Report to the Public 2013-2014

COLORADO

Air Quality Control Commission

Department of Public Health & Environment

COLORADO

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Cover photo: Air quality education at the Denver Museum of Nature and Science, July 2014. The event featured displays and a flyover by a NASA research aircraft. See page 15 for more information.
Photo by David Oonk, Cooperative Institute for Research in Environmental Sciences.

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Message from the Chair . . .

To the residents of the State of Colorado:

As a Colorado citizen, the mother of three teenage children, and the owner of a Colorado-based business, I invite you to explore the Annual Report of the Air Quality Control Commission. The Commissioners are active volunteers and put much time and thought into the information we consider and the decisions we make, and we are proud of the work done by the Colorado Air Pollution Control Division and the Commission. This annual report summarizes our work, as well as provides a basis for the ongoing work that the Commission strives to achieve.

Continuing our work of 2012-2013, the Commission continued preparing for a rulemaking for additional oil and gas emission control measures in the latter part of 2013. The hearing in February 2014 followed a very extensive, collaborative stakeholder process that helped ensure that all interested sectors of Colorado were at the table. The rule not only achieved improvements in air quality for the citizens of Colorado, but also developed a strategy for control measures that both environmentalists and the oil and gas industries could find some common ground.

Another example of the Commission's work which engages and provides incentives to industry to actively contribute to clean air is the approval of an alternative compliance approach for diesel fleet vehicle emissions testing. This new rule allows diesel fleet managers who reach air emission standards through exemplary maintenance of their fleets a less rigorous, less costly vehicle testing program.

Rocky Mountain National Park also appears to be benefiting from a collaborative relationship between Colorado agricultural producers, The Air Division, and the National Park Service. Through voluntary development and use of best management practices that decrease the emission of ammonia by agricultural producers, the park appears to be experiencing a downward trend in nitrogen deposition. These types of collaborative achievements between the Air Division, our Colorado agencies and Colorado industry partners are very exciting for us, and prove that we all benefit from collaborative efforts!

In summary, The Commission engaged in the following activities:

- spent much of its time preparing for and conducting a rulemaking for additional oil and gas emission control measures;
- approved an alternative compliance approach for diesel fleet vehicle emissions testing;
- assumed enforcement authority from the Environmental Protection Agency for the latest industrial source regulations; and
- heard numerous briefings on the science of climate change and the greenhouse gas regulatory options

For those citizens who may not be as knowledgeable about air quality and its science, I invite you to take this opportunity to learn about what Colorado is doing about the air you breathe, for those of you who might be more engaged, I encourage you to think about serving on the Commission and becoming more involved with the Commission and its meetings.

Great Sand Dunes National Park & Preserve.

Commissioner	Resident of	Term expires
David Brown	Highlands Ranch	January 31, 2015
Peter Butler, PhD	Durango	January 31, 2017
John Clouse, *vice chair*	Denver	January 31, 2015
Tony Gerber, MD, PhD	Denver	January 31, 2017
Chuck Grobe	Craig	January 31, 2017
Jana Milford, PhD, JD, *secretary*	Boulder	January 31, 2016
Todd Mitchell	Aspen	January 31, 2017
Laura Teague, *chair*	Fort Morgan	January 31, 2015
William Toor	Boulder	January 31, 2016

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

The major pollutants . . .

La Casa Air Monitoring Station in northwest Denver.

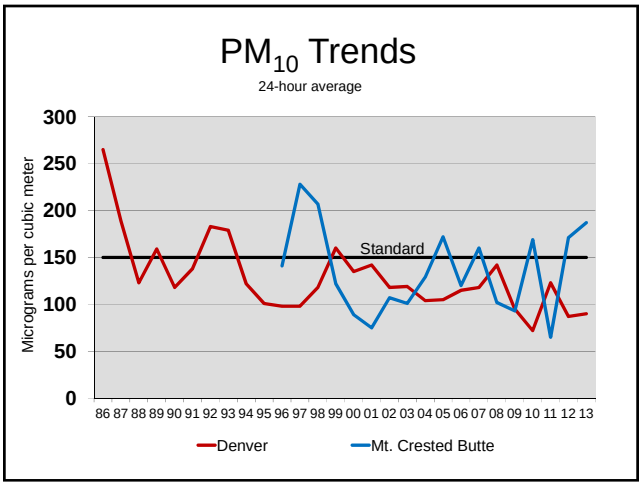
There are many types of air pollution, from blowing dust to human-caused chemical emissions. The U.S. Environmental Protection Agency has developed standards for six air pollutants that it calls "criteria pollutants" to protect the public's health and welfare. The standards indicate maximum allowable levels of the regulated pollutants in the air. EPA reviews and revises the standards periodically as necessary as new information on health and environmental effects becomes available.

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 contribute to changes in our climatic environment. Climate change has been a growing concern in recent years, and Colorado and the nation are undertaking steps to reduce greenhouse gas emissions and their impacts.

Monitoring the Pollutants

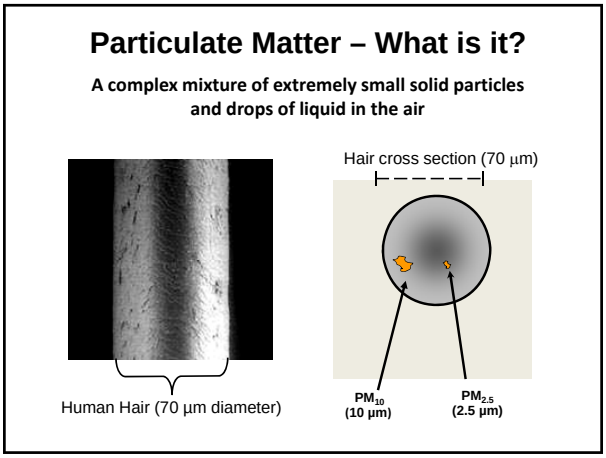


The Colorado Air Pollution Control Division maintains a statewide monitoring network for all criteria pollutants as required by the federal Clean Air Act and at times conducts special studies of toxic air pollutants. Monitors are placed in areas where emissions sources and modeling suggest that air quality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

The following information provides more detail about certain criteria pollutants of concern in Colorado. For more details on all the criteria pollutants and Colorado air monitoring sites and data, see www.colorado.gov/airquality, or the annual Colorado Air Quality Data Report at www.colorado.gov/cdphe/aqcc-colorado-air-quality-data-report.

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. Small particles less than 10 microns in diameter (PM_{10}) pose the greatest concern to human health. A micron is 1 millionth of a meter. A human hair is about 60-70 microns in diameter.



PM_{10}

PM_{10} consists of solid and semisolid material up to 10 microns in size suspended in the atmosphere. The majority of PM_{10}, about 78 percent, are from fugitive dust sources rather than stack emissions or internal engine combustion, according to the EPA's national emissions inventory for 2009.

$PM_{2.5}$

$PM_{2.5}$ particles are a subset of PM_{10} and include those particles up to 2.5 microns in size. $PM_{2.5}$ can be directly emitted from sources such as wildfires, or they can form when gases emitted from power plants, industries and automobiles react in the air.

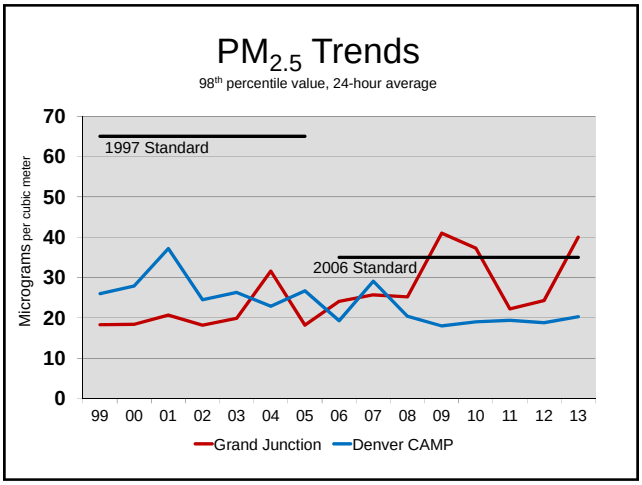
Health and Environmental Effects

Particulate matter can enter the lungs. Once inhaled, PM_{10} and $PM_{2.5}$ particles can affect the heart and lungs and cause serious health effects, including respiratory problems, cancer and premature mortality. The environmental effects range from visibility degradation to climate change and vegetation damage.

