

Guidance for Georgia Schools

Outdoor Air Quality & Physical Activity



Introduction

Long-term exposure to air pollution can lead to serious health problems in all people and short-term exposure can lead to asthma attacks and heart trouble in vulnerable people. The health risk of air pollution rises as outdoor pollutant concentrations rise. Children are especially vulnerable because their lungs are still developing, they take in more air in relation to body weight, and they tend to spend more time being active outdoors than adults.

This guidance document is intended to help school systems develop action plans for appropriate changes in outdoor activity when air pollution reaches unhealthy levels.



Determining Outdoor Air Quality

A measure called the Air Quality Index (AQI) rates daily air quality on a scale from 0 (the cleanest) to 500 (the most polluted). Health warnings are set according to medical research studies that link health risks with different amounts of airborne pollutants. Recent studies have led to new, stricter standards for ground-level ozone that took effect in Georgia in May 2008.

The Georgia Environmental Protection Division issues a Smog Alert whenever the AQI is predicted to exceed 100. Atlanta area school systems can register to receive emailed alerts through The Clean Air Campaign Web site (www.CleanAirCampaign.com). Alerts for the Macon area are available through the Middle Georgia Clean Cities Coalition from: Charise.Stephens@macon.ga.us. The forecasts are also available through the Georgia Environmental Protection Division's Air Quality Hotline (404.362.4909). These forecasts predict which pollutants are likely to be high the following day, allowing school Administrative staff to plan any needed changes in outdoor activities.

When and Where Is Air Pollution a Problem in Georgia?

The two outdoor air pollutants of greatest concern in Georgia are ground-level ozone and fine particulate matter (PM_{2.5}, also called particle pollution). These pollutants together are often referred to as smog. The twenty-county metro Atlanta area and the Macon area violate federal air quality standards. With a stronger ozone standard now in place, Athens, Augusta, Columbus and part of northwest Georgia are also violating the federal standard for that pollutant.

Although air quality is a year-round concern, most smog occurs during the warm months of late spring and summer, including May, August and September when children are in school. In addition, some athletic teams and marching bands practice outdoors during the peak of smog season. As a result, school systems should be prepared to adjust outdoor activities to protect student health on days when ozone, fine particulates or both exceed federal standards.



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Recommended Changes in Outdoor Activities

AQI	Health Concern	Recommendation
GREEN 0-50	The air is considered healthy for everyone.	Outdoor activities are recommended for all students.
YELLOW 51-100	The air is unhealthy mainly for extremely sensitive children and adults.	Outdoor activities are recommended for most students except those known to respond to air pollution at this level.*
ORANGE 101-150	The air is unhealthy for sensitive individuals, including all children under the age of 18, mature adults over the age of 55, and those with respiratory and cardiac conditions.	Outdoor exertion for all children and for sensitive adults should be <u>limited</u> in duration and intensity. When possible, all outdoor activity should be moved to times of day when the pollutant of concern is lowest.**
RED 151-200	The air is unhealthy for everyone.	Outdoor activities should be <u>avoided</u> for children and adults. Depending on the pollutant that is high, there may be some times during the day that are safer for outdoor activity (see yellow box, below).
PURPLE 201-400	The air is unhealthy or even hazardous for everyone.	Outdoor activities should be avoided for all children and adults, throughout the day and evening.

*School staff should watch children carefully for signs of distress to identify students who are more sensitive, as well as ensure immediate access to medications for students with asthma.

**See attached implementation document for additional suggestions regarding specific ways to reduce exposure, such as doing indoor weight training instead of outdoor endurance training on smog alert days.

Ozone and particle pollution peak at different times of day. The following guidelines are designed to help school officials decide how to adjust the time of day for outdoor activities according to the pollutant of concern. Sometimes predictions are higher than actual measured concentrations. To check which (or both) pollutants are high *at a specific time* (raw data from the previous hour), go to:

www.georgiaair.org/tmp/today/amp_O3.html for ozone, and
www.georgiaair.org/tmp/today/amp_PM25.html for particle pollution (PM_{2.5})

- Ozone concentrations are generally highest between 2:00 p.m. and 7:00 p.m. Move outdoor activities to the morning, and limit outdoor time after 2:00 p.m. as much as possible.
- Particle pollution concentrations often peak during morning and evening rush hour but can still be quite high in the middle of the day due to photochemical particle formation. Outdoor time should be limited throughout the day and evening unless the Georgia Air site indicates actual levels are not at the unsafe levels that were predicted.
- If both ozone and particle pollution concentrations are high, outdoor activity should be limited throughout the day and evening unless the Georgia Air site indicates actual levels are not at the unsafe levels that were predicted.