

## Lake Lanier provides excellent water

Gwinnett County receives its drinking water supply from Lake Sidney Lanier located just north of Buford. The county's water intakes, located in coves three miles from Buford Dam, provide a uniform raw water supply that is low in suspended materials, bacteria, dissolved organics, and metals.



Lake Lanier, formed by Buford Dam holding the Chattahoochee and Chestatee Rivers, is a major recreation area in north Georgia. In fact, it is one of the most-visited U.S. Army Corps of Engineers projects in the country and offers opportunities for boating, fishing, and other water pastimes. People throughout the region enjoy Lanier and its plentiful recreation opportunities.

Lake Lanier is key in providing water to Georgia, since more than 60 percent of Georgia's population receives drinking water from the Chattahoochee River system. The Lake Lanier watershed comprises more than 1,000 square miles in 10 Georgia counties.

The watershed contains heavily forested areas and smaller cities. Additionally, agriculture is the primary activity in the watershed.

## Public Input Opportunities

The Gwinnett County Water and Sewerage Authority, which owns the Water Resources water and wastewater system, acts as an advisory agency to the Gwinnett County Board of Commissioners. The authority meets monthly at the DWR Central Facility. For a schedule of meetings, visit the County's website at [www.gwinnettcounty.com](http://www.gwinnettcounty.com).

## Gwinnett focuses on water conservation

Gwinnett County's Water Conservation Plan includes programs and initiatives designed to educate our customers and the community about water efficient behaviors and to safeguard our future water supply. Our efforts include public outreach activities, rebates and incentives for replacing older fixtures, and efficient water management practices throughout the County.

### Public outreach

The Department of Water Resources (DWR) developed Homeowner H2O to educate Gwinnett County residents about water conservation. The presentations focus on leak detection and repair, installing water-efficient fixtures, and increasing water-saving behaviors inside and outside the home.

Department representatives are available to speak to homeowners associations, civic clubs, and other community groups. Homeowner H2O conservation workshops are also offered to the public several times a year to help all of our customers learn how to reduce their water bills. In 2014, nearly 300 Gwinnett County residents attended a water conservation workshop.

DWR launched a school outreach program called Water on Wheels to target primary education. These classroom-based programs are available to travel to schools throughout Gwinnett County. Students participate in engaging hands-on lessons that teach the importance of water conservation and foster attitudes that inspire lifelong water efficient behaviors. All Water on Wheels lessons support Academic Knowledge and Skills standards for science. Programs are also available to Gwinnett County scouts, summer camps, libraries, and recreation centers. More than 6,600 students received hands-on water conservation education through the Water on Wheels program in 2014.

To schedule an educational program for your group, contact Heather Moody at [dwrconserve@gwinnettcounty.com](mailto:dwrconserve@gwinnettcounty.com) or 678.376.6722. All public outreach programs are offered free of charge to Gwinnett County residents, schools, and businesses.



# 2014 Detected Contaminants

## Primary Inorganic Substances

Substance	Units	MCL	MCLG	Highest Level Detected	# of sample sites found above the Action Level	Violation (yes/no)	Source of Substance
Copper	ppm	AL=1.3	1.3	0.170	0	No	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives
Lead	ppb	AL=15	0	17.00	1	No	Corrosion of household plumbing systems, erosion of natural deposits

## Unregulated Volatile Organic Substances

Substance	Units	MCL	MCLG	Highest Level Detected	Violation (yes/no)	Source of Substance
Bromodichloromethane	ppb	None Established	None Established	1.8 ug/L	No	By-product of drinking water chlorination
Chloroform	ppb	None Established	None Established	4.0 ug/L	No	By-product of drinking water chlorination
Chlorodibromomethane	ppb	None Established	None Established	0.53 ug/L	No	By-product of drinking water chlorination

## Primary Inorganic Substances

Substance	Units	MCL	MCLG	Water System Results	Violation (yes/no)	Range of Detections	Source of Substance
Fluoride	ppm	4.0	4.0	1.38	No	0.13 – 1.38	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate/Nitrite	ppm	10.0	10.0	0.43	No	0.40 – 0.43	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

## Disinfection By-Products

Substance	Units	MCL	MCLG	Average	Violation (yes/no)	Range of Detections	Source of Substance
Total Trihalomethanes	ppb	80	0	36.8	No	7.9 – 85.4	By-product of drinking water chlorination
Total Haloacetic Acids	ppb	60	0	21.1	No	9.6 – 35.3	By-product of drinking water chlorination
Bromate	ppm	0.01	0	0	No	0	By-product of drinking water disinfection

## Turbidity

Substance	Units	MCL	MCLG	Highest Value Reported	Lowest % of Samples Meeting Limits	Violation (yes/no)	Source of Substance
Turbidity	NTU	<0.3 in 95% of monthly samples	<0.3 in 95% of monthly samples	0.610	99.73%	No	Soil Runoff

## Microbiological

Substance	MCL	MCLG	Highest Monthly % of Positive Samples	Major Sources in Drinking Water
Total Coliform bacteria	No more than 5% of monthly samples can test positive for Coliforms	0.0	0.71	Naturally present in the environment

## Disinfection Residual

Substance	Units	MRDL	MRDLG	Highest Value Detected	Violation (yes/no)	Range of Detections	Source of Substance
Free Chlorine	ppm	4	2	2.15	No	0.48 – 2.15	Added to drinking water for disinfectant residual

## Household efficiency

Gwinnett County has continued our participation in the Metro Water District's Toilet Rebate Program for single-family homes in 2015. The program provides rebates to qualified homeowners for replacing old, inefficient toilets. Details about the single-family toilet rebate program are available by visiting [www.northgeorgiawater.org](http://www.northgeorgiawater.org) or calling 404.463.8645.

