

# ANNUAL WATER QUALITY REPORT 2017

## Water Testing Performed in 2017



In 2017, the City of Gainesville Department of Water Resources conducted over 2,700 laboratory tests for more than 100 drinking water parameters. This report includes information about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. Your Water Resources Department is committed to providing the community with clean, safe, and reliable drinking water. The tables below list all the drinking water contaminants that we detected during the 2017 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing completed from January 1 through December 31, 2017. **EPD** requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, may be more than one year old.

### EPA Regulated Inorganic Substances or Contaminants

Substance (Unit)	Analysis Frequency	MCL	MCLG	Average	Range	Major Sources	Violation
Fluoride <sup>1</sup> (ppm)	Annually	4	4	0.66	0.12 - 0.84	Erosion of natural deposits; water additive which promotes strong teeth	No
Nitrate/Nitrite <sup>2</sup> (ppm)	Annually	10	10	0.035	0.33 - 0.37	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	No

<sup>1</sup>Fluoride is added to water to help promote dental health in children. <sup>2</sup>Nitrate and Nitrite are measured together:

### Gainesville's Water Distribution System – Lead and Copper Levels at Residential Taps

Substance (Unit)	Action Level 90%	90 <sup>th</sup> Percentile sample result	Number of sites exceeding Action Level (AL)	Major Sources	Violation
Lead <sup>3</sup> (ppb)	15	0.0044	0 of 50	Corrosion of household plumbing systems	No
Copper <sup>4</sup> (ppm)	1.3	0.028	0 of 50	Corrosion of household plumbing systems	No

Gainesville is required to test a minimum of 50 homes for lead and copper every three years. The last testing occurred in 2015, and the next testing will take place in 2018. Compliance with the Lead and Copper Rule is based on obtaining the 90<sup>th</sup> percentile of the total number of samples collected and comparing it against the lead and copper action levels. To have an exceedance, the 90<sup>th</sup> percentile value must be greater than 15ppb for lead or 1.3ppm for copper.

<sup>3</sup>Of the 50 homes tested in 2015, no sites exceeded the lead action level (AL) for Lead.

<sup>4</sup>Of the 50 homes tested in 2015, no sites exceeded the action level (AL) for Copper.

### Disinfection By-Products, By-Product Precursors, and Disinfectant Residuals

Substance (Unit)	Analysis Frequency	MCL (LRAA)	MCLG (LRAA)	Highest Detected LRAA <sup>5</sup>	Range	Major Sources	Violation
TTHMs (Total Trihalomethanes) (ppb) – Stage 2	Quarterly	80	0	43	16 - 43	By-products of drinking water disinfection	No
HAA5s (Haloacetic Acids) (ppb) – Stage 2	Quarterly	60	0	19	12 - 19	By-products of drinking water disinfection	No
TOC (Total Organic Carbon) (ppm)	Monthly	TT	N/A	Average 1.1	0.92 – 1.1	Decay of naturally-occurring organic matter in the water withdrawn from sources such as lakes and streams	No
Chlorine (ppm)	Monthly	MRDL=4	MRDLG=4	Average 1.40	0 – 2.06	Drinking Water Disinfection	No

<sup>5</sup>LRAA=Locational Running Annual Average

### Turbidity

Substance (Unit)	Analysis Frequency	MCL	MCLG	Highest value reported	Lowest % of samples meeting limit	Major Sources	Violation
Turbidity (NTU)	Continuous	TT, <0.3 in 95% of monthly samples	0	0.28	100	Soil Runoff	No

Note: Turbidity is a measure of the cloudiness of the water; it is monitored because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

Gainesville's Annual Average Hardness – 25ppm

Gainesville's Annual Average Alkalinity – 16ppm

Gainesville's Annual Average pH – 7.87 std units

### Microbiological Contaminants

Substance (Unit)	Analysis Frequency	MCL	MCLG	Highest % positive samples (monthly)	Range	Major Sources	Violation
Total Coliform Bacteria <sup>6</sup> (+/-)	Monthly	<5% positive samples (monthly)	0	0.9%	0 – 0.9%	Naturally present in the environment	No

<sup>6</sup>100 Samples taken monthly

### Contaminants that may be present in source water BEFORE treatment include:

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. 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 the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

**Microbial contaminants**, such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants** such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

**Pesticides and herbicides**, which 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, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

### Terms & Abbreviations used below:

**Action Level (AL):** the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Environmental Protection Agency (EPA):** the United States Environmental Protection Agency.

**Environmental Protection Division (EPD):** the Georgia Department of Natural Resources Environmental Protection Division.

**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.

**Maximum Contaminant Level Goal (MCLG):** the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**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 contamination.

**Treatment Technique (TT):** a required process intended to reduce the level of a contaminant in drinking water. **n/a:** not applicable – **nd:** not detectable at testing limit – **ppb:** parts per billion or micrograms per liter – **ppm:** parts per million or milligrams per liter – **NTU:** nephelometric turbidity units, measurement of suspended material in water.

**Lead in Drinking Water** 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. Gainesville's Water System is responsible for providing high quality drinking water, but 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 2 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 **800.4264791** or online at **www.epa.gov/safewater/lead**.





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The City of Gainesville Department of Water Resources provides water to residential, commercial and industrial customers located within the Gainesville corporate limits, a large portion of unincorporated Hall County and within the corporate limits of the cities of Clermont, Buford, Oakwood, Braselton, Flowery Branch and Gillsville. The Gainesville service area covers approximately 400 square miles. The water system serves a customer base of approximately 53,000 accounts with an estimated 159,000+ users. We welcome your comments and participation on issues that concern our drinking water. Linda MacGregor, Department of Water Resources Director, may be reached at (770) 538-2400. Don Dye, Assistant Director of Department of Water Resources, may be reached at (770) 538-2462.

