

Georgia's Water Quality Standards

The State of Georgia Environmental Protection Division (GAEPD) is responsible for setting and enforcing water quality standards. The goals of establishing these standards are to “provide enhancement of water quality and prevention of pollution; to protect the public health or welfare in accordance with the public interest for drinking water supplies, conservation of fish, wildlife, and other beneficial aquatic life, and agricultural, industrial, recreational, and other reasonable and necessary uses and to maintain and improve the biological integrity of the waters of the State.”

Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03(2)(a)

The State of Georgia classifies all waters into categories, which have different standards depending on the designated use of the water body. These uses include:

Drinking Water Supply
Fishing
Wild River

Recreation
Coastal Fishing
Scenic River

General Water Quality Criteria

Georgia's water quality standards consist of two groups of criteria; the general criteria that apply to all waters and the specific criteria that change based on use. The general criteria include:

- ☒ Waters shall be free of materials, oils, and scum, associated with municipal or domestic sewage, industrial waste or any other waste which will settle to form sludge deposits, produce turbidity, color, or odor, or that may otherwise interfere with legitimate water uses.
- ☒ Waters shall be free from toxic, corrosive, acidic, and caustic substances in amounts which are harmful to humans, animals, or aquatic life.

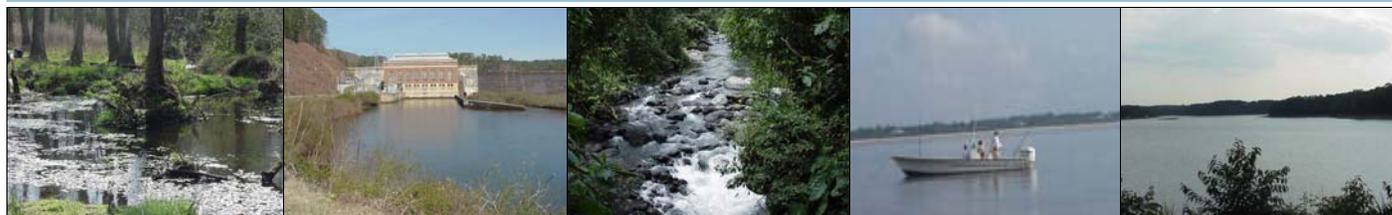
General criteria also include acute (one time exposure) and chronic (exposure over a period of time) concentrations of metals, as well as maximum allowable concentrations of pollutants such as pesticides and other chemicals.

These criteria can be found in the GAEPD's document "Rules & Regs. for Water Quality Control".

How is a stream or river's designated use determined?

- ☒ **Drinking Water Supply:** Waters approved as a source for public drinking water systems permitted by the Georgia EPD. Waters classified for drinking water supplies will also support fishing use and any other use requiring water of a lower quality
- ☒ **Recreation:** the water supports general recreational activities such as water skiing, boating or swimming
- ☒ **Fishing:** the water supports the propagation of fish, shellfish, game and other aquatic life
- ☒ **Wild River/Scenic River:** these are usually grouped together and refer to streams or rivers that are wild or scenic. This is the highest water quality standard
- ☒ **Coastal Fishing:** refers to those waters along the ocean side of Georgia's coast that support recreational and commercial fishing.

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Fishing

Drinking Water Source

Wild/Scenic River

Coastal Fishing

Recreation

Specific Water Quality Criteria - The specific water quality criteria are listed below.

The presence of *Fecal Coliform Bacteria* in water bodies indicates that the water has been contaminated with fecal material of man or animals. The presence of bacteria not only decreases the quality of the environment for aquatic life, but also indicates a potential health risk to humans and animals exposed to the water.

Dissolved Oxygen (DO) is the amount of oxygen dissolved in water. Aquatic life, including fish and plants, depend on DO for survival. Concentration of DO in water is highly dependent on temperature (higher temperature, lower DO) but pollution also tends to lower the DO.

pH indicates the acidity or basic nature of a solution. pH should be relatively neutral (around 7.0) to support aquatic life. Lemon juice is acidic, with a pH of 2.2—2.4, while baking soda is basic, with a pH of 8.0.

