, street sanding and sweeping controls in Aspen and Steamboat Springs, and traffic reduction measures in Aspen. Any industries located in these cities now or in the future must also comply with emission controls as part of state regulations.

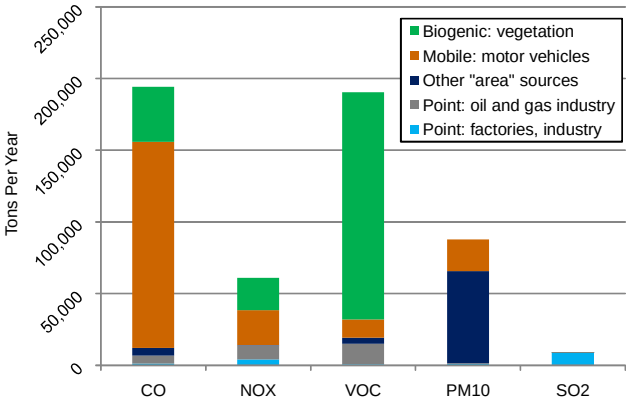
Regional sources of pollutants

Table acronyms:
CO: Carbon Monoxide
NOx: Oxides of Nitrogen
VOC: Volatile Organic Compounds
PM10: Particles less than 10 microns in diameter
SO2: Sulfur Dioxide

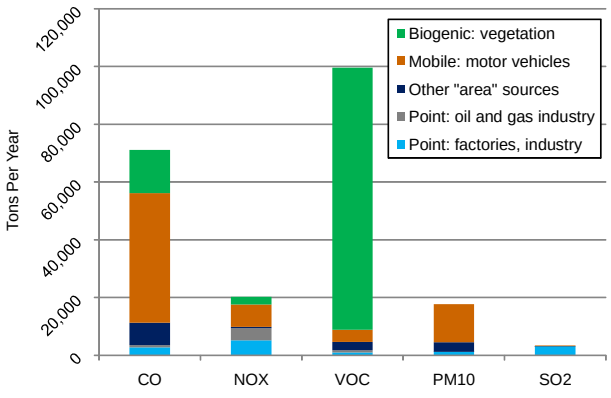
Denver/North Front Range Air Pollution Sources