The information contained in this report summarizes your drinking water for calendar year 2017. This information is provided on or before June 1. If you are interested in getting more information about your water quality or this report, please call Horace Gee, Environmental Compliance Manager at (770) 532-7462.

The Department of Water Resources is actively involved in protecting our local water resources and works with various state, federal and local agencies on Watershed Protection issues. In 2003, our community completed a source water assessment. The overall point source susceptibility ratings for both of Gainesville's water treatment plants are low.

## Protecting Our Source of Drinking Water Starts at Home

Lake Lanier provides City of Gainesville and area residents drinking water. The water is pulled from the lake and treated to remove pollutants at either Riverside or Lakeside Water Treatment Plant before it is sent to your home. Even though our drinking water goes through a rigorous treatment process, it is important for us to protect the quality of Lake Lanier to ensure healthy drinking water for years to come. In addition, Lake Lanier brings millions of dollars to the area annually through tourism, recreation and area development. Protecting the lake starts at home.

### We live in a Watershed

When it rains, water runs off yards and roads picking up any pollutant in its path. Excess fertilizer, pet waste, oil and other residue is washed into the nearest stream and ultimately ends up in Lake Lanier. A watershed simply means that any rain that falls and is not soaked into the ground will runoff and enter the nearest body of water. West of Hwy 985 we are in the Lake Lanier or Chattahoochee River Watershed.



### Easy steps we can all take to protect the lake

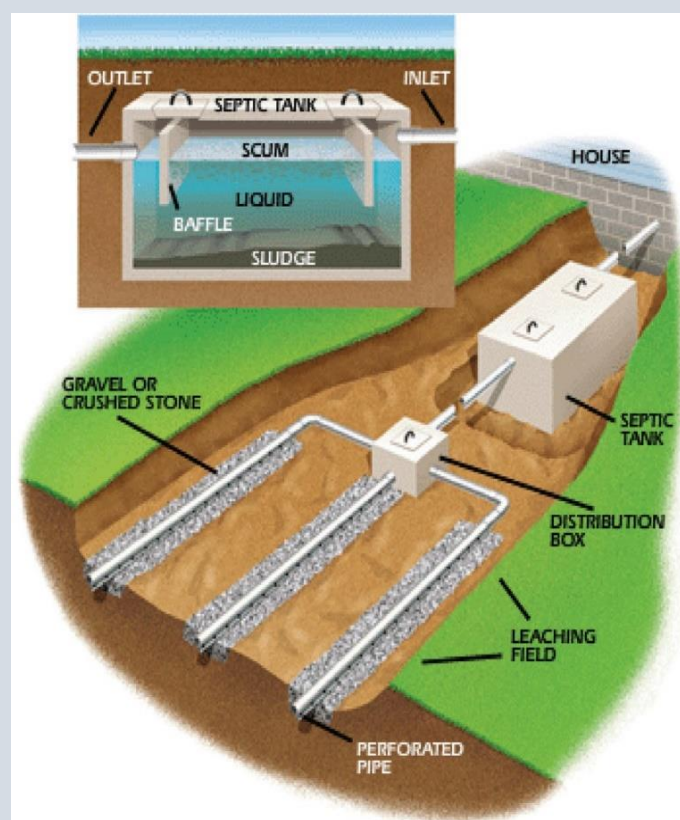
- Never dump anything onto the street, down a storm drain or into a drainage ditch.
- Pick up after your pet. Bag it and throw it into the trash. Pet waste is a large contributor to fecal coliform pollution.
- Use fertilizers and pesticides sparingly.
- Put litter in its place.
- Check your vehicles for leaks and repair them as soon as possible.
- Wash your car over a grassy area or at a commercial car wash that recycles water, not on your driveway.
- Tell a friend or neighbor how they can help prevent stormwater pollution.

## Keep Your Septic System Out of Sight But Not Out of Mind

City of Gainesville Water Customers either treat their wastewater through the sewer system or with an on-site septic system. Wastewater is drainage from your dishwasher, washing machine, toilets, showers and sinks. Poorly functioning or failing septic systems and wastewater lines can be a source of water pollution; they can leak sewage that contains pathogens and nutrients, which are then carried by rain to area streams and Lake Lanier. By following a few simple tips, you can maintain your septic system to maximize its efficiency, reduce problems, potential expenses and help protect our waterways!

### Septic System Maintenance Tips

- Have your septic system inspected at least every three years to determine if pumping is needed. The solids can accumulate in the septic tank and should be pumped out by a licensed contractor. This will reduce the likelihood of an expensive and unpleasant system failure.
- Flush only human waste and toilet paper.
- Avoid overloading your septic system by reducing or spacing out the amount of water you use. Repair any leaks and space out loads of laundry.
- Protect your leach field. Never plant trees or vegetation other than turf grass over it. Direct downspouts or other drainage away from the septic system and don't overwater the grass. Overwatering saturates the ground and reduces the ability of the wastewater to percolate into the soil.



### How Does It Work?

A typical home septic system consists of two parts:

- Septic Tank:** Wastewater from your home enters the septic tank. Solids settle to the bottom and are broken down by beneficial bacteria.
- Leach Field:** Liquid from the septic tank flows out into the leach field where it slowly seeps. Natural filtration through the ground finishes the job of treating the wastewater from your home.

**For More Information, visit us at [www.gainesville.org/water-resources](http://www.gainesville.org/water-resources) or call 770-532-7462 Like Us on Facebook by searching: Gainesville Water Resources**