

Air Quality Regulation in Minnesota

The federal Clean Air Act

The federal Clean Air Act is the primary regulatory authority used by the Minnesota Pollution Control Agency (MPCA) to protect the state's air quality. In addition to the Clean Air Act, state law grants broad authority to the agency to protect Minnesota's air. However, budgetary and other constraints keep the MPCA from going much beyond its responsibilities under the Clean Air Act.

The State Implementation Plan

The federal Clean Air Act, first enacted in 1970, established a two-tiered regulatory partnership, in which:

- the **federal government**, through the Environmental Protection Agency, (EPA) develops standards for air quality; and
- **each state** plans how achieve those standards.

When the EPA approved Minnesota's State Implementation Plan (SIP), it delegated its regulatory authority to administer the Clean Air Act in Minnesota to the MPCA. Rather than a single plan that is reviewed on a regular basis, the SIP is a constantly evolving collection of plans, targets, standards, permits, and state regulations designed to meet state and federal air quality requirements. Once approved, the SIP takes on the force and effect of federal law, in addition to whatever separate authority it may have under state law.

Federal standards

There are a number of federal standards or programs that state air regulatory programs should incorporate. The most important of these are:

- National Ambient Air Quality Standards
- National Emission Standards for Hazardous Air Pollutants
- New Source Performance Standards and
- New Source Review

Each will be discussed below.

National Ambient Air Quality Standards

The EPA has set standards for concentrations of seven principal pollutants (the "criteria pollutants") in the outside air, called the National Ambient Air Quality Standards (NAAQS).

The seven criteria pollutants are carbon monoxide (CO); lead; sulphur dioxide (SO_x) and nitrogen oxide (NO_x) (often called "socks and knocks"); ozone (O₃); particulate matter with diameters of 10 micrometers or less (PM 10); and particulate matter with diameters of 2.5 micrometers or less (PM 2.5).

Those areas of the country that meet the standards for a given criteria pollutant are said to be “in attainment” for that pollutant. All of Minnesota is currently in attainment for all seven criteria pollutants, although the MPCA is concerned about the growing concentrations of ozone in the metropolitan region. Once an area is determined to be a “nonattainment” area, the regulatory controls of air quality within that area become much more stringent, and the resulting costs of compliance can be extremely expensive.

Standards for control of air toxics

The 1990 amendments to the Clean Air Act listed 189 hazardous air pollutants to be regulated by the EPA. The federal agency may add to this list, but to date it has not done so.

To regulate hazardous air pollutants, EPA identifies categories of sources that release these air toxics (e.g., gasoline service stations, coal-burning power plants, chemical plants, etc.). The EPA then reviews the control technologies available for each category and specifies an emission standard for that category of sources, assuming the maximum reduction of air toxin emissions is consistent with the technology available. (This is often referred to as MACT, for “maximum achievable control technology.”) Collectively, these standards are known as the National Emission Standards for Hazardous Air Pollutants or NESHAP.

New Source Performance Standards

The EPA has established standards limiting emissions from new or modified facilities of approximately 70 industrial categories of emission sources. These standards are known as the New Source Performance Standards (NSPS). A new facility subject to these standards must demonstrate that it will comply with the applicable NSPS and obtain a construction permit from the MPCA.

New Source Review

Under the New Source Review program (NSR), a facility must install modern pollution control equipment when it is built (for new sources) or when it makes certain major modifications (for existing sources). Facilities subject to NSR in attainment areas must install “best available control technology” (BACT). Facilities subject to NSR in nonattainment areas are subject to an even more strict standard, and must install “lowest achievable emission rate” technology (LAER).

The new source review requirements apply only to new and significantly modified facilities. Facilities existing as of 1977 that have not made major modifications need only install “reasonably available control technology” (RACT). Some refer to these existing facilities as “grandfathered” facilities. Many coal-fired power plants in existence or planned and under construction in 1977 fall under this category.

Regulation of mobile sources

Only the EPA and California may adopt emissions standards for mobile sources (cars, trucks, buses, etc.). California is authorized under the federal Clean Air Act to adopt stricter standards, and any other state may elect to adopt and enforce California’s more stringent emissions standards.

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