



Colorado Department
of Public Health
and Environment

*“To protect and improve
the health and environment
of the people of Colorado.”*

NEWS

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**State Health Department Marks 20 Seasons of Color-Coded Air Pollution Advisories;
Annual Wintertime High Pollution Advisory Program Set to Begin on October 31**

DENVER – The Colorado Department of Public Health and Environment will mark 20 seasons of issuing color-coded pollution advisories as the annual wintertime High Pollution Advisory Program kicks off on Tuesday, Oct. 31.

Meteorologists from the department's Air Pollution Control Division will issue the first red or blue advisory of the 2006-2007 season at 4 p.m. Tuesday afternoon. The first advisory takes effect at midnight on Wednesday, Nov. 1. Subsequent advisories will be issued daily at 4 p.m. and remain in effect for 24 hours. The season concludes on Saturday, March 31, 2007.

“This program is one of the longest continuously-running public outreach programs of its kind in the nation,” said Margie Perkins, who will retire as Air Pollution Control Division director at the end of the year. “It is as much a part of Denver winters as skiing and snowball fights. Through the use of two words – red and blue – we are able to effectively communicate information about air quality to our residents.”

Red advisories, which indicate that air quality conditions could lead to air pollution levels above federal and/or state standards, trigger mandatory residential burning restrictions and voluntary driving reductions. Burning is limited to approved fireplaces, wood stoves, pellet stoves and masonry heaters in the seven-county Denver metropolitan area.

Approved fireplaces, wood stoves, pellet stoves and masonry heaters are those that meet U.S. Environmental Protection Agency Phase II (Colorado Phase III) certification. A current list of approved devices is available upon request from the Colorado Department of Public Health and Environment or can be viewed on-line at <http://www.cdphe.state.co.us/ap/woodstoves.html>.

Blue advisories require no public action. However, residents are urged to consider using alternate modes of transportation whenever possible.

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The program began in 1987 as part of the Better Air Campaign, a voluntary public/private sector initiative that grew out of efforts led by then Colorado Gov. Richard Lamm to address carbon monoxide pollution during the winter months.

The Better Air Campaign originally focused on encouraging voluntary participation in a no-drive program that used license plate numbers to determine which day motorists should leave their cars at home in favor of alternative transportation. Motorists also were encouraged to leave their cars at home on another 15 declared “High Pollution Days” occurring between mid-November and mid-January.

The wintertime High Pollution Advisory Program emerged from the Better Air Campaign, and is the last remaining component of that effort.

At one time, the High Pollution Advisory Program issued twice-daily advisories at 6 a.m. and 4 p.m., lasted for five months (November thru April), and featured red, blue and yellow advisories.

Program coordinators regularly sought public feedback about ways the program could be improved. The yellow advisory was eliminated in the early 1990s. Beginning with the 1995-1996 season, only one advisory was issued daily, at 4 p.m. The program also was shortened in the 1990s, concluding at the end of March instead of the end of April.

The program evolved in other ways. Originally part of a travel reduction effort, the focus shifted to compliance with residential burning restrictions that took effect in the late-1980s and early 1990s. As air quality conditions improved throughout the 1990s and smoke from residential fires reduced dramatically, the focus again shifted – this time to more of a daily air quality communications tool.

“I’ve watched the program evolve over the years and have seen its focus change as air quality conditions have changed,” said Paul Tourangeau, recently appointed as Perkins’ successor as Air Pollution Control Division director. “It’s quite remarkable when one considers where we were from an air quality perspective back in the mid-1980s when the program began and where we are now. It’s a real success story, and this program has played an important role in that success.”

According to Mike Silverstein, deputy director of the Air Pollution Control Division and planning and policy manager, the daily air pollution contribution from residential fires was often 50 percent or more on typical winter days when the program began.

“An air quality study completed in the late 1990s revealed that the contribution from residential fires had been reduced to the single digits,” Silverstein said. “Thousands of fireplaces were converted to cleaner technologies like natural gas and, as the program became better known, more and more people took pride in complying with the restrictions on residential fires. It was their contribution to protect air quality.”

Silverstein continued, “The regulations and ordinances that restrict residential fires under a red advisory still exist. We certainly encourage residents to comply with the law. However, our primary goal during the High Pollution Season these days is to provide Denver-metro area residents with useful information about air quality. The ‘reds’ and ‘blues’ do that, and that’s why this program remains important and relevant.”

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When the program began in 1987, the eight-hour, health-based federal carbon monoxide standard of 9.0 parts per million (ppm) was exceeded in the Denver-metropolitan area on 19 days that year. Since 1995, the standard has been exceeded only once, in 1999.

Also in 1987, the highest carbon monoxide level recorded in the Denver-metropolitan area was an eight-hour average of 20.8 ppm, more than double the standard. In 2005, the highest eight-hour carbon monoxide level recorded in Denver was 2.9 ppm, less than a third of the standard.

The highest carbon monoxide values in the state now commonly are recorded outside the Denver-metropolitan area. Although well below all standards, Colorado Springs recorded the highest carbon monoxide value in the state last year at 3.7 ppm.

The High Pollution Advisory Program area is defined as the seven Denver-metropolitan area counties (Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas and Jefferson). Residences above 7,000 feet in elevation in parts of Boulder, Douglas and Jefferson counties are exempt from the residential burning restrictions under red advisories, as are residences east of Kiowa Creek in extreme eastern parts of Adams and Arapahoe counties.

Each red or blue advisory includes the current maximum air pollution concentration and visibility readings in the metropolitan area, as well as the highest readings for the day. Each advisory specifies which pollutant is responsible for the day's current high and maximum high readings, where those readings were recorded, and provides a pollution outlook for the advisory period.

The most troublesome wintertime pollutants are carbon monoxide and particulate matter. Carbon monoxide is produced during the incomplete combustion of organic fuels. Its primary source in the Denver-metropolitan area is automobiles.

Carbon monoxide affects the central nervous system by depriving the body of oxygen. It can reduce a healthy person's ability to perform tasks like jogging or running. Sensitive persons like those with cardiovascular disease, angina patients and pregnant women can be affected more negatively.

Particulate matter refers to tiny airborne particles, regardless of chemical composition, that are small enough to be inhaled. They can become imbedded in a person's respiratory tract and lungs and cause respiratory damage. The smaller the particle, the more deeply it can penetrate.

Particulate matter sources include automobiles and various industrial processes, and smoke from residential wood fires.

Most major Denver metropolitan area media outlets include each day's advisory in some form in weather segments, on weather pages, in news briefs, as part of traffic reports, or in daily calendars and/or digests. The Air Pollution Control Division also maintains two telephone hotlines, (303) 758-4848 and (303) 782-0211, to provide the public with air quality information. The hotlines are updated with newly recorded messages daily.

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Additionally, Internet users can log onto <http://apcd.state.co.us/psi/advisory.html> for the current advisory and current air pollution conditions recorded at any of several monitors located throughout the metropolitan area. Data are updated automatically each hour, 365 days a year.

Internet users also can select options that will display bar and line graphs for specific air pollutants to investigate daily and day-to-day trends at a given site, and reports that compare air pollution levels site-to-site. Information is archived for reference.

A wide variety of Web sites commonly accessed by Internet users have linked their pages to the division's on-line advisory information. Instructions on how to link a Web site to the on-line advisory information are available at <http://apcd.state.co.us/psi/banners.html>.

Last winter, 95 blue and 57 red advisories were issued during the five-month season. The previous winter, 99 blue and 53 red advisories were issued, with one advisory period split (red until midnight, blue thereafter). About two-thirds of advisories during a typical season are blue, the other third red.