ANNUAL WATER QUALITY REPORT

Reporting Year 2023

Presented By
City of Buford

PWS ID#: 1350000

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

Where Does My Water Come From?

The City of Buford receives its water supply from Lake Sidney Lanier, located just north of Buford. We also purchase a small portion of our water from the Gwinnett County Water Plant. Lake Lanier is formed by the Buford Dam, which holds the Chattahoochee and Chestatee Rivers flowing from northern Georgia. Lake Lanier is the most visited Corps of Engineers project in the country.

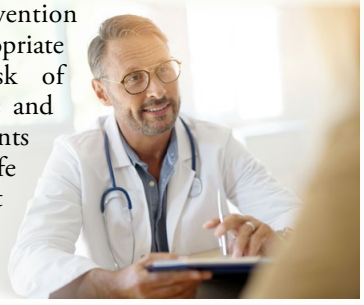
Lake Lanier is a key element in terms of water supply: more than 60 percent of Georgia's population receives drinking water from the Chattahoochee system. Lake Lanier's watershed is composed of more than 1,000 square miles in 10 Georgia counties. The watershed contains heavily forested areas, with agriculture being the largest activity. Lake Lanier is very low in point source and urban runoff pollutants.

> **"When the well is dry, we know the worth of water."**
>
> *—Benjamin Franklin*

The Buford Waterworks was built in 1934 to filter 500,000 gallons of drinking water per day. In 1965 it was expanded to one million gallons per day. In 1994 the plant was high rated to two million gallons per day. Buford's new membrane ultrafiltration water treatment plant was put into operation in early 2024, and we look forward to continuing to serve our community's needs.

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, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (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 or water.epa.gov/drink/hotline.



How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is drawn from Lake Lanier and sent to our reservoir. The water is then pumped into the membrane filtration plant, where chlorine is added as the water passes through a static mixer.

At this point, the water is filtered through hollow fiber membranes - long, narrow rubes with billions of microscopic pores on the surface that are thousands of times smaller in diameter than a human hair. The tiny pores filter water, allowing clean water to pass through while capturing virtually all particles. Chlorine is added as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, fluoride (to prevent tooth decay) and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to sanitized underground reservoirs, water towers, and your home or business.

Community Participation

The Buford city commissioners meet the first Monday of every month at 7:00 p.m. at the Buford City Arena. Your questions and concerns can be heard after the regular scheduled meetings. For more information, call Buford City Hall at (770) 945-6761, Monday through Friday, 9:00 a.m. to 5:00 p.m.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Cory Burge, Water Plant Superintendent, at (770) 216-4008.

Source Water Assessment

A source water assessment was conducted for the City of Buford in accordance with Georgia's Source Water Assessment and Protection Implementation Plan for Public Drinking Water Sources. The assessment was completed and updated in 2020 through the Georgia Metropolitan North Georgia Water Planning District as part of a larger Source Water Assessment Plan (SWAP) for the Lake Lanier basin. The Lake Lanier SWAP was managed with the overall goal of identifying potential risks that may affect the integrity of surface drinking water sources in the basin. Separate assessments were conducted for 13 existing and new municipal surface water intakes, and separate SWAP reports were produced for the nine individual water systems.

The source water assessment area for the City of Buford includes an inner management zone (IMZ) and an outer management zone (OMZ). The IMZ includes the entire subwatershed around Big Creek Cove, areas within a one-half-mile buffer all the way around the lake, and all areas within a seven-mile radius from the intake. The OMZ upstream of the intake includes all areas from the IMZ plus the seven-mile radius from the intake. Several suburbs and urban areas are located within the City of Buford's IMZ and OMZ. Therefore, the types of point source potential contaminant sources (PCS) identified are somewhat varied and include mostly gas stations, auto repair shops, marinas, and boat repair shops. Most point source PCS ranked low, and the overall point source susceptibility rating for the intake is low. Of the PCS types that ranked high, the most common were marinas and gas stations. The marinas all ranked high; however, gas stations more often ranked low or medium priority. The high ranking for gas stations resulted from a particular station's location in relation to water or the intake.