Temperature affects the capability of chemicals and other pollutants to dissolve in water. Therefore, increased temperature makes it easier for pollutants to dissolve. Temperature also affects dissolved oxygen content; DO decreases as temperatures increase. Consequently, high temperatures are detrimental to aquatic life.

Nutrients: Most aquatic plants and fish depend on nutrients such as nitrogen and phosphorus, however, excessive levels of these nutrients can cause too much plant and algal growth. This will lower the DO, increase turbidity, and may decrease recreational opportunities. Currently, Georgia only has nutrient standards on a limited number of lakes, however nutrient standards for all waters will be established in the near future.

Specific Water Quality Criteria

	Fecal Coliform Bacteria	Dissolved Oxygen	pH	Temperature
Drinking Water Supply (not treated drinking water)	May-Oct <200 colonies/100mL as geometric mean Nov-Apr <4000 colonies/100mL (instantaneous max)	>5 mg/L daily average Not <4 mg/L at all times	Between 6.0 and 8.5	< 90°F
Recreation	Coastal waters: 100 colonies/100mL Other: 200 colonies/100mL	>5 mg/L daily average Not <4 mg/L at all times	Between 6.0 and 8.5	< 90°F
Fishing	May-Oct <500 colonies/100mL as geometric mean Nov-Apr <4000 colonies/100mL (instantaneous max)	>5 mg/L daily average Not <4 mg/L at all times	Between 6.0 and 8.5	< 90°F
Coastal Fishing	May-Oct <500 colonies/100mL as geometric mean Nov-Apr <4000 colonies/100mL (instantaneous max)	Site Specific	Between 6.0 and 8.5	< 90°F
Wild River	No Alteration of natural WQ	No Alteration of natural WQ	No Alteration of natural WQ	No Alteration of natural WQ
Scenic River	No Alteration of natural WQ	No Alteration of natural WQ	No Alteration of natural WQ	No Alteration of natural WQ

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How do I know if waters in my area are meeting Georgia's water quality standards?

All waters in the State of Georgia that do not meet Georgia's standards are placed on the Georgia 303(d) list. The 303(d) list (named for the section of the Federal Clean Water Act that requires it) is a list that identifies the polluted water bodies in the State and sets priorities for their clean up. A water body qualifies for this list if it is too polluted or otherwise degraded to support its designated use (based on water quality monitoring). This list is closely connected to water quality standards. If a water body violates water quality standards set by the State of Georgia, it will likely be included in the 303(d) list. The Georgia Environmental Protection Division provides the Georgia 303(d) List of Impaired Waters on their website at www.ganet.org/dnr/enviro/gaenviro_files/gaenviro.htm#waterqual. The U.S. Environmental Protection Agency (USEPA) also has list of impaired waters on their Surf Your Watershed web page at www.epa.gov/surf.

If a water body that you are concerned about is not on the list or the EPA's website, it does not necessarily mean that it meets state standards because water quality can change over time and some water bodies have not yet been monitored.

If you suspect a water body in your area may not meet water quality standards, ask your local Extension Agent how you can determine if the stream meets state standards. You can also contact the Georgia Environmental Protection Division or your local Regional Development Center (contact information on page 4)

The Georgia Environmental Protection Division (GAEPD) is responsible for submitting a completed 303(d) List of Impaired Waters to Congress every two years.

Designated Uses: What do partially supporting and not supporting designated use mean?

- ⓧ A water body is placed on the partially supporting list if: 1) the chemical data (DO, pH, temperature) indicated a water quality standard was not met in 11%-25% of the samples collected or 2) if a fish consumption guideline was in place for the water body.
- ⓧ A water body is placed on the not supporting list if: 1) chemical data indicated a water quality standard was not met in greater than 25% of the samples collected, 2) if a fish consumption ban was in place or 3) if tests indicated toxicity at low flow in a municipal or industrial discharge.