Impacts in Colorado

All monitoring sites in Colorado meet the federal standards for both PM_{10} and $PM_{2.5}$ pollution. However, particle pollution at times can cause temporary, localized air quality impacts due to blowing dust or wildfires.

The charts on these pages show exceedances of particulate standards in recent years. These exceedances were caused either by winter temperature inversions that trap pollutants close to the ground or high winds that resulted in blowing dust. These exceedances do not count as violations because the standards are based on 3-year averages, and those averages are below the standards in these locations.

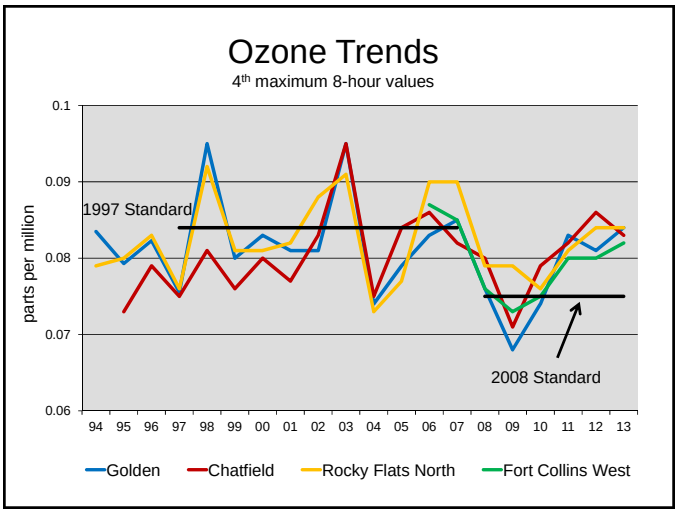


Ground-level ozone

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, oil and gas production, and even vegetation contribute to ozone formation.

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

The major pollutants . . .



The highest ground-level ozone concentrations usually occur in the summer when hot, still days cause reactive pollutants to form ozone. However, high ozone events have been observed in some rural areas in winter where oil and gas production activities are concentrated.

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, and can cause premature mortality. 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 have a history of violating the national ozone standards, and have been designated by the EPA as a marginal nonattainment area for ozone effective July 20, 2012, for violating the 2008 ozone standard. The marginal nonattainment designation does not impose any new planning requirements on the state at this time; however, the area must meet the standard by 2015 or new requirements may be imposed. The rest of Colorado presently attains the ozone standard.

The Commission is continuing to take regulatory actions to reduce ozone. In early 2014 the Commission adopted regulatory changes to significantly reduce VOC emissions from the oil and gas production sector. When fully implemented, the regulatory revisions will reduce VOC emissions by 93,000 tons per year in Colorado. In addition, the Commission approved a regional haze plan in 2011 that includes substantial oxides of nitrogen (NOx) emission reductions that will improve ozone throughout the state. More than 35,000 tons per year of NOx reductions throughout Colorado will occur by the year 2018 through these actions. In addition, new federal motor vehicle emissions standards and Colorado's motor vehicle inspection and maintenance programs also help reduce precursors of ozone.

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.”

The majority of NOx is nitrogen dioxide (NO_2) and nitric oxide (NO). NO_2 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, industrial engines and power

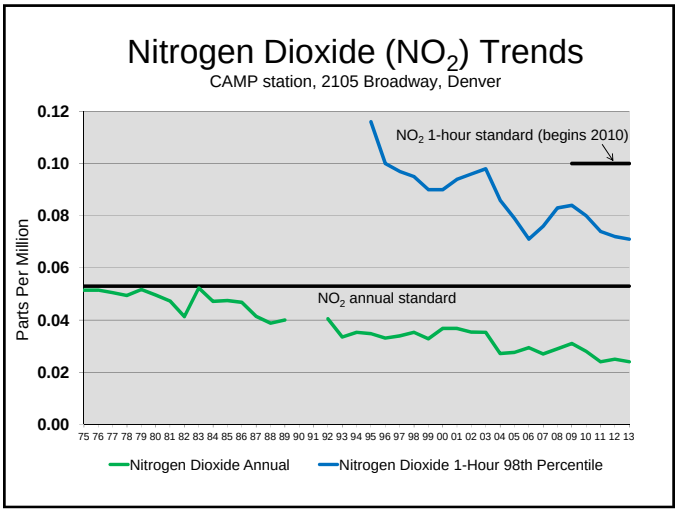
plants. Home heaters and gas stoves can also produce substantial amounts of NOx in indoor settings.

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 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 NO_2 at two sites in Colorado: downtown Denver's CAMP station and in Welby just north of Denver. The highest levels are recorded at CAMP. Both sites show NO_2 values that are well below the national ambient air quality standards. Nationally, average NO_2 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 NO_2 in Colorado and report their data to the EPA's Air Quality System data base. These monitors also show levels below the NO_2 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. There are two lead monitors in Colorado, one at Centennial Airport in Arapahoe County, and another near Interstate 25 and Alameda Avenue in Denver. Both meet the federal lead standard.

The major pollutants . . .

Gasoline transport and transfer.

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 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. 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.

Hazardous Air Pollutants

Hazardous air pollutants, also known as toxic 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 pollutant emissions 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.

Air toxics also are reduced through automobile inspection and maintenance, ozone reduction measures to reduce volatile organic chemicals, the Mercury-free Colorado Campaign, a diesel school bus emissions control retrofit program, and pollution prevention in industries and communities statewide.

Traffic on Interstate 25 in Denver.

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 cancer, 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, or as residents who live near major highways or industries. Several air monitoring studies of air toxics in Colorado have been done, including in Denver, Grand Junction, Pueblo and Garfield County. In general, the studies have found that most air toxics levels are low. Urban areas where motor vehicles and industries are concentrated have the highest impacts in Colorado as well as rural areas where oil and gas development occurs.

For more information:

- EPA National monitoring programs annual reports: www.epa.gov/ttn/amtic/uatm.html
- CDPHE air toxics reports: www.colorado.gov/airquality/tech_doc_repository.aspx#miscellaneous
- Garfield County reports: www.garfield-county.com/air-quality/

Greenhouse Gases

Both natural and human emissions of greenhouse gases (GHGs) absorb the sun's heat and trap that heat in the atmosphere. As atmospheric concentrations of these gases increase, the Earth's climate is impacted. Actions taken by the Commission have helped to reduce GHG emissions. The Regional Haze state implementation plan, for example, incorporates significant reductions in GHG emissions from electrical generating units due to power plant retirement and/or repowering with natural gas. Also, the Air Quality Control Commission's February 2014 oil and gas rulemaking will reduce methane emissions from that sector.

The Division is currently finalizing the updated Greenhouse Gas Inventory for the State of Colorado. The inventory shows data from all sectors in Colo-

The major pollutants . . .

Cherokee Generating Station, Denver.

rado based on EPA's State Inventory Tool (SIT) Model. The Inventory will be available on the Division's website at: www.colorado.gov/cdphe/colorado-greenhouse-gas-reports.

Nationally, carbon dioxide makes up about 84 percent of greenhouse gases, methane makes up 9 percent, with nitrous oxide and fluorinated gases making up the rest, according to the U.S. Environmental Protection Agency.

The data from the most recent inventory shows that the largest source of greenhouse gas emissions from human activities in Colorado is from burning fossil fuels for electricity and transportation. Other categories of greenhouse gas emissions in Colorado include industrial processes (such as the production of cement and steel), agriculture, forestry, oil and gas exploration and development, coal mining, other land use, and waste management including landfills.

Environmental Effects

Temperatures are rising, snow and rainfall patterns are shifting, and more extreme climate events — like heavy rainstorms, flooding, crop losses, and record high temperatures — are affecting the environment, according to the EPA. Glaciers, snowpack and sea ice are shrinking, oceans are rising, and droughts are longer and more intense in some areas.