The overall nonpoint susceptibility rating for the intake is medium. The majority of the nonpoint source PCS ranked medium, with several ranked as high priority. Nonpoint source PCS types receiving a high rating were secondary road crossings or those near streams, sewer systems with a history of spills, septic systems, and urban land use. The watershed vulnerability rating for the Buford intake is low due to watershed and lake size. Likewise, both the point and nonpoint source PCS/vulnerability analysis resulted in a low priority ranking.

A copy of Buford's SWAP is available for inspection at Buford City Hall, Monday through Friday, 9:00 a.m. to 5:00 p.m. You may also view it at northgeorgiawater.org/conserve-our-water/water-supply-in-our-region/.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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;

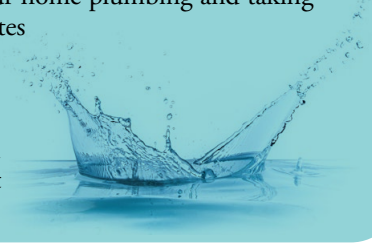
Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

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

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water and removing lead pipes, but we cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, or doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have it tested, contact Water Plant Superintendent Cory Burge at (770) 216-4008. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.



Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 40 percent of bottled water is actually just tap water, according to government estimates.

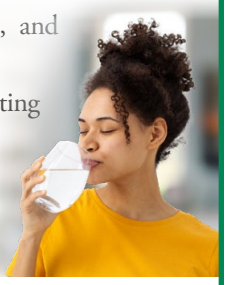
The FDA is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water. For a detailed discussion on the NRDC study results, visit https://goo.gl/Jxb6xG.

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water.
- Monitoring and inspecting machinery, meters, gauges, and operating conditions.
- Conducting tests and inspections on water and evaluating the results.
- Maintaining optimal water chemistry.
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels.
- Documenting and reporting test results and system operations to regulatory agencies.
- Serving our community through customer support, education, and outreach.



So the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

				Buford Waterworks		Gwinnett County			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Bromate (ppb)	2023	10	0	NA	NA	<5.0	NA	No	By-product of drinking water disinfection
Chlorine (ppm)	2023	[4]	[4]	0.84	0.4–1.1	1.57	0.02–2.46	No	Drinking water disinfectant
Fluoride[1] (ppm)	2023	4	4	0.80	0.26–1.13	0.85	0.58–0.96	No	Erosion of natural deposits; Water additive which promotes strong teeth
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2023	60	NA	26.6	21–33	26.9	10.7–26.9	No	By-product of drinking water disinfection
Nitrate[2] (ppm)	2023	10	10	0.28	NA	0.40	NA	No	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits
Nitrite[2] (ppm)	2023	1	1	0.28	NA	0.40	NA	No	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits
Total Coliform Bacteria (positive samples)	2023	TT	NA	0[3]	NA	0.64[4]	NA	No	Naturally present in the environment
Total Organic Carbon [TOC] (ppm)	2023	TT[5]	NA	1.2	1.0–1.3	1.2	0.90–1.80	No	Decay of naturally occurring organic matter in the water withdrawn from sources such as lakes and streams
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80	NA	40.3	26.2–55.4	65.6	11.0–65.6	No	By-product of drinking water disinfection
Turbidity[5] (NTU)	2023	TT	NA	0.06	NA	0.14	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	100	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

				Buford Waterworks		Gwinnett County			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	1.3	0.0035	0/20	0.18[6]	0/50[6]	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2022	15	0	ND	0/20	ND[6]	1/50[6]	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES

		Buford Waterworks		Gwinnett County		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Perfluorooctanesulfonic Acid [PFOS] (ppt)	2023	NA	NA	1.02	0.90–1.16	NA
Perfluorooctanoic Acid [PFOA] (ppt)	2023	NA	NA	1.1	0.93–1.28	NA

[1] Fluoride is added to water to help promote dental health in children.
[2] Nitrate and nitrite are measured together.
[3] Nine samples are taken monthly.
[4] Approximately 306 samples are taken monthly.
[5] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.
[6] Sampled in 2023.