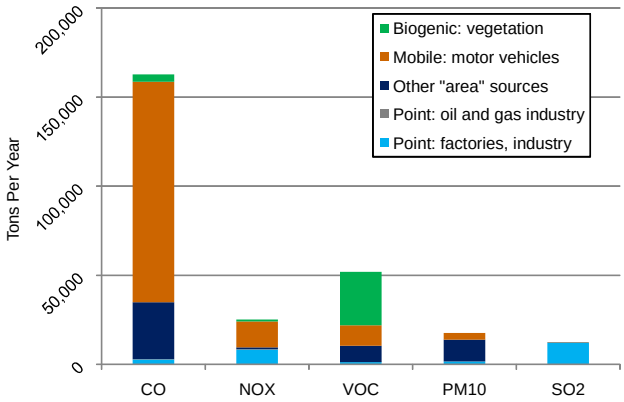
Eastern Plains Air Pollution Sources



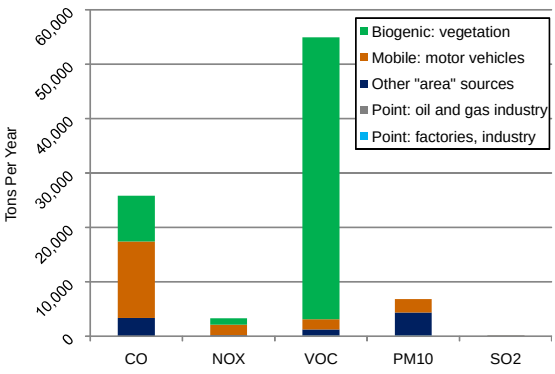
South Central Air Pollution Sources



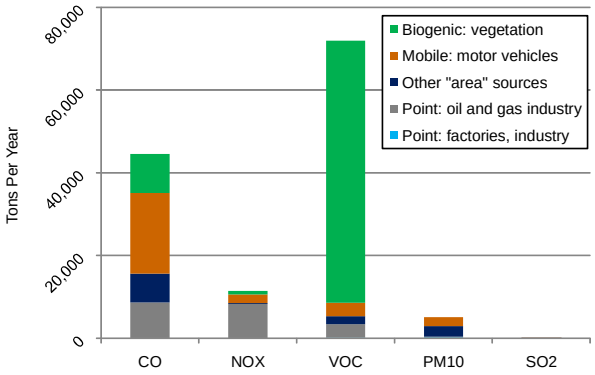
Pikes Peak Air Pollution Sources



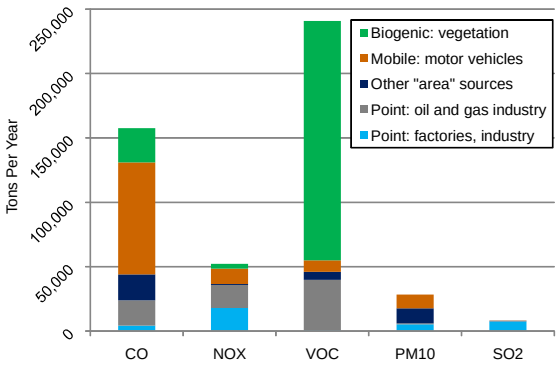
San Luis Valley Air Pollution Sources



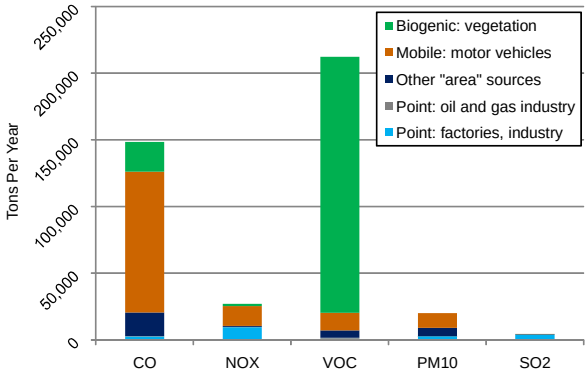
Southwestern Air Pollution Sources



West Slope Air Pollution Sources



Central Mountains Air Pollution Sources



Air Quality Control Commission
Report to the Public 2010-2011

Appendices

A. Regional air pollution levels
B. Pollutant standards and health effects
C. Summary of regulations
D. Enforcement Report
E. Regional contact information
F. Statutory requirement for report to public

Appendix A: 2010 Air Pollution Levels

Denver / North Front Range: counties of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, Weld

Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See appendix for standards)
Carbon Monoxide	440 Main St., Longmont	4.4 ppm -- 12% of 1-hour standard
	2105 Broadway, Denver	2.4 ppm -- 25% of 8-hour standard
Ozone	11500 N. Roxborough Park Rd.	.104 ppm -- 83% of 1-hour standard
	16600 W. Highway 128 (Rocky Flats)	.078 ppm -- 104% of 8-hour standard
Nitrogen Dioxide	2105 Broadway, Denver	80 ppb -- 80% of 1-hour standard
	2105 Broadway, Denver	.028 ppm -- 53% of annual average standard
Sulfur Dioxide	2105 Broadway, Denver	38 ppb -- 51% of 1-hour standard
	2105 Broadway, Denver	.010 ppm -- 7% of 24-hour standard
	2105 Broadway, Denver	.002 ppm -- 6% of annual standard
PM10	7101 Birch St., Commerce City	72 ug/m^3 -- 46% of 24-hour standard
	7101 Birch St., Commerce City	28 ug/m^3 -- 51% of annual average standard
PM2.5	1516 Hospital Road, Greeley	33.2 ug/m^3 -- 94% of 24-hour standard
	7101 Birch St., Commerce City	8.62 ug/m^3 -- 56% of annual average standard
Lead	7800 S. Peoria St., Denver	.01354 ug/m^3 -- 9% of revised 2008 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.	136 ug/m^3 -- 88% of 24-hour standard (high wind event)
	Lamar Power Plant, 100 N. 2nd Ave.	28.0 ug/m^3 -- 51% of annual average standard
PM2.5	Vicinity of Roads 5 and 98, Elbert County	13.4 ug/m^3 -- 38% of 24-hour standard
	Vicinity of Roads 5 and 98, Elbert County	4.29 ug/m^3 -- 28% of annual average standard

