

ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017



Presented By

Fayette County
WaterSystem



From the Director's Desk

The Fayette County Water System is committed to providing the best customer service while maintaining a competitive status with all water utilities. Staff is committed to maintain high levels of skill and will provide results-oriented organizational preparedness to meet Fayette County Water System customers' demands today and tomorrow. During 2017 our Water System has continued to tackle new challenges to provide safe drinking water to all our customers. We have taken a vow to produce water that not only meets requirements but will exceed all areas of compliance. Over the last few years the Fayette County Water System has spent several million dollars installing new and improved technology into our water treatment plants. By doing so we are able to effectively target possible contaminants in the raw water and produce an excellent quality of water here in Fayette County. As we exit 2017 and enter 2018 we will finalize the chemical feed equipment and overall operations at each plant. We are also investing in a complete hydraulic mapping of our water distribution system that will enable us to advance our water delivery services. We will then turn our focus to the infrastructure of our distribution system with storage tank inspections to address structural or operational faults.

Please take the time to review our 2017 accomplishments to improve our service to you:

- Received Gold Award at South Fayette WTP and Crosstown WTP for 100% Compliance.
- With completion of the Coastline Road project, our Water System has gained complete independence and eliminated the need to purchase water from City of Atlanta for residents of North Fayette County.
- Staff has assisted middle and high school students hosting the second annual Model Water Tower Competition sponsored by the GAWP.
- Formation of the Utility Service division has each team member cross trained in all field areas of locating, customer service field operations and meter reading. Being under one management team has streamlined processes, provided the ability to achieve more tasks with less overtime and improved morale of field staff by providing the support they need while working in the field.
- The Water System continued utilizing social media outlet Facebook to post conservation tips, share upcoming events and to keep citizens informed.
- All water plant personnel are participating in cross training program at both water treatment plants.
- Crosstown WTP improvements include new filter media/filter bottoms, Zero2Waste, new control panels (Human Machine Interface) and an operator console which allows for greater water treatment control and efficiency.
- Testing new equipment to improve operator's ability to monitor water quality through each step of the treatment process.
- Testing new filters to increase plant production permit.
- Maintenance staff has worked continuously on preventative and corrective projects at both water plants.
- Implemented the Munis My Work Mobile web client application.
- Implemented and continue to enroll customers into Citizen Self Service.
- The Water System saved a total of \$27,063 in postage for annual year 2017 by using Citizen Self Serve.
- Educated our citizens with water conservation efforts and drought restriction notifications.
- Completed the installation of a new water main at Castle Lake Drive to provide better water service.

Feel free to contact us with any questions as we chart the course to take care of your demands today and tomorrow. At the Fayette County Water System, while many may use social media to reach out for help, we are always waiting to hear from you so we can immediately offer our expertise and help to make you a happy customer. Please remember "Memorable Customer Service Can Only Take Place in A Human-to-Human situation". Jeffrey Gitomer,

Lee Pope, Director
Fayette County Water System

Information on the Internet

The U.S. EPA (<https://goo.gl/TFAMKc>) and the Centers for Disease Control and Prevention (www.cdc.gov) websites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Georgia Environmental Protection Division has a website (<https://epd.georgia.gov>) that provides complete and current information on water issues in Georgia, including valuable information about our watershed.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call The Fayette County Water System at (770) 461-1146.

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. EPA/CDC (Centers for Disease Control and Prevention) 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 <http://water.epa.gov/drink/hotline>.

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 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 storm-water 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 storm-water 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 storm-water 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.



Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The Water Committee meets the second and fourth Wednesdays of each month, beginning at 8 a.m. at the Water System Office, 245 McDonough Road, Fayetteville, GA 30214. The schedule and minutes from each meeting are posted at www.fayettecountyga.gov under Agendas/Minutes.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to <http://goo.gl/QMoIXT>.

Where Does My Water Come From?

Fayette County Water System gets its water from several sources. The surface water sources are Lake Kedron, Lake Peachtree, Lake Horton, Lake McIntosh, and the Flint River. The purchase water sources can be the City of Atlanta, City of Fayetteville, and Clayton County Water Authority.

