



Earth Gauge™ Atlanta – Water Quality

Environmental Information for Broadcast Meteorologists

This fact sheet is part of a series on key weather-environment topics for the Atlanta regional area. The Earth Gauge™ Healthy Communities project is designed to provide basic background information on environmental impacts in major U.S. urban areas, as well as simple messages meteorologists can deliver to their viewers.

The Chattahoochee River is the smallest river serving a major metropolitan area in the United States, providing around 70 percent of metro Atlanta's drinking water. A large proportion of the Atlanta area's growth is taking place north of the city, where this water supply originates. It is generally accepted that water quality declines sharply when the amount of paved surface in an urban area is greater than ten percent. This is because rain water cannot soak through paved surfaces, and instead runs into storm drains, carrying with it any pollutants encountered on the way to local streams and rivers.

What's in the Water?



Rain water running over yards, driveways, and streets can transport many pollutants into storm drains and directly to local waters – fertilizers, pesticides, pet waste, oil, and trash are common pollutants that can harm wildlife, cause algal blooms, and close recreation areas.



Soil that erodes away from yards, sloping land, and stream banks can smother wildlife habitat and vegetation on the river bottom, clog drainage ditches and stream channels, and impact recreation areas.



In areas with combined sewers, which are designed to carry both sewage and rain water, heavy rain events can cause overflows that discharge a combination of rain water and sewage into local streams and rivers.



Old or leaking septic systems can contribute pollutants to groundwater supplies, which feed surface rivers and streams during dry weather. If the soil around a septic tank becomes soggy or flooded with rain water, it can be less effective at treating wastewater.

Learn More about Watersheds and Water Quality

The Clean Water Campaign offers information about storm water pollution in metro Atlanta and practical tips to prevent water pollution at home, in your yard, and on the road. www.cleanaircampaign.com

Effects of Urbanization on Water Quality is part of the U.S. Geological Survey's *Water Science for Schools* site. It provides an excellent primer on water quality issues related to urban development. www.ga.water.usgs.gov/edu/urbanquality.html

Watersheds: Connecting Weather to the Environment is a free online course designed to provide understanding of a watershed as the local environment in which people's actions and decisions play against the background of daily and seasonal weather. meted.comet.ucar.edu/broadcastmet/watershed/

Flip this page over to find simple messages and tips about water quality you can use during your on-air weather report.



Earth Gauge

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Making the Connection: What You Can Say On-Air

Here are some simple facts and tips you can provide to your viewers to help make the connection between wet weather events and water quality. Help your viewers understand how pollutants enter our water supply and how they can take simple steps to reduce their own impact on Atlanta's water quality.

Gutters to Lawn

Much of the pollutant load in the Chattahoochee River is attributed to the high concentration of urban areas in the Atlanta region, which tend to have larger amounts of pavement. When it rains, water runs over driveways, sidewalks, roofs, and streets, picking up many pollutants along the way. This water eventually makes it into storm drains, which are direct pathways to our rivers and streams. In Atlanta and downstream areas, the Chattahoochee shows levels of some pollutants that are two to 16 times higher than normal levels.

Viewer Tip: You can slow the flow of rainwater at home by making sure that gutters and downspouts discharge onto your lawn or another grassy area, instead of onto a driveway, sidewalk, or street. This allows rainwater to be filtered and slowly soak into the ground, instead of running off into storm drains and local waters, untreated!



Re-Tree

According to the Georgia Forestry Commission, Atlanta loses 54 acres of trees per day - that's more than 19,000 acres per year! Not only do trees beautify our landscape, but they also provide important environmental services - they slow down and absorb rushing rain water, prevent erosion, absorb air pollutants, and provide shade on warm days.

Viewer Tip: Since 1985, Trees Atlanta has planted and distributed more than 68,000 trees, and the organization holds volunteer projects every Saturday morning, year-round! Consider helping to replant Atlanta's urban forest by volunteering at a local event. You can find out what's happening by visiting the Trees Atlanta calendar at www.treesatlanta.org/calendar.html.

Septic Smarts

The Metropolitan North Georgia Water Planning District estimates that there are more than half-a-million septic tanks in the 16-county area, and over 12,000 new systems are being added each year! About 40 percent of these tanks are at least 20 years old - the expected life-span of an average septic tank. As septic systems age, they can become less efficient at treating and filtering wastes, putting groundwater quality at risk.

Viewer Tip: If you have a septic system, it is important to make sure house gutters, sump pump drains, and other outdoor drainage systems for rainwater do not drain onto the soil absorption area. If the soil around your tank becomes soggy or flooded, it can be less effective at treating wastewater.



What's Bugging You?

Did you know that the month of May is when the highest concentrations of pesticides are found in Atlanta's streams and rivers? In the U.S., homeowners apply more pesticides per acre of lawn than farmers do to agricultural land! Of the 36 most common lawn pesticides, many are toxic to birds, fish, and other animals.

Viewer Tip: The spring season marks the emergence of many garden pests in Georgia, including fire ants, grubs in lawns, lacebugs on azaleas, and bagworms on evergreens. Before you apply pesticides in your yard, make sure you know what pest you are fighting, and how to best manage them. Your local garden center or University Cooperative Extension Service can help you identify pests and choose the proper treatment. If you do decide to apply pesticides, please wait for dry weather - rain water will wash pesticides from your yard, into storm drains, and directly to local rivers and streams, wasting product and putting wildlife and water quality at risk.