In January 2012, DWR extended the successful high-efficiency toilet rebate program to multifamily residences. Apartment, condominium, and townhome communities that are Gwinnett County water customers may now qualify for a \$100 rebate for every old toilet replaced with a WaterSense® certified toilet using 1.28 gallons per flush or less. For details about the new multifamily toilet rebate program, please call 678.376.6722 or email [dwrconserve@gwinnettcounty.com](mailto:dwrconserve@gwinnettcounty.com).

Since the single family toilet rebate program began in 2008, 16,113 toilets have been rebated. To date, the County has allocated over 1.5 million dollars to this conservation initiative and the effort is yielding an estimated water savings of 305,117 gallons per day for our customers.

Toilet recycling is available at the DWR Central Facility in Lawrenceville. Residents in Gwinnett County who replace their old toilets through the Metro Water District's toilet rebate program can drop them off to be recycled for free. The porcelain is recycled by breaking it up, mixing



it into stone aggregate, and using the mixed material as road base and for pipe beds. Since the program began in February 2011, the County has collected an average of four tons of porcelain every month. As of March 2015, the program has kept 314 tons of waste out of Gwinnett County landfills! In addition to the old toilets collected by DWR, building owners are also required to recycle their old toilets in order to qualify for the Multifamily Toilet Rebate Program.

Is your house as water-efficient as it can be? Do it Yourself Household Water Audit brochures are available to assist water customers in reducing their water bills. This simple step-by-step guide will help you understand how much water you use, identify leaks, and use less water around your home. Free low-flow home retrofit kits are also available at the billing counter at DWR's Central Facility on Winder Highway. Inside the kit are several water saving products including a low-flow showerhead, two 1-gallon-per-minute bathroom faucet aerators, a 1.5-gallon-per-minute swivel kitchen faucet aerator, and toilet leak detection dye tablets.

## Efficient water management

Through best management practices such as an aggressive leak-detection program, a pricing structure that encourages water conservation, and a range of progressive County ordinances, DWR strives to maximize water efficiency and serve as a water conservation leader in the region. Gwinnett has also made a concerted effort to reduce water usage in County-owned facilities. All departments have taken positive steps to conserve water, such as discontinuing irrigation and car washing and installing water-efficient fixtures.

Since the program began in 2003, Gwinnett County has been a pioneer of reclaimed water use in the state of Georgia. At the state-of-the-art F. Wayne Hill Water Resources Center, wastewater undergoes a stringent treatment process that cleans it to an almost pristine state before being discharged into the Chattahoochee River or Lake Lanier. In 2014, 10.66 billion gallons of high-quality effluent was returned to Lake Lanier.

To learn more about water conservation in Gwinnett, please visit [www.DWRconserve.com](http://www.DWRconserve.com) or email [dwrconserve@gwinnettcounty.com](mailto:dwrconserve@gwinnettcounty.com).

## Glossary

### PPM and PPB

Simply put, "ppm" means "parts per million" and "ppb" means "parts per billion." PPM corresponds to one penny in \$10,000 or one minute in two years. PPB corresponds to one penny in \$10,000,000 or one minute in 2,000 years.

### Maximum Contaminant Level Goal (MCLG)

The level of a known contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

### Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

### Action Level (AL)

The concentration of a contaminant, which, if exceeded, triggers a treatment or other requirement that a water system must follow.

### Nephelometric Turbidity Unit (NTU)

A measure of suspended material in water. Turbidity is measured by shining a beam of light through water and measuring the angle at which the light is scattered by the suspended material. An instrument called a Turbidimeter is used for this purpose.

### Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

### Maximum Residual Disinfectant Level (MRDL)

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

### Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

# Notes about contaminants

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and, in some cases, can pick up substances resulting from the presence of animal or human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from septic systems, agriculture, livestock operations, wildlife, and sewage treatment plants
- **Pesticides and herbicides** that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, and septic systems
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil or gas production, mining, or farming
- **Radioactive contaminants**, like radon, can be naturally occurring or the result of oil and gas production and mining activities

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which provide the same protection for public health.

## A note about lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Gwinnett Department of Water Resources is responsible for providing high quality drinking water, but it cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the **Safe Drinking Water Hotline** at 800.426.4791 or online at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Contaminants and health risks

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA's **Safe Drinking Water Hotline** at 800.426.4791.

## Important health information

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the **Safe Drinking Water Hotline** at 800.426.4791.

## For more information

For additional information or questions about this report, contact the Gwinnett County Department of Water Resources Environmental Laboratory at 678.376.4272. The Water Production section manager may be reached at 678.376.4200. Tours of the water plants may be scheduled for school groups and individuals at 678.376.4200.



## What is Cryptosporidium?

*Cryptosporidium* (Crypto) is a one-celled parasitic protozoan often found in water sources that receive runoff from animal waste. Crypto can infect humans and have severe impacts on certain people, including organ transplant recipients, immunocompromised persons, young children, and persons undergoing cancer treatment. Water Resources has a monthly sampling and analysis program for Crypto and Giardia, another protozoan often found in water. Samples of both lake water and finished drinking water are analyzed each month. Crypto and Giardia both form cysts when the environment is unfavorable for their survival. During 2014, no Giardia and/or Crypto samples detected cysts or oocysts. This test program is ongoing.