Impacts in Colorado

A number of observed and projected climatic changes have been cited in Colorado and the Southwest by the EPA (www.epa.gov/climatechange/impacts-adaptation/southwest.html), including:

- Increasing temperatures and more frequent and severe droughts will likely worsen existing competition for water resources.
- Drought, wildfire, changes in species' geographic ranges, invasive species and pests will likely threaten native Southwest forests and ecosystems.
- Climate change may make it difficult for the Southwest's growing cities to attain air quality standards and meet energy and water demands.
- Climate change poses threats to the region's native peoples, infrastructure, agriculture, and recreational activities.

For additional information on the impacts of climate change in Colorado, see the Colorado Water Conservation Board's Climate Change in Colorado report: cwcb.state.co.us/environment/climate-change/.

New state and federal regulations require sources to report their GHG emissions. Federal greenhouse gas permitting requirements were established in 2011. Under Colorado's permitting program, sources may need to limit their emissions of GHG or utilize emissions control equipment known as Best Available Control Technology.

Other regulations that help prevent greenhouse gas emissions include the federal motor vehicle emissions and fuel mileage standards, and the oil and gas regulations adopted in February 2014 by the Air Quality Control Commission that will reduce emissions of methane.

Colorado participates in a number of non-regulatory initiatives to reduce GHGs, including collaboration with the Colorado Energy Office (CEO)'s Greening Government Initiative to report and reduce energy use. Additionally CDPHE coordinates with CEO and the Colorado Water Conservation Board on climate issues as part of HB 13-1293.

A standing workgroup of the Commission is investigating greenhouse gas reduction strategies for Colorado and analyzing options for incorporating climate change policies into rules. Information on activities can be found on the Commission's home page: www.colorado.gov/cdphe/aqcc.

Confluence of Roaring Fork and Colorado rivers, Glenwood Springs.

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, soil particles, ammonium and nitrates. These particles are produced by emissions from power plants, industrial sources, motor vehicles, fires, agricultural activities, 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.

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, and in Colorado has led to nitrogen deposition and over-fertilization of alpine ecosystems in Rocky Mountain National Park.

Impacts in Colorado

The federal Regional Haze Rule focuses on National Parks and Wilderness (Class I) Areas. Under the Clean Air Act, the "Class I" area designations were given to 158 areas in existence as of August 1977 that included national parks greater than 6,000 acres and all national wilderness areas and memorial parks greater than 5,000 acres. Colorado has 12 Class I areas. 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. Nitrogen deposition has impacted the park, including changes in the type and abundance of aquatic plant species, elevated levels of nitrate in surface waters, elevated levels of nitrogen in spruce tree chemistry, long-term accumulation of nitrogen in forest soils and a shift in alpine tundra plant communities favoring sedges and grasses over the natural wildflower flora.

The major pollutants . . .

Comanche Generating Station, Pueblo.

The Colorado Air Quality Control Commission adopted a Regional Haze State Implementation Plan in January 2011. The EPA approved this plan in October 2012. The process included a detailed analysis of regional haze and its sources, and established emissions controls for major industrial sources of haze.

More detailed information online:

- **Air quality home page**:
  www.colorado.gov/cdphe/apcd
  Statewide monitoring data, current air quality, forecasted air quality.

- **Ozone:**
  www.colorado.gov/cdphe/ozone-information
  Current status of ozone levels, health effects, nonattainment status and ozone reduction efforts.

- **Greenhouse gas/climate change:**
  www.colorado.gov/cdphe/categories/services-and-information/environment/air-quality/climate-change
  Information on Colorado's greenhouse gas regulations, EPA rules, and Colorado's greenhouse gas inventory.

- **Regional haze:**
  www.colorado.gov/cdphe/regional-haze
  Colorado's federally-approved Regional Haze Plan, which show status of regional haze, sources, and strategies that will reduce regional haze

- **Nitrogen deposition at Rocky Mountain National Park:**
  www.colorado.gov/cdphe/rmnpinitiative
  Current status on nitrogen deposition and it's impacts at the park, including the planning documents that specify the reduction strategies in place.

Major initiatives . . .

New oil and gas requirements reduce ozone formation and climate change emissions

In early 2014 the Air Quality Control Commission adopted groundbreaking regulatory requirements that will dramatically reduce the emission of hydrocarbons from the oil and gas production sector. These requirements are part of the Commission's ongoing efforts to enact cost-effective strategies to reduce emissions that contribute to elevated concentrations of ground-level ozone in Colorado. Additionally, the newly adopted regulations enact the first set of reduction strategies in the nation aimed directly at methane emissions from the oil and gas sector as part of Colorado's broader efforts to reduce greenhouse gas emissions that contribute to global climate change.

February 2014 oil and gas rule-making hearing, held at the Aurora City Council chambers.

The new regulatory requirements both expand and enhance existing strategies to reduce hydrocarbon emissions from the oil and gas sector and enact innovative new strategies aimed at reducing emissions from previously unregulated oil and gas sources. Specifically the adopted revisions will accomplish the following:

- Lower the control requirement threshold for condensate storage tanks from 20 to six tons per year of uncontrolled actual volatile organic compound (VOC) emissions;
- Require controls for crude oil and produced water storage tanks with uncontrolled actual VOC emissions that are equal to or greater than six tons per year;
- Expand the North Front Range ozone nonattainment area requirements for tank controls during the first 90 days of production to the rest of the state;
- Establish requirements to ensure that emissions from controlled storage tanks are captured and routed to the control device;
- Establish leak detection and repair requirements for compressor stations and well production facilities, including requirements to reduce emissions from compressor seals and open-ended lines consistent with current federal requirements;
- Expand the existing nonattainment area requirements for auto-igniters on flare devices to the rest of the state;
- Expand the existing ozone nonattainment area requirements for low-bleed pneumatic devices to the rest of the state, require no-bleed pneumatic devices where feasible;
- Require that the gas stream at newly constructed well production facilities either be connected to a pipeline or routed to a control device from the date of first production.
- Lower the existing control requirement threshold for existing glycol dehydrators to six tons per year of uncontrolled actual VOC emissions and two tons per year of uncontrolled actual VOC emissions for dehydrators located within 1,320 feet of a building, and establish a two-ton per year control

threshold for all new glycol dehydrators; and

- Establish requirements for the use of best management practices both to minimize the need for down-hole well maintenance and liquids unloading and to minimize emissions during well maintenance and liquids unloading events.

Once fully implemented, these reduction strategies are expected to reduce VOC emissions by approximately 93,000 tons per year and reduce methane emissions by approximately 64,000 tons per year. Additional information regarding the rulemaking can be found at the Commission's website: www.colorado.gov/cdphe/aqcc-meeting-materials-february-19-23-2014

Emissions inspection changes protect air and improve motorist convenience

Emissions testing station.

Changes to the Automobile Inspection and Readjustment (A.I.R.) program in the Denver-metro area and Northern Front Range will take effect beginning January 1, 2015. The changes were approved by the Colorado Air Quality Control Commission in 2012 and are designed to increase customer convenience while continuing to protect air quality.

Among the changes is an extension of the model-year exemption for new vehicles from the current four years to seven years. The extension reflects improvements in vehicle technology that have resulted in newly-manufactured vehicles polluting significantly less for longer.

Additionally, vehicles between 8 and 11 years old will be evaluated using their On-Board Diagnostic (OBD) computers instead of the traditional four-minute, treadmill-style test. Vehicles equipped with OBD provide real-time data and access to a series of diagnostic codes. This allows for identification of emissions-related problems simply by plugging into a communications port inside the vehicle.

If any vehicles of that age are presented for inspection with an illuminated "Check Engine" light, they will need to be repaired in order to pass the inspection.

And, notably, hybrids will be inspected for the first time using OBD.

The roadside inspection – RapidScreen – remains an important component of the inspection program. RapidScreen enables approximately 30 percent of all eligible vehicles to skip a trip to an Envirotest-run inspection facility in recognition of their ultra-low emissions.

Despite the changes, the inspection cost for the motorist has not changed. It remains $25 every two years for 1982-and-newer vehicles and $15 annually for 1981-and-older vehicles.

A robust public education and awareness campaign kicked off late-summer 2014 to inform the motoring public of these significant program changes. Even prior to that, staff in the Air Pollution Control Division's Mobile Sources Program began sharing information with the automotive repair industry. Repair shops and technicians are a vital link to motorists.

