

What is air pollution ?

Ozone and Fine Particles

The highest ozone levels occur between 2 and 7 p.m.

Georgia's ozone season is May 1 through September 30.

All 20 metro Atlanta counties fail to meet the EPA 8-hour ozone standard.

Unhealthy levels of fine particle pollution can occur at any time of the year.

Georgia's Environmental Protection Division (EPD) expects that most cities Georgia will fail to meet the stronger ozone standard set in March 2008.

27 counties or partial counties (22 in the Atlanta area) do not meet the EPA fine particle standard.



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What is air pollution?

Air pollution consists of gases, solid particles and aerosols that change the natural composition of the atmosphere. The air pollutants of greatest concern in Atlanta are ground-level ozone and fine particulate matter. Air pollution is harmful to human health and can damage the environment, including soil, water, plants and animals.

Air pollution comes from two kinds of sources: natural and human (anthropogenic). Natural sources can include forest fires, trees and plants, and even sea salt in coastal areas. Anthropogenic pollution occurs from a wide range of human activities, such as car and truck exhaust, industrial processes, power plants, mining activities and landfills.

What governs air pollution?

The Clean Air Act (CAA) is the federal law that governs air pollution and efforts to improve air quality. The CAA sets standards for how much of certain pollutants can be in the air. A primary standard is health-based, meaning the amount of pollutants in the air is not supposed to harm human health. A secondary standard is set with the goal of protecting the environment.

What pollutes Georgia's air?

Roughly half of all Georgians now live in areas with air that may be harmful to their health. Under the new ozone standard, by 2010 almost two-thirds of Georgians will live in areas that fail to meet the federal air quality standard for this pollutant. Traffic accounts for about half of Atlanta's ozone-forming nitrogen oxide emissions, and coal-fired power plants are the second largest source.

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Ozone and Particulate Matter

Ground Level Ozone (Smog)

Ozone can be good or bad depending on where it is located. Ozone in the stratosphere high above Earth protects human health and the environment, but ground-level ozone is a serious health concern. Ozone is produced by a combination of two pollutants, nitrogen oxides (NO_x) and volatile organic compounds (VOCs). VOCs are produced by both natural and human processes, but NO_x come primarily from fossil fuel combustion — cars, trucks, diesel equipment, power plants and industry. These smog-forming pollutants react with one another in the atmosphere in the presence of sunlight to form ground-level ozone.

The 20-county Atlanta region does not meet the 1997 8-hour standard for ozone set by the EPA. On March 12, 2008, EPA strengthened the standard, a change that is likely to mean the Macon, Athens, Columbus and Augusta regions also become “nonattainment.”

Because Atlanta did not meet its 2007 deadline for the previous standard, its status as “marginal” non-attainment was bumped up to “moderate” and may become “severe” due to the new, stronger standard.



Particulate Matter

Particles found in the air, including dust, dirt, soot, smoke and liquid droplets, are known as fine particulate matter (PM). Particles can be suspended in the air for long periods of time. Some particles are large or dark enough to be seen as soot or smoke, while others are so small that they can only be detected with an electron microscope.



Some particles are directly emitted into the air and come from a variety of sources such as cars, trucks, buses, factories, construction sites, tilled fields, unpaved roads, stone crus and burning of wood. Other particles may be formed in the air when gases from burning fuels react with sunlight and water vapor. These particles are formed from emissions from power plants, vehicles and industrial processes.

In 2008, EPA designated 22 counties around Atlanta as non-attainment for PM. EPA also designated areas around Macon, Rome and in Georgia near Chattanooga as PM non-attainment areas. The state is developing plans to bring these areas into attainment with the standard by 2010.