South Central: counties of Custer, Huerfano, Las Animas, Pueblo

Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See appendix for standards)
PM10	211 D St., Pueblo	59 ug/m^3 -- 38% of 24-hour standard
	211 D St., Pueblo	18.7 ug/m^3 -- 34% of annual average standard
PM2.5	211 D St., Pueblo	19.3 ug/m^3 -- 54% of 24-hour standard
	211 D St., Pueblo	6.24 ug/m^3 -- 40% of annual average standard

Central Mountains: counties of Chaffee, Clear Creek, Gilpin, Eagle, Fremont, Grand, Gunnison, Hinsdale, Jackson, Lake, Mineral, Park, Pitkin, Routt, Summit

Pollutant	Monitoring Site with Highest Level*	Percent of Standard ** (See appendix for standards)
PM10	603 6th St., Crested Butte	174 ug/m^3 -- 112% of 24-hour standard (high wind event)
	603 6th St., Crested Butte	25.1 ug/m^3 -- 46% of annual average standard

Southwestern: counties of Archuleta, La Plata, Montezuma, San Juan

Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See page for standards)
Ozone	106 W. North St., Cortez 106 W. North St., Cortez	.088 ppm -- 70% of 1-hour standard .067 ppm -- 89% of 8-hour standard
PM10	309 Lewis St., Pagosa Springs 1225 Camino Del Rio, Durango	349 ug/m^3 -- 225% of 24-hour standard (high wind event) 25 ug/m^3 -- 45% of annual average standard
PM2.5	106 W. North St., Cortez 106 W. North St., Cortez	13.8 ug/m^3 -- 39% of 24-hour standard 6.0 ug/m^3 -- 39% of annual average standard

Western Slope: counties of Delta, Dolores, Garfield, Mesa, Moffat, Montrose, Ouray, Rio Blanco, San Miguel

Pollutant	Monitoring Site with Highest Level*	Percent of Standard ** (See page 7 for standards)
Ozone	195 W. 14th St., Rifle 865 Rapid Creek Rd., Palisade	.081 ppm -- 65% of 1-hour standard .067 ppm -- 89% of 8-hour standard
Carbon Monoxide	645 1/4 Pitkin Ave., Grand Junction 645 1/4 Pitkin Ave., Grand Junction	1.7 ppm -- 5% of 1-hour standard 1.1 ppm -- 12% of 8-hour standard
PM10	333 W. Colorado Ave., Telluride 144 E. 3rd Ave., Rifle	354 ug/m^3 -- 228% of 24-hour standard (high wind event) 25.5 ug/m^3 -- 58% of annual average standard
PM2.5	650 South Ave., Grand Junction 650 South Ave., Grand Junction	43.3 ug/m^3 -- 122% of annual average standard 9.0 ug/m^3 -- 58% of annual average standard

Pikes Peak Region: counties of El Paso and Teller

Pollutant	Monitoring Site with Highest Level *	Percent of Standard ** (See page for standards)
Carbon Monoxide	690 W. Hwy. 24, Colorado Springs	3.8 ppm -- 11% of 1-hour standard
	690 W. Hwy. 24, Colorado Springs	2.1 ppm -- 22% of 8-hour standard
Ozone	Road 640 USAF Academy	.093 ppm -- 74% of 1-hour standard
	101 Bank's Place, Manitou Springs	.069 ppm -- 92% of 8-hour standard
PM10	130 W. Cache LaPoudre, Colorado Springs	41 ug/m^3 -- 26% of 24-hour standard
	130 W. Cache LaPoudre, Colorado Springs	19.6 ug/m^3 -- 36% of annual average standard
PM2.5	130 W. Cache LaPoudre, Colorado Springs	14.9 ug/m^3 -- 42% of 24-hour standard
	130 W. Cache LaPoudre, Colorado Springs	6.2 ug/m^3 -- 40% of annual average standard

San Luis Valley: counties of Alamosa, Conejos, Costilla, Rio Grande, Saguache

Pollutant	Monitoring Site with Highest Level*	Percent of Standard ** (See page 7 for standards)
PM10	208 Edgemont Blvd., Alamosa	285 ug/m^3 -- 184% of 24-hour standard (high wind event)
	425 4th St., Alamosa	26.9 ug/m^3 -- 49% of annual average 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. Ozone monitors in Cortez and Rifle began operation in 2008 so three-year average values are not yet available at those sites. 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.