To learn more about the A.I.R. program, the changes and general information about Mobile Source Program activities, go to: www.colorado.gov/cdphe/apcd and click on Motor Vehicle Emissions.

Major Colorado air studies analyze ozone, sources of pollution

The Air Pollution Control Division played an active role in two major air quality field studies along the Front Range during the summer to learn more about ground-level ozone formation and movement, contributions from various pollutant sources, and tools that can be used for forecasting air quality.

The National Center for Atmospheric Research (NCAR) in Boulder conducted the Front Range Air Pollution and Photochemistry Experiment – nicknamed FRAPPÉ – that was made possible in part by a 2013 supplemental budget amendment for $2 million sought and secured by the Colorado Department of Public Health and Environment.

FRAPPÉ in turn helped to convince the National Aeronautics and Space Administration (NASA) to choose the Front Range as one of its locales for the DISCOVER-AQ study, which seeks to obtain better information from satellites that face challenges in distinguishing between pollution higher in the atmosphere versus pollution at surface-level.

Aircraft from NCAR and NASA operated along a number of different flight paths and altitudes across the Front Range and around the perimeter of the state in July and August, collecting data for the coordinated air quality studies.

The aircraft used were not typical commercial planes filled with passengers and flight attendants. Rather, they contained state-of-the-art equipment designed to collect, evaluate and validate measurements of air pollutants aloft for comparison to ground-level air pollutant measurements.

"The data collected will help us to better target reduction strategies to improve air quality and reduce ozone," said Gordon Pierce, manager for the Air Pollution Control Division's Technical Services Program. "It will be an invaluable resource for many years to come."

Once analyzed, the data from both studies will help identify pollutants, where they go and the impact upon public health and the environment. Both

Air quality study open house at Rocky Mountain Metropolitan Airport, Broomfield..

Air quality research aircraft over Erie air monitoring tower.

public health and environmental interests will find significant value in the data for risk assessments, air quality forecasting and improved computer modeling for a variety of uses.

Air Pollution Control Division scientists pushed for and welcomed both studies as, among other things, opportunities to share information and interact with a variety of federal and state partners with a goal of improving air quality in the long term.

For more information on the studies, including currently-available data, go to www2.acd.ucar.edu/frappe and http://discover-aq.larc.nasa.gov.

Air emissions permits streamlined through process improvements

Improved efficiency has been a focus of the work culture at the Colorado Department of Public Health and Environment for some time, and the Air Pollution Control Division has utilized "Lean" process improvements to streamline permitting.

In Colorado, many sources that emit air pollutants are required to report their emissions, and if those emissions are over a certain limit, to obtain a permit. The permit defines the conditions under which the source may operate in order to meet air quality regulations. More than 16,000 facilities are registered in the permitting system in Colorado.

Examples of these sources include gas stations, dry cleaners, auto finishers, electric utilities, mining operations, construction projects and oil and gas development sites.

Lean was implemented as a management tool at the department in 2011. The basic concept of Lean – which was originally developed by the Toyota Motor Company – is to focus on customer needs and to reduce waste in all areas of production. These efforts have become especially important for the Air Pollution Control Division at a time when permit applications have more than doubled in the past 10 years. The division processed more than 5,100 permit applications in 2013. Lean process improvements and the associated focus on streamlining and efficiency have helped steadily decrease permit backlogs, particularly for applications in the oil and gas sector.

The following process improvements have been implemented:

- Reduce review and handling time after initial receipt of permit application. The permit is now processed more quickly with fewer hand-offs among staff.
- Upfront review for completeness of application. Engineers only receive complete applications, thereby reducing the need to seek additional information from sources prior to beginning work on the application.
- Standardized permitting templates. A work group developed templates that result in clear, understandable and enforceable permit conditions.
- Supervisory review streamlining. Some basic permits no longer require supervisory review and approval.
- General Permits. Several source types can now submit an application for a general permit if their operations meet specific standardized criteria. A general permit is issued immediately upon submittal of the application.
- Permits issued prior to payment. Applicants receive their permits immediately upon completion. Previously, the division would not issue a permit until all fees were paid by the applicant.

Air Pollution Control Division field day at Weld County oil and gas production site.

Looking forward . . .

The Commission will continue its work to better understand Colorado's greenhouse gas emissions sources and potential emission reduction options. This will include approving a state plan to comply with the EPA's proposed rules governing carbon dioxide emissions from new and existing power plants once the proposals go final. The Commission will also monitor the State's progress in attaining ozone standards and will take the appropriate actions necessary to comply with federal requirements. The Commission will also review the impacts of the new oil and gas air rules that were adopted in early 2014.

These are but three items that will come in front of the Commission over the next two years, and on all matters of Commission interest, the public is invited to participate. You can monitor the Commission's work by viewing meeting agendas and the Long Term Calendar, all located at the Commission's website. www.colorado.gov/cdphe/aqcc

Roles of government and the public . . .

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. The members reflect a wide variety of professional backgrounds and individual interests. Colorado has chosen the citizen board approach to develop and oversee implementation of its air quality management program to ensure that the air program is responsive to the public."

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.colorado.gov/cdphe/aqcc

The Colorado Air Quality Control Commission, among other responsibilities, develops and adopts a regulatory program to protect and improve air quality in Colorado. Typically, the Commission develops program requirements from concept through implementation. Much of the air quality management program currently is in place and has been adopted over time. The Commission occasionally considers new programs 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.

Rules adopted by the Commission regulate air pollutant emissions from:

- stationary industrial sources, including oil and gas operations;
- gasoline cars and light-duty trucks;
- diesel vehicles;
- demolition of asbestos-containing structures;
- wood stoves;
- commercial and agricultural activities that produce odors;
- structures containing lead-based paint; and
- open burning and the use of prescribed fire.

The regulations seek to protect human health and reduce air pollution effects on crops, natural vegetation, and visibility impairment.

Commission meetings typically are conducted on the third Thursday of each month and may extend into the next day. The Commission usually meets in Denver, but also holds meetings in other cities around the state. The Commission encourages the public to attend meetings and provide input.

Air Pollution Control Division Programs

www.colorado.gov/cdphe/apcd

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. The Division is organized into five specialized programs, described below.

Mobile Sources Program

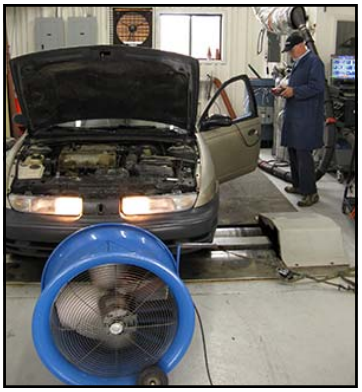
www.colorado.gov/cdphe/MotorVehicles

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 (A.I.R.) Program for gasoline vehicles in the Denver-metropolitan and North Front Range areas with the Colorado Department of Revenue. As part of the vehicle emissions inspection, the Mobile Sources Program is effectively using a remote sensing technology to "screen out" about 38 percent of the fleet from inspection at a centralized facility.

The Mobile Sources Program also administers two separate diesel opacity inspection programs, one designed for large fleets and the other for individual diesel vehicles.

The Mobile Sources Program operates 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.



Air Pollution Control Division Mobile Sources Program emissions technical center.

Planning and Policy Program

www.colorado.gov/cdphe/apcd

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.colorado.gov/cdphe/apcd

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 16,000 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. Any sources found to be out of compliance with regulations and the conditions of their permits are subject to enforcement actions. Detailed enforcement information begins on page 45 of this report. 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.

Asbestos abatement worker.

Indoor Environment Program

www.colorado.gov/cdphe/IndoorEnvironment

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, 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

The U.S. EPA has established a regulatory framework for states to follow under the Clean Air Act. 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 federal requirements.

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, and mining activities.

Federal agencies must prepare environmental analyses for federal actions that affect the environment. Colorado is typically a cooperating agency in reviewing these actions, and the public has a role in commenting on such actions through the NEPA process.

Alternatives are typically evaluated in the process before a final decision is made allowing the implementation of projects on federal lands.

