



Southeastern States Air Quality Toolkit for Local Government Officials

How Do Regulations Protect Public Health and Welfare?

Regulation of criteria air pollutants

The federal Clean Air Act requires the U.S. Environmental Protection Agency (U.S. EPA) to adopt standards for commonly occurring outdoor (ambient) air pollutants that pose threats to public health and the environment. The agency has adopted national ambient air quality standards for six criteria air pollutants (ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead). A standard is a national target for an acceptable level of a pollutant in the air. These standards provide the basis for permit limitations and other regulatory actions.

Common or criteria pollutants and chemicals that react to form pollutants are produced by numerous sources including industrial sources, mobile sources (such as automobiles, trucks and construction equipment), and even charcoal grills and wood burning fireplaces. As directed by the federal Clean Air Act, the U.S. EPA develops the air quality standards for common pollutants based solely on scientific knowledge of the health effects of these pollutants without considering the cost to regulated sources. The primary standards set limits to protect public health, including the health of sensitive populations such as children, asthmatics, and the elderly. Secondary standards set limits to protect public welfare by reducing effects on soil, water, crops and other vegetation, buildings, animals, and visibility. The Clean Air Act requires the U.S. EPA to review each standard every five years and to revise the standard, if necessary, to ensure that it reflects the most recent health information available. In setting a standard, the U.S. EPA recognizes that it cannot establish a standard below which no adverse health effects will occur. The established standards therefore do not eliminate all risk. Once the U.S. EPA adopts a federal standard, states must adopt a standard that is at least as strict as the federal requirement but may adopt one that is stricter.

Regulation of hazardous air pollutants

Hazardous air pollutants (HAPs), or air toxics, are chemicals that cause or may cause cancer or other serious health effects, such as reproductive effects or birth defects. The HAPs may also harm the environment. Air toxics are released from a variety of sources, including mobile sources and large and small stationary sources. Mobile sources, such as cars and trucks, release vapors when the vehicle is being fueled (gasoline or diesel is put into the vehicle), and exhaust when that fuel is burned. Air toxics can also be produced by large stationary sources (industrial plants) and smaller stationary sources (e.g., dry cleaners and paint shops).

The 1990 Clean Air Act revisions authorized the U.S. EPA to regulate 188 hazardous air pollutants, but did not require the U.S. EPA to develop national ambient (outdoor) air standards like the agency has for common pollutants. The U.S. EPA has categorized the sources that release HAPs as major (large) or area (small) sources. The Act requires the U.S. EPA to set technology standards (Maximum Available Control Technology (MACT)) requiring the maximum reduction of HAPs releases, taking cost and feasibility into account. While there are no air quality standards for HAPs, state and local agencies monitor concentrations of these chemicals in outdoor air and evaluate public health risks.

Related Documents:

- *Air Pollution and Health Risk*, U.S. EPA, March 1991.
- *Original List of Hazardous Air Pollutants*, U.S. EPA, 1990.
- *Taking Toxics Out of the Air*, U.S. EPA, 2000.

For More Information:

- Air Toxics Website, U.S. EPA, <http://www.epa.gov/ttn/atw/index.html>
- Toxic Air Pollutants, U.S. EPA, <http://www.epa.gov/air/toxicair/index.html>