DRAFT 10/12/11

Appendix B: Pollutant Standards and Health Effects

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.	Affected areas include high-density urban areas and communities where blowing dust is a problem. Exceedances occurred in 2010 in Alamosa, Crested Butte, Pagosa Springs and Telluride for PM10.
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 downwind of urban areas are most affected. Violation of the eight-hour standard in Denver and Fort Collins occurred for the 2009-2011 three-year period.
Sulfur Dioxide (SO_2) 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, particularly during removal or renovation.
Nitrogen Dioxide (NO_2) 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
Carbon Monoxide (CO) Two 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, fuels containing ethanol, transportation planning, travel reduction programs, residential burning controls, stationary source controls and pollution prevention programs, High Pollution Advisory Program, new vehicle emission control equipment.
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 for 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, new vehicle emission control equipment, travel reduction programs, residential burning controls, stationary source controls and pollution prevention programs, High Pollution Advisory Program, power plant retirement.
Ozone (O_3) **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 0.075 parts per million.	Enhanced Automobile Inspection and Maintenance Programs, new vehicle emission control equipment, gasoline transfer controls, low volatility gasoline, substitution of non-reactive hydrocarbons, solvent control and pollution prevention programs, stationary source controls and summertime Ozone Advisory Program, power plant retirement.
Sulfur Dioxide (SO_2) A new one-hour sulfur dioxide standard was established in June 2010 at a level of 75 parts per billion based on the 3-year average of the 99th percentile daily maximum values. A state standard is set at a 3-hour average not to exceed 700 micrograms per cubic meter more than once in twelve months.	Colorado Air Quality Control Commission regulations control sulfur dioxide emissions from industry, new motor vehicle emission control equipment, power plant retirement.
Lead (Pb) The federal lead standard is averaged across rolling three-month time periods. During any three months, the lead concentration is not to exceed 0.15 micrograms per cubic meter.	Leaded gasoline phase out and stationary source controls.
Asbestos 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.
Nitrogen Dioxide Two federal standards exist. The annual average standard is 0.053 parts per million. A new 1-hour standard was set in January 2010 at 100 parts per billion based on the 3-year average of the 98th percentile daily maximum values.	Colorado Air Quality Control Commission regulations control the emissions of oxides of nitrogen, new motor vehicle emission control equipment, power plant retirement.
Hazardous Air Pollutants 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, new vehicle emission control equipment.

Appendix C: Summary of 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 diesel-powered 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 Denver-metro 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.

Appendix D: Enforcement Report

Purpose

This portion of the report satisfies the requirements 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.

A summary of enforcement statistics is provided on the following page.
For a full Enforcement Report for the Stationary Sources Program please see:

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

Enforcement Program

The Stationary Sources Program, including the Field Services Unit and the Oil and Gas Team, regulates stationary sources, including open burning and odors. The enforcement process can vary for each case, depending on the circumstances and time frame at issue. In general, the program has been focusing more on informal enforcement settlements in lieu of issuing notices of violation and compliance orders. Upon discovery of a violation in which enforcement action is recommended, the Division will draft and send a compliance advisory (CA) to notify the source of these noncompliance issues. The CA includes a statement that the company should contact the Division 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 informal settlement discussions or proceed with a formal enforcement action (issue a Notice of Violation). Most 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).