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 as the tribe works to develop and implement a comprehensive air quality management program. In fact, on March 2, 2012, the EPA approved the Tribe's Part 70 Program application giving the Tribe full authority to implement and administer its 40 CFR Part 70 Operating Permit Program for Title V sources within the exterior boundaries of the Reservation.

The tribe also actively monitors air quality at a number of sites.

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.

The other tribe in Colorado, the Ute Mountain Ute, has not established an air quality program on its lands. The EPA implements and enforces federal air quality measures on this reservation.

Roles of government and the public . . .

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 burning restrictions in the winter.

Aspen, Grand Junction, Eagle County and San Miguel County have implemented their own indoor burning 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 have developed a variety of environmentally beneficial programs to reduce traffic, conserve energy and recycle.

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 COUNCIL

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.

North Front Range Metropolitan Planning Organization

www.nfrmpo.org

The North Front Range Metropolitan Planning Organization 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 input on emission reduction measures affecting the North Front Range region while providing 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 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

Electric vehicle charging stations.

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. For the greatest emission reductions, consider an electric 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 until 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 high ozone days 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 LED or compact fluorescent lights instead of incandescent bulbs.
    - Install solar panels on your house to produce emissions-free electricity.
    - Recycle everything you can (paper, glass, metal cans, aluminum and plastic). It takes less energy to recycle than to create new material.

Air quality open house at the Rocky Mountain Metropolitan Airport, Broomfield.

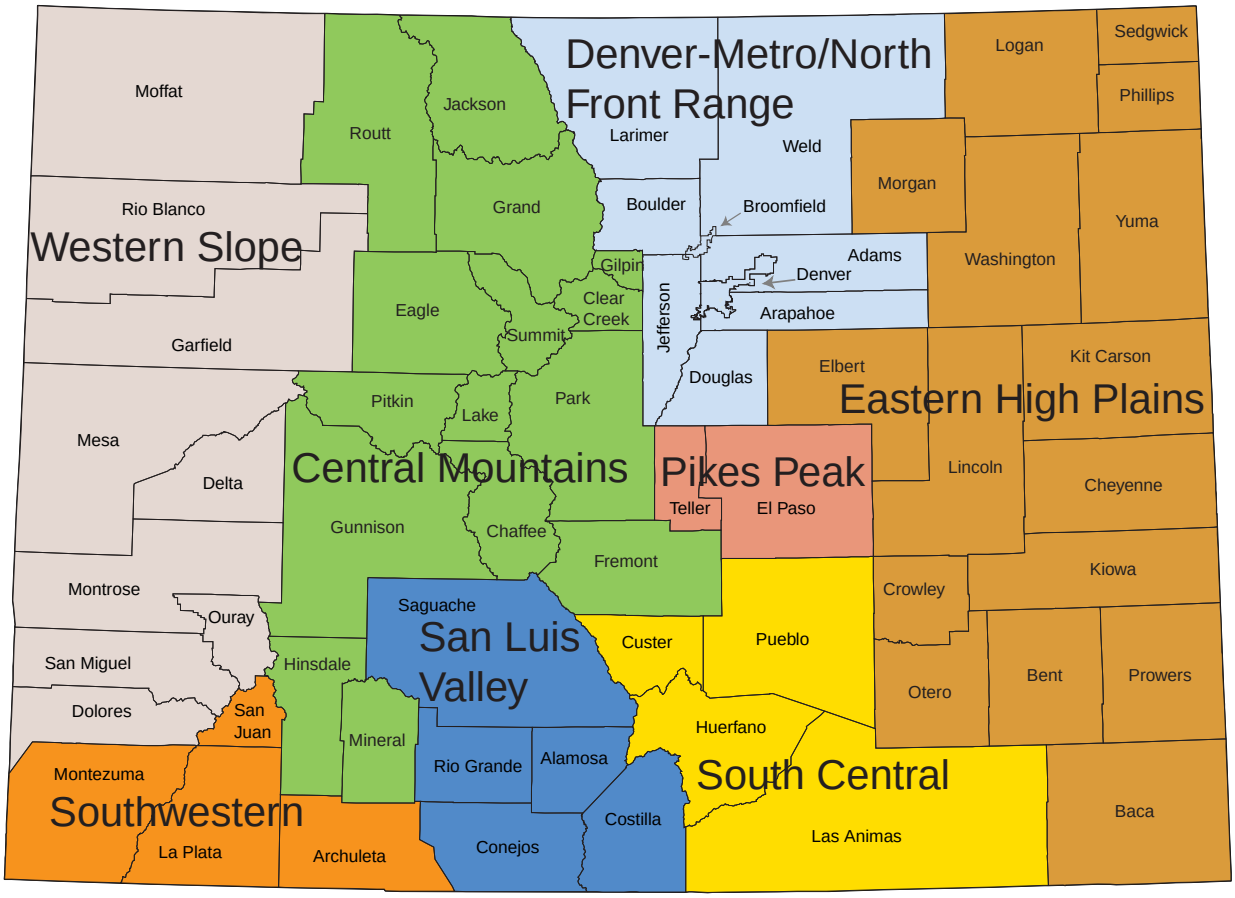
Get involved

- 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 days.
- 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



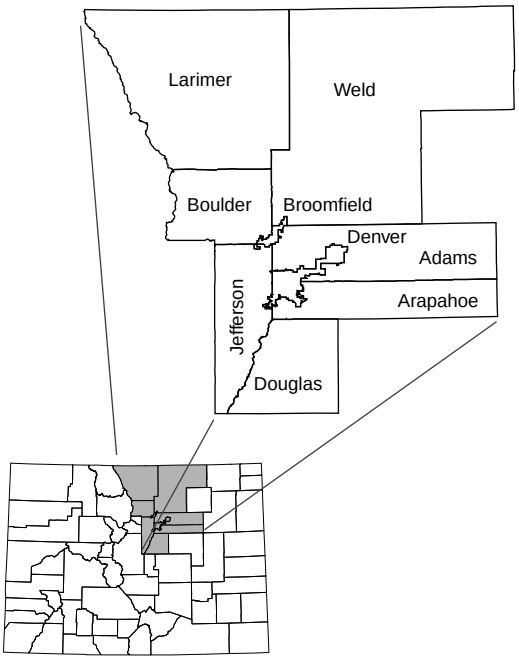
Denver-Metro/ North Front Range Region

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.

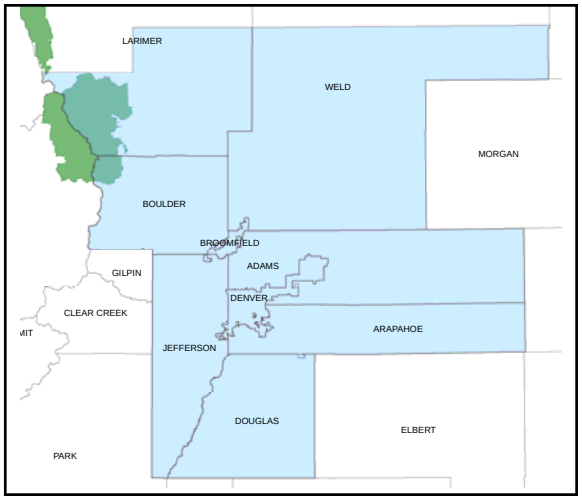
In 2002 the area came into compliance with all federal air quality standards.

The region presently complies with all National Ambient Air Quality Standards, except for ozone. The area has been exceeding the EPA's most recent ozone standards since the early 2000s, and in 2007 was formally designated as a "nonattainment" area. This designation was re-affirmed in 2012 when the EPA designated the region as a "marginal" nonattainment area for the more stringent ozone standard adopted by EPA in 2008.

Rocky Mountain National Park has been impacted by nitrogen deposition, which is causing changes to the alpine plant and aquatic environments. A nitrogen reduction plan has been developed by a team of state and federal agency scientists. For more information on this groundbreaking initiative see www.colorado.gov/cdphe/rmnpinitiative.



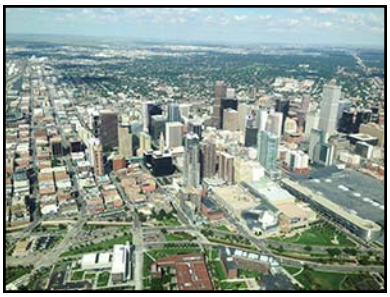
Ozone nonattainment area



Regional air quality . . .

