# Goal 5: **Environmental Protection and Enhancement**

## Desired Community Condition: **Air, land, and water systems protect health and safety.**


## Indicator: **Air Quality**

**Progress Rating: Local Trend: POSITIVE National Comparison: BETTER**

## Indicator Description

The City of Albuquerque Environmental Health Department collects and maintains records for historic air pollutant levels throughout Bernalillo County, including carbon monoxide, ozone, particulate matter (10 microns or less known as PM-10, i.e. dust; and also PM-2.5, fine particulates), and oxides of nitrogen or NOX. Air is monitored at ten sites. Six of these sites measure carbon monoxide and ozone; one site measures nitrogen oxides, which are precursors to ozone; nine sites measure PM-10; and two sites measure PM-2.5. The City began to monitor PM-2.5 in 2000. The air quality indicator tracks the levels for these pollutants as the percent of the ambient air quality standard level for each. The ambient air quality standards (AAQS) are designed to achieve a level of air quality that protects human health, animal and plant life and property and protects against interference with public welfare, visibility and the use of property.

## Why is this indicator important?

High levels of air pollution contribute to human health problems and deterioration of the quality of life. People with heart and lung disease, children with asthma, and seniors are considered most vulnerable to the effects of air pollution.

Air pollution is caused by various sources. Automobiles are responsible for roughly 70 percent of carbon monoxide emissions. Particulate matter is a mixture of solid particles and liquid droplets that can turn clear skies brown any time of year. Its chief sources are industrial factories and refineries, power plants, boilers and home furnaces, and diesel-powered cars, trucks and buses. Gasoline pumping contributes to high levels of volatile organic compounds, which are hazardous air pollutants and precursors to ozone production. A miscellaneous group of activities such as home solvent use, painting operations, and degreasing operations also contribute to hazardous air pollution.

Some exceedences of the standard are permitted before the Environmental Protection Agency (EPA) would find the City to be in violation. If the City is found to violate the standards, the area would be designated as a non-attainment area. Following designation to non-attainment, specific regulations addressing the pollutant must be implemented. These would place additional restrictions on sources of the pollutants, such as industrial sources, transportation projects, vehicle emissions, fireplace burning, and other consumer-related sources. Failure to comply with these regulations could jeopardize federal highway funding, limit the expansion of industrial operations, and hinder economic activity.

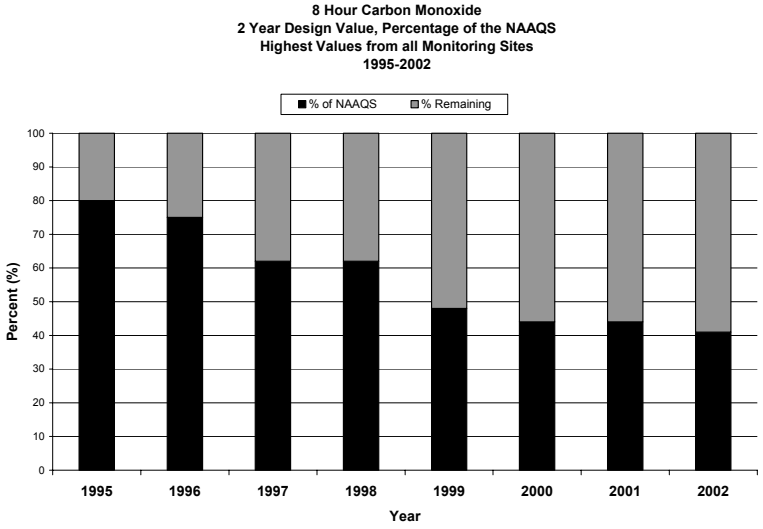
## Data Sources

U.S. Environmental Protection Agency; City of Albuquerque Environmental Health Department

## What can we tell from the data?

- Albuquerque's air contaminant levels have not violated state and federal standards since 1991. This contrasts favorably with the period of the 1970s and 80s when the carbon monoxide (CO) standard was consistently violated.
- In 1995 the average level of carbon monoxide was 80% of the AAQS and in 2002 the average level was 41% of the AAQS.
- Overall ozone concentrations have been increasing since 1990. In 2002, the average level was 89% of the AAQS. Subsequent exceedences over several years could lead to a violation of ozone standards. Ozone increases are generally a function of increases in NOX and volatile organic compounds (VOC), which come from automobiles as well as industrial sources.
- Citizen participation in programs implemented in Bernalillo County, such as restrictions on wood burning, oxygenated fuels programs, and inspection and maintenance of automobiles have helped to lower unhealthy levels of air pollutants.
- Particulate matter is 15 to 30% of the AAQS in most areas of Albuquerque except Jefferson and Osuna where the average level is 81% of the AAQS.

### Carbon Monoxide Levels




### Ozone Levels