BLENDING OF THE WATER SUPPLY		
SUPPLIER	GALLONS	PERCENT
City of Atlanta	59,952,933	1.5%
Fayetteville	0	0.0%
Clayton County	0	0.0%
Water Plants (2)	3,908,498,000	98.5%
Total	3,968,450,933	100.0%

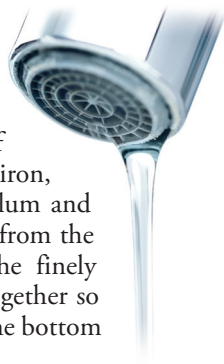
Copies of the City of Atlanta, City of Fayetteville, and Clayton County Water Authority water quality reports are available upon request.

Water Treatment Process

The Fayette County Water System has two water treatment plants. Both plants have the ability to add sodium permanganate at the beginning of the treatment process to oxidize iron, manganese, and some organics. Alum and lime are added to the water taken from the surface water sources to cause the finely divided mud particles to clump together so they settle with other particles to the bottom of the settling tanks by gravity.

The clear water is collected from the top of the basins, filtered, and disinfected with chlorine to make the water biologically safe. The pH is adjusted by adding lime, and phosphate is added to make the water noncorrosive. Fluoride is added to prevent dental cavities. Treated drinking water is pumped through large pressure pumps to other pumping stations, and tanks within the local distribution system.

Distribution systems are composed of large pipes known as trunk mains to deliver drinking water. Smaller-diameter-branch mains feed individual streets and subdivision. Service connections to branch mains deliver water into residences. Pumping stations are used to increase pressure and to maintain adequate supply flows. Water distributed to elevated water tanks ensures stable water pressure. An adequate supply of water is maintained to meet peak water demands and/or emergencies such as fires, water main breaks, power outages, and pump failures.



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; and
- 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.

Lead in Home Plumbing

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. We are 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 or at www.epa.gov/lead.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE		
Chlorine (ppm)	2017	[4]	[4]	2.39	0.20–2.80	No	Water additive used to control microbes		
Chlorine Dioxide (ppb)	2017	[800]	[800]	70	20–360	No	Water additive used to control microbes		
Chlorite (ppm)	2017	1	0.8	0.52	0.0–0.52	No	By-product of drinking water disinfection		
Fluoride (ppm)	2017	4	4	0.75	0.10–0.92	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories		
Haloacetic Acids [HAA] (ppb)	2017	60	NA	56.1	14.8–83.3	No	By-product of drinking water disinfection		
Nitrate (ppm)	2017	10	10	ND	ND	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits		
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	67.9	16.9–75	No	By-product of drinking water disinfection		
Total Coliform Bacteria (positive samples)	2017	TT	NA	0	NA	No	Naturally present in the environment		
Total Organic Carbon (removal ratio)	2017	TT	NA	1.1 ¹	0.98–1.40	No	Naturally present in the environment		
Turbidity (NTU)	2017	TT	NA	0.29 ²	0.03–0.29	No	Soil runoff		
Turbidity (lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	96.7	NA	No	Soil runoff		
Tap Water Samples Collected for Lead and Copper Analyses from Sample Sites throughout the Community ³									
		Fayette County Water System				Brooks			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2016	1.3	1.3	0.26	0/30	0.15	0/10	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2016	15	0	2.0	0/30	0	0/10	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED CONTAMINANT MONITORING RULE - PART 3 (UCMR3)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chlorate (ppb)	2013	191	93–280	Disinfection by-product and used in production of chlorine dioxide
Chromium (Total) (ppb)	2013	0.33	0.26–0.48	See Chromium-6 for use or source information
Chromium-6 (ppb)	2013	0.16	0.08–0.28	Naturally occurring element
Strontium (ppb)	2013	37	28–47	Naturally occurring element
Vanadium (ppb)	2013	1.0	0.41–7.4	Naturally occurring elemental metal

¹ TOC compliance is a calculated removal ratio of 1 (actual removal is equal to or greater than the required removal) and is reported for compliance as a running annual average, computed quarterly. For our source water, 35% removal is required. At South Fayette Water Treatment Plant the amount detected was 1.15.

² 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.

³ Water from the treatment plants do not contain lead or copper, therefore, water is tested at the tap. Fayette County Water System is on Reduced Monitoring

Definitions

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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