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.



Denver skyline with a view to the northeast.

Air Pollution Sources

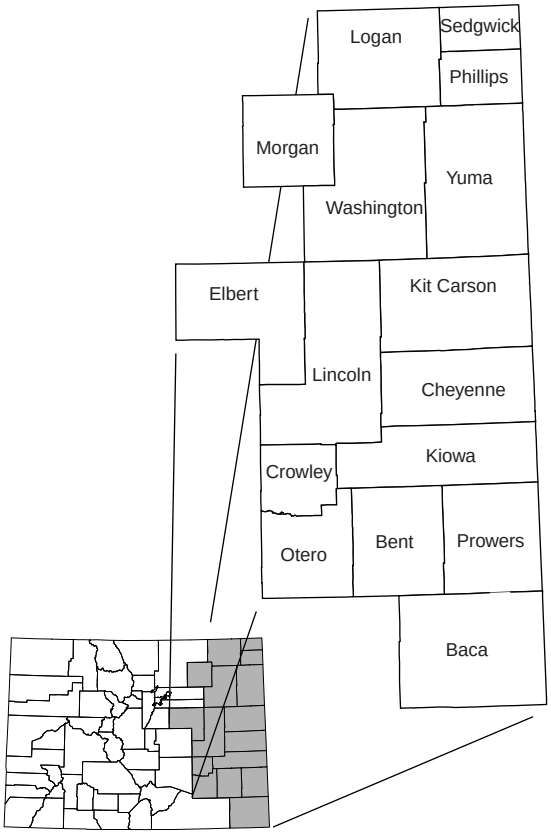
- Motor vehicles
- Road dust
- Oil and gas production
- Large commercial breweries
- Petroleum refining
- Asphalt production
- Cement manufacturing
- Sand and gravel operations
- Glass bottle manufacturing
- Commercial seating manufacturing
- Area-wide remediation at Rocky Mountain Arsenal
- Coal and 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 plants
- At power plants, low NOx burners, fuel switching to natural gas, and unit shutdowns

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 semi-arid 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

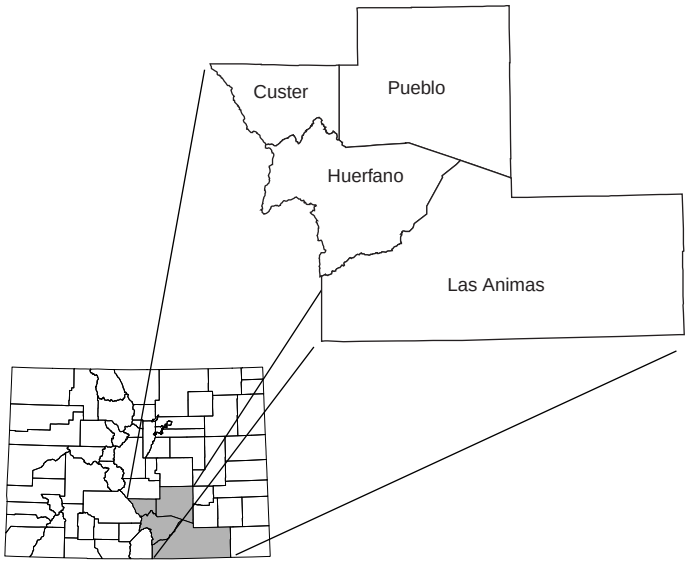
- Motor vehicles
- Windblown dust
- Odors from confined animal feeding operations
- Oil and gas production
- Pawnee Power Plant near Brush
- Western Sugar beet sugar processing in Fort Morgan
- Cargill Meat packing plant in Fort Morgan
- Lamar Power Plant

Air Pollution Control Measures

- Lamar 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 emission 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
- Oil and gas production
- Large natural gas compressor stations in Las Animas County

Air Pollution Control Measures

- Local dust control plans
- Selective catalytic reduction, low NOx burners, lime spray dryers and activated carbon mercury controls at Comanche Power Plant to reduce NOx, SO_2 and mercury emissions
- Compliance actions, monitoring and mercury reduction program at Evraz Rocky Mountain Steel Mills
- Statewide oil and gas emission controls
- VOC controls on natural gas compressor stations

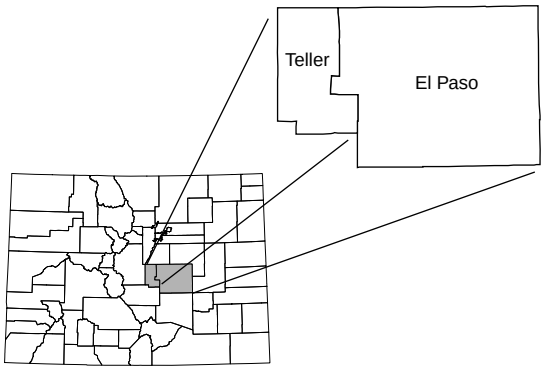
Pikes Peak Region

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
- Oil and gas production
- Sand and gravel operations



Air Pollution Control Measures

- Street sweeping
- Dust control plans
- Lime spray dryers and low NOx burners at power plants to control NOx and SO_2 emissions
- Statewide oil and gas emission controls

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

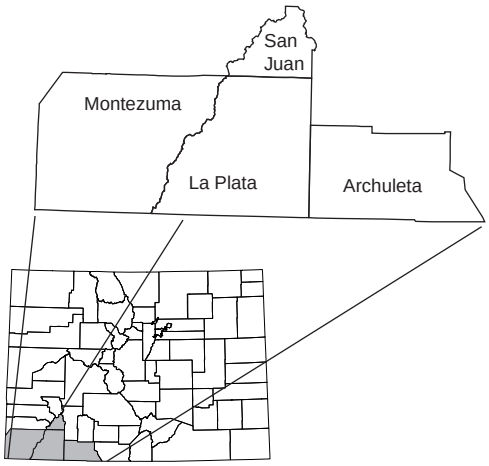
- Blowing dust
- Oil and gas production
- Motor vehicles

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
  - Statewide oil and gas emission controls

Southwest Region

The Southwest Region includes the Four Corners area of Montezuma, La Plata, Archuleta and San Juan counties. 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, while 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, and tourism and agriculture are dominant industries. Though the oil and gas industry is growing in this area, all of the area complies with federal air quality standards.



Air Pollution Sources

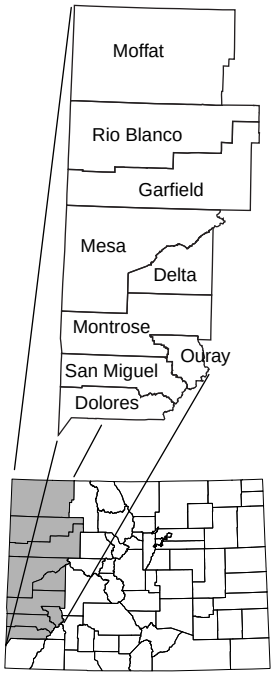
- Motor vehicles
- Natural gas processing and transmission
- Two coal-fired power plants in New Mexico
- Gas field development in Colorado, Southern Ute Indian Reservation, and New Mexico
- Wildfires
- Durango & Silverton coal-fired steam locomotive tourist train

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
- Emissions 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 urban area, and 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. However, elevated ozone levels have been recorded in the Rangely area during recent winters, and $PM_{2.5}$ in Grand Junction in 2013. These levels do not count as violations of the air quality standards, because the standards are based on three-year averages.