Enforcement Statistics July 2010 - June 2011

Actions	Field Services Unit	Asbestos Unit	CFC Unit	Lead Unit
Warning Letters	24	17	0	1
Compliance Advisories	127	n/a	0	0
Notices of Violations	11	71	0	11
Notices of Noncompliance (schools only)	n/a	21	n/a	0
Compliance Orders	0	42	4	5
Compliance Orders on Consent	63	0	0	0
Early Settlement Agreements	57	1	0	0
AQCC Hearings	0	0	0	0
Referrals to Attorney Generals Office	0	5	0	0
Referrals to EPA	0	5	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. 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.

Appendix E: Regional Contact Information

Statewide

Colorado Air Quality Control Commission
(303) 692-3476
www.cdphe.state.co.us/op/aqcc

Colorado Air Pollution Control Division
(303) 692-3100
www.cdphe.state.co.us/ap
comments.apcd@state.co.us

U.S. Environmental Protection Agency
(303) 312-6312
www.epa.gov/region8/air

Denver/North Front Range

Regional Air Quality Council
(303) 629-5450
www.raqc.org

Boulder County
(303) 441-1100
www.BoulderCountyAir.org

City of Denver
(303) 285-4053
www.denvergov.org/deh

City of Fort Collins
Natural Resources Division
(970) 221-6600
www.fcgov.com/airquality

City of Greeley
(970) 350-9783
www.greeleygov.com

Jefferson County Department of Health and Environment
(303) 271-5755
www.co.jefferson.co.us

Larimer County
(970) 498-6775
www.larimer.org

North Front Range Transportation and Air Quality Planning Council
(970) 221-6608
www.nfrmpo.org

Tri-County Health Department
(Adams, Arapahoe and Douglas counties)
(303) 220-9200
www.tchd.org

Weld County
(970) 304-6415
www.co.weld.co.us

Eastern High Plains

City of Lamar
(719) 336-4376
www.ci.lamar.co.us

Southeastern Land and Environment
(719) 336-8988
www.prowerscounty.net

Northeast Colorado Health Department
(970) 552-3741
www.nchd.org

Pikes Peak

Pikes Peak Area Council of Governments
(719) 471-7080
www.ppacg.org

El Paso County
Department of Health and Environment
(719) 578-3137
www.elpasocountyhealth.org

Park County
(719) 836-2771
www.parkco.us

Teller County
(719) 687-3048
www.co.teller.co.us

South Central

Pueblo City-County Health Department
(719) 583-4323
www.co.pueblo.co.us/pcchd

Las Animas-Huerfano
District Health Department
Trinidad: (719) 846-2213
Walsenberg: (719) 738-2650
http://la-h-health.org

Central Mountains

City of Aspen
(970) 920-5075
www.aspenpitkin.com

Chaffee County
(970) 539-2124
www.chaffeecounty.org

Clear Creek County
(303) 679-2335
www.co.clear-creek.co.us

Eagle County
(970) 328-8755
www.eaglecounty.us/envHealth

Fremont County and Cañon City
(719) 269-9011
www.canoncity.org

Gilpin County
(303) 582-5214
http://co.gilpin.co.us

Gunnison County
(970) 641-4100
www.gunnisoncounty.org

Lake County
(719) 486-1796
www.lakecountyco.com

Pitkin County
(970) 920-5070
www.aspenpitkin.com

Routt County
(970) 879-0185
www.co.routt.co.us

Summit County
(970) 668-0727
www.co.summit.co.us

Town of Vail
(970) 479-2138
www.vailgov.com

San Luis Valley

City of Alamosa
719-589-2593
www.cityofalamosa.org

Southwest

Archuleta County
970-264-8300
www.archuletacounty.org

Montezuma County
(970) 565-3056
www.co.montezuma.co.us

San Juan County
(970) 387-5766
www.sanjuancountycolorado.us

Western Slope

Delta County
(970) 874-2165
www.deltacounty.com

Garfield County
(970) 945-2339
www.garfield-county.com

Mesa County
(970) 248-6960
www.health.mesacounty.us/environment

Moffat County and Rio Blanco County
(970) 824-2643
www.co.moffat.co.us

Montrose County
(970) 249-7755
www.co.montrose.co.us

San Miguel County
(970) 728-0447
www.sanmiguelcounty.org

Appendix F: 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.