What are the main sources of water quality impairment in Georgia?

- ⓧ Fecal coliform
- ⓧ Low dissolved oxygen
- ⓧ Metals (lead, copper, zinc, mercury)
- ⓧ Fish consumption guidelines
- ⓧ Impacted biological communities
- ⓧ pH
- ⓧ Toxicity
- ⓧ Sediment

From: EPA's 2000 Section 303 (d) List Fact Sheet for Georgia

What happens if a water body in my area makes the 303(d) List?

If a water body does not meet water quality standards and is consequently listed on the 303(d) list, it is a candidate for a Total Maximum Daily Load (TMDL) being set. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. It also includes an allocation of that amount to the sources of pollution. A TMDL adds up all of the allowable loads of a single pollutant from all the point and nonpoint sources that contribute pollution. It also takes into account error by introducing a margin of safety and requires that a clean-up plan be developed and implemented.

Contacts and More Information

Contacts

Your County Extension Agent
<http://extension.caes.uga.edu>

Georgia EPD

www.ganet.org/dnr/environ/gaenviron_files/gaenviro.htm#waterqual

Your local Regional Development Center

Atlanta Regional Commission - www.atlantaregional.com
Coastal Georgia RDC - www.coastalgeorgiardc.org
Central Savannah River Area RDC - www.csrardc.org
Coosa Valley RDC - www.cvrdc.org
Georgia Mountain RDC - www.gmrdc.org
Middle Georgia RDC - www.mgrdc.org
Heart of Georgia Altamaha RDC - www.hogardc.org
North Georgia RDC - www.ngrdc.org
Northeast Georgia RDC - www.negrdc.org
South Georgia RDC - www.sgrdc.com
Chattahoochee-Flint RDC - www.cfrdc.org
McIntosh Trail RDC - www.mtrdc.org
Lower Chattahoochee RDC - www.lowerchattahoocheerdc.org
Middle Flint RDC - www.middleflintrdc.org
Southeast Georgia RDC - www.segardc.org
Southwest Georgia RDC - www.swgrdc.org

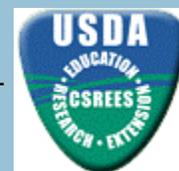
Georgia's Rules and Regulations for Water Quality Control
www.ganet.org/dnr/environ/rules_files/exist_files/391-3-6.pdf

EPA's Surf Your Watershed
www.epa.gov/surf/

University of Georgia College Agricultural and Environmental Sciences
Water Quality Site
<http://srwqis.tamu.edu/states/georgia>

University of Georgia Environmental Services Laboratory
<http://aesl.ces.uga.edu/>

The Southern Region Water Quality Regional Coordination Project promotes regional collaboration, enhances delivery of successful programs and encourages multi-state efforts to protect and restore water resources. Effective approaches for watershed management, pollution prevention, and youth education are identified and shared among states. Ultimately, the project improves public access to the research, extension, and education resources available through the Land Grant University System in the Southern Region and nationwide. The project is funded by the USDA Cooperative State Research, Education, and Extension Service.



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Bulletin 1242-3/January 2004

The University of Georgia and Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. The Cooperative Extension Service, The University of Georgia, College of Agricultural and Environmental Sciences offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, sex or disability. An Equal Opportunity Employer/Affirmative Action Organization Committed to a Diverse Work Force. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, the University of Georgia College of Agricultural and Environmental Sciences and the U.S. Department of Agriculture cooperating. Gale A. Buchanan, Dean and Director.

This bulletin was authored by Dr. Mark Risse and Hillary Smith Tanner of the University of Georgia Biological and Agricultural Engineering Department. Special thanks go out to the following individuals for providing input and review of this publication: James E. Hairston, Auburn University; Calvin B. Sawyer, Clemson University, Elizabeth Booth, Georgia EPD; Vince Williams, Georgia EPD.