Air Pollution Sources

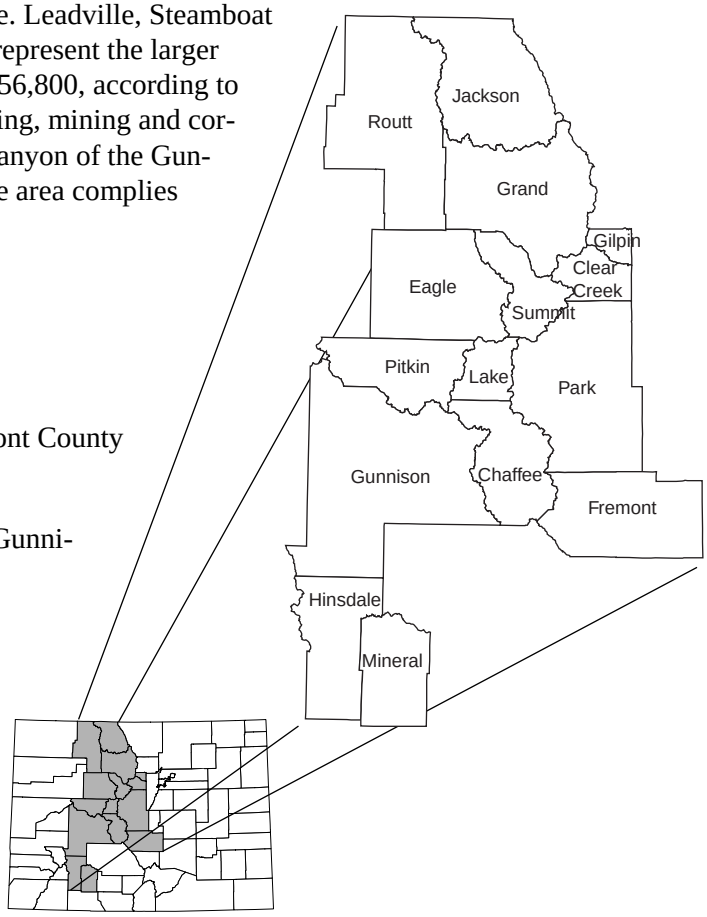
- Motor vehicles
- Oil and gas development
- Nucla and Craig coal-fired power plants
- Coal mines in Delta, Mesa, Moffat and Montrose counties
- Sand and gravel operations
- Windblown dust
- Wildfires
- Prescribed fire

Air Pollution Control Measures

- Power plant fluidized bed combustion for sulfur dioxide control, shutdown of the Cameo Plant
- 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

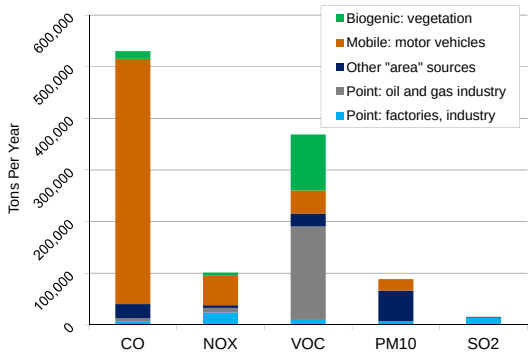
- Power plants: dry limestone scrubbers to reduce SO_2 emissions, fabric filter baghouse to control particulate emissions, low-NOx burners/Selective Catalytic Reduction (by 2018) to control NOx emissions, shutdown of the Black Hills Plant
- Holcim Portland Cement plant: Selective non-catalytic reduction emissions for NOx reduction, wet limestone scrubbers for SO_2 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

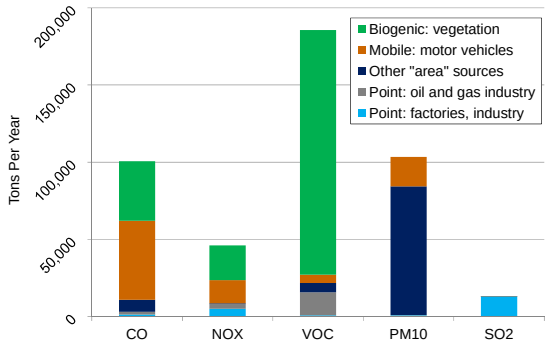
Table acronyms:
CO: Carbon Monoxide
NOx: Oxides of Nitrogen
VOC: Volatile Organic Compounds
PM_{10}: Particles less than 10 microns in diameter
SO_2: Sulfur Dioxide

Please note the scale on each of the bar charts when comparing emissions from one region to another.

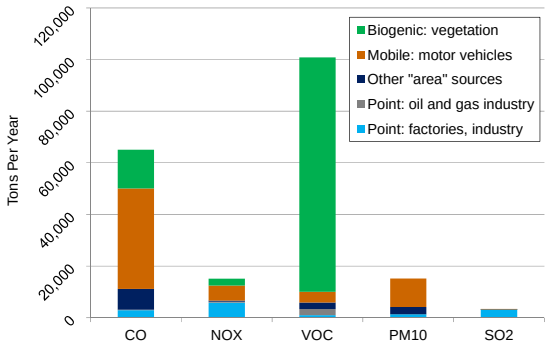
Denver/North Front Range Air Pollution Sources



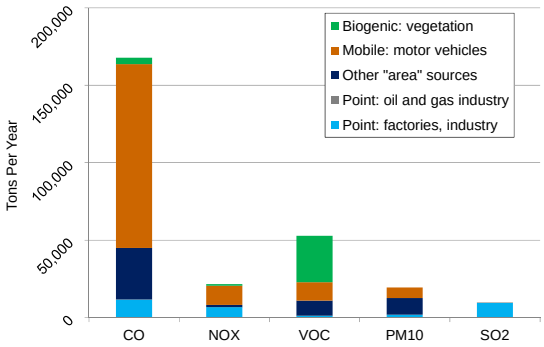
Eastern High Plains Air Pollution Sources



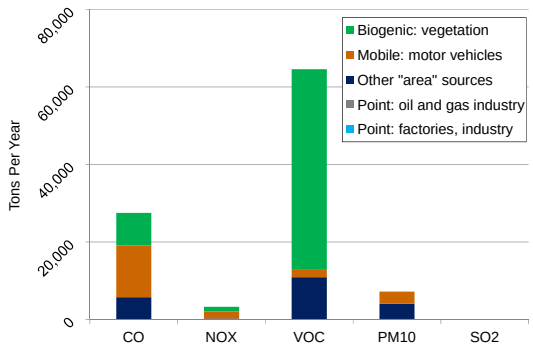
South Central Air Pollution Sources



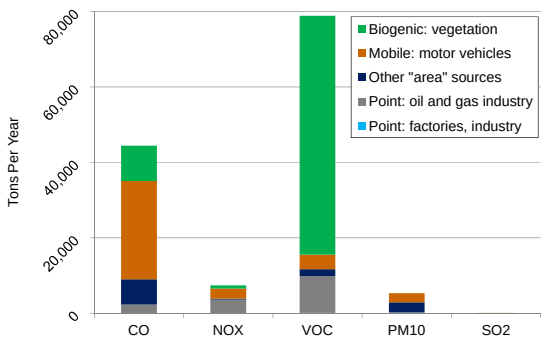
Pikes Peak Air Pollution Sources



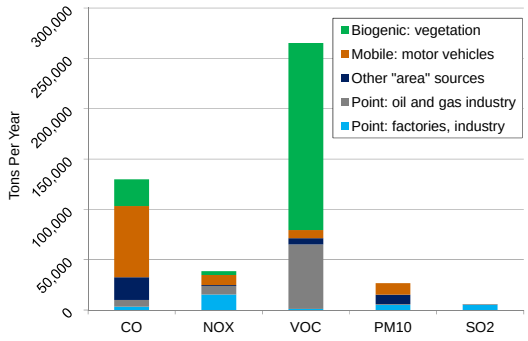
San Luis Valley Air Pollution Sources



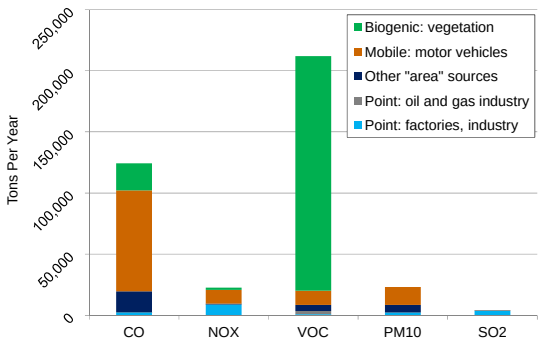
Southwest Air Pollution Sources



Western Slope Air Pollution Sources



Central Mountains Air Pollution Sources



2013 Air Pollution Levels . . .

2013 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 **
Carbon Monoxide	2105 Broadway, Denver 2105 Broadway, Denver	5.7 ppm — 16% of 1-hour standard 2.5 ppm — 26% of 8-hour standard
Ozone	16600 W Highway 128 (Rocky Flats) 115000 N Roxborough Park Rd (Chatfield SP)	.110 ppm -- 88% of 1-hour standard .083 ppm -- 110% of 8-hour standard
Nitrogen Dioxide	2105 Broadway, Denver 2105 Broadway, Denver	71 ppb -- 71% of 1-hour standard 24 ppb -- 45% of annual average standard
Sulfur Dioxide	2105 Broadway, Denver	37 ppb -- 49% of 1-hour standard
PM_{10}	7101 Birch St., Commerce City	144 $\mu g/m^3$ -- 93% of 24-hour standard
$PM_{2.5}$	1516 Hospital Rd., Greeley 7101 Birch St., Commerce City	25.0 $\mu g/m^3$ -- 70% of 24-hour standard 8.1 $\mu g/m^3$ -- 65% of annual average standard
Lead	7800 S. Peoria St., Denver	.02 $\mu g/m^3$ -- 13% of 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 **
PM_{10}	104 E. Parmenter St., Lamar	1220 $\mu g/m^3$ -- 787% of 24-hour standard (high wind event)

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

Pollutant	Monitoring Site With Highest Level*	Percent of Standard **
PM_{10}	925 N. Glendale Ave., Pueblo	64 µg/m^3 -- 41% of 24-hour standard
PM2.5	925 N. Glendale Ave., Pueblo 925 N. Glendale Ave., Pueblo	16.0 µg/m^3 -- 45% of 24-hour standard 6.3 µg/m^3 -- 50% 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 **
PM_{10}	19 Emmons Loop, Mount Crested Butte	187 µg/m^3 -- 121% of 24-hour standard (high wind event)

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

Pollutant	Monitoring Site With Highest Level*	Percent of Standard **
Ozone	106 W. North St., Cortez 106 W. North St., Cortez	.071 ppm -- 57% of 1-hour standard .068 ppm -- 91% of 8-hour standard
PM_{10}	1235 Camino Del Rio, Durango	419 µg/m^3 -- 270% of 24-hour standard (high wind event)
$PM_{2.5}$	106 W. North St., Cortez 106 W. North St., Cortez	13.0 µg/m^3 -- 37% of 24-hour standard 5.9 µg/m^3 -- 47% of annual average standard

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

Pollutant	Monitoring Site With Highest Level*	Percent of Standard **
PM_{10}	425 4th St., Alamosa	246 µg/m^3 -- 159% of 24-hour standard (high wind event)

2013 Air Pollution Levels . . .

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

Pollutant	Monitoring Site With Highest Level*	Percent of Standard **
Carbon Monoxide	645 1/4 Pitkin Ave., Grand Junction 645 1/4 Pitkin Ave., Grand Junction	1.4 ppm -- 4% of 1-hour standard .9 ppm -- 9% of 8-hour standard
Ozone	865 Rapid Creek Rd., Palisade 865 Rapid Creek Rd., Palisade	.076 ppm -- 61% of 1-hour standard .067 ppm -- 89% of 8-hour standard
PM_{10}	560 Dodge St., Delta	64 µg/m^3 -- 41% of 24-hour standard
$PM_{2.5}$	650 South Ave., Grand Junction 650 South Ave., Grand Junction	29 µg/m^3 -- 82% of 24-hour standard 7.7 µg/m^3 -- 62% of annual average standard

Pikes Peak Region: counties of El Paso and Teller

Pollutant	Monitoring Site With Highest Level*	Percent of Standard **
Carbon Monoxide	690 W. Hwy. 24, Colorado Springs 690 W. Hwy. 24, Colorado Springs	3.36 ppm -- 9% of 1-hour standard 1.8 ppm -- 19% of 8-hour standard
Ozone	Road 640, USAF Road 640, USAF	.088 ppm -- 70% of 1-hour standard .074 ppm -- 99% of 8-hour standard
PM_{10}	130 W. Cache LaPoudre, Colorado Springs	73 µg/m^3 -- 47% of 24-hour standard
$PM_{2.5}$	130 W. Cache LaPoudre, Colorado Springs 130 W. Cache LaPoudre, Colorado Springs	18 µg/m^3 -- 51% of 24-hour standard 6.3 µg/m^3 -- 50% 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. For $PM_{2.5}$ 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.

Pollutant Standards and Health Effects . . .

Pollutant	Health Effects	Areas Affected
Carbon Monoxide: 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 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.
Ozone: 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.	High concentrations of ozone can impair lung function; 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.	Violations of the eight-hour standard in the Denver area and Fort Collins occurred for the 2012-2014 three-year period.
Particulate Matter: 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 •PM_{10} = particles smaller than 10 microns •$PM_{2.5}$ = 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.	PM_{10} exceedances occurred in several areas in 2013 due to blowing dust. Grand Junction experienced $PM_{2.5}$ exceedances in 2013 due to wintertime air inversions.
Sulfur Dioxide: 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.
Nitrogen Dioxide: a gas contributing to 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.
Lead: primarily an inhalable particulate; its primary source is small aircraft engines and metal processing.	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.
Hazardous Air Pollutants: 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.
Asbestos: 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.

Pollutant Standards and Health Effects . . .

State and Federal Standards	Strategies to Reduce Air Pollutants
Carbon Monoxide Two federal standards exist. • 1-hour standard: 35 parts per million • 8-hour standard : 9 parts per million	Enhanced Automobile Inspection and Maintenance, ethanol fuels, transportation planning, travel reduction, residential burning controls, stationary source controls and pollution prevention, High Pollution Advisory Program, new vehicle emission control equipment.
Ozone 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.	Automobile inspection and maintenance, 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 including oil and gas equipment, summertime ozone advisory program, power plant retirements.
$PM_{2.5}$ Standards • Annual mean standard must not exceed 12 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 **PM_{10} 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.
Sulfur Dioxide • 1-hour standard: 75 parts per billion based on the 3-year average of the 99th percentile daily maximum values • State standard: 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.
Nitrogen Dioxide • Annual average standard: 0.053 parts per million • 1-hour standard: 100 parts per billion based on the 3-year average of the 98th percentile daily maximum values	Colorado Air Quality Control Commission regulations control emissions of oxides of nitrogen from stationary sources, including engines, cement plants and power plants. Other strategies include motor vehicle emissions control equipment, and power plant retirements.
Lead 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.	Lead gasoline phase out and stationary source controls.
Hazardous Air Pollutants The National Emission Standards for Hazardous Air Pollutants regulate approximately 190 pollutants. These standards are delegated to the states to enforce.	Residential burning controls and state/local pollution prevention programs reduce the prevalence of hazardous air pollutants, new vehicle emission control equipment, re-formulated low-benzene gasoline.
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.

Summary of Regulations . . .

Procedural Rules

The rules that the Commission follows for its regular monthly meetings and public hearings.

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.

Summary of Regulations . . .

Hazardous Air Pollutants Control
Regulation No. 8

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

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.

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.

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.colorado.gov/cdphe/enforcement-action-reports

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. Informal settlements allow for negotiation, and prevent the possibility of a lengthy appeals process.

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 2013 - June 2014

Actions	Stationary Sources Program	Asbestos Unit	CFC Unit	Lead Unit
Warning Letters	17	3	0	0
Compliance Advisories	102	n/a	0	0
Notices of Violations	12	25	0	0
Notices of Noncompliance (schools only)	n/a	50	n/a	0
Compliance Orders	1	24	0	0
Compliance Orders on Consent	47	0	0	0
Early Settlement Agreements	72	31	0	0
AQCC Hearings	0	0	0	0

Glossary of Terms

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

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

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

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

Notice of Noncompliance (NON): Issued to a school and requires the school to take certain steps to come into compliance. 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.

Regional Contact Information

Statewide

Colorado Air Quality Control Commission
(303) 692-3476
www.colorado.gov/cdphe/aqcc
cdphe.aqcc-comments@state.co.us

Colorado Air Pollution Control Division
(303) 692-3100
www.colorado.gov/cdphe/apcd
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

Regional Contact Information

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

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.