2019 WATER QUALITY REPORT

HOW IS MY WATER TREATED?

All water supplied to you is thoroughly treated and disinfected. The Adkins Treatment Plant, a conventional filtration plant with a current capacity of 90 million gallons per day (MGD), draws water from Lake Keowee. This plant uses coagulation, sedimentation, filtration and disinfection to treat the water. Alum is used in the coagulation step along with small amounts of sodium hydroxide for pH adjustment. Chlorine combined with ammonia, known as chloramines, is used for disinfection to protect against water-borne diseases. Ortho/polyphosphate blend is added for corrosion control. In accordance with EPA guidelines, fluoride is provided to prevent tooth decay.

The Stovall Treatment Plant provides filtration for all water drawn from the Table Rock and North Saluda Reservoirs. This 75 MGD plant is one of the largest in the United States to use Dissolved Air Flotation (DAF) in the treatment process. The Stovall Plant uses an innovative flotation process for particle removal rather than sedimentation. The remaining processes and chemicals used for water treatment are similar to those at the Adkins Treatment Plant.

All treatment plants are maintained and monitored by State Certified Environmental Systems Operators who are thoroughly trained to perform routine chemical and physical testing for treatment control.

PROVIDING HIGH QUALITY DRINKING WATER

Greenville Water is pleased to present our 2019 Water Quality Report. Each year, the team at Greenville Water works diligently to protect our watersheds, ensure our treatment practices are highly effective, and provide you, our customers, with safe drinking water. Once again, we are happy to report that Greenville Water meets all of the strict drinking water standards established by the Environmental Protection Agency (EPA) and the South Carolina Department of Health and Environmental Control (SCDHEC). In order to protect its customers, Greenville Water and SCDHEC collected over 30,000 samples and performed more than 64,000 tests during 2019. Greenville Water ensures your water quality by testing water samples collected during the treatment process and as the water is delivered to customers through approximately 3,000 miles of pipeline. The 2019 Water Quality Report indicates that our water is safe to drink.

WHERE DOES MY DRINKING WATER COME FROM?

Greenville Water draws water from three sources: Table Rock Reservoir, North Saluda Reservoir and Lake Keowee. Table Rock and North Saluda Reservoirs are both located in the foothills of the Blue Ridge Mountains in northern Greenville County. Greenville Water owns 100 percent of both watersheds. Greenville Water regularly patrols and carefully maintains these uninhabited, pristine lands. The properties are further protected by a Conservation Easement with The Nature Conservancy. Lake Keowee is owned by Duke Energy. In 2013, Greenville Water obtained two South Carolina Surface Water Withdrawal permits, one for Stovall Treatment Plant and one for Adkins Treatment Plant. Stovall Treatment Plant has two supply sources, Table Rock Reservoir (2,077 million gallons per month [MGM]) and North Saluda Reservoir (1,860 MGM). The Adkins Treatment Plant has one supply source, Lake Keowee (4,650 MGM).

SOURCE WATER PROTECTION IS IMPORTANT

To raise awareness about the ways in which water pollution can impact your drinking water, SCDHEC has identified potential sources of contamination for each drinking water source in the state. More information on source water assessment can be found at: www.scdhec.gov/environment/your-water-coast/source-water-protection and Greenville Water's Source Water Assessment can be reviewed upon request.

PRIMARY DRINKING WATER STANDARDS - REGULATED SUBSTANCES DETECTED IN 2019

INORGANIC COMPOUNDS							
Parameter	Units	MCL	MCLG	Range	Highest Level Detected	Possible Sources	Violation
Fluoride	ppm	4	4			Drinking water additive *Flouride added during treatment to prevent tooth decay*	
Stovall Plant				NA	0.60*		NO
Adkins Plant				NA	0.56*		NO
Distribution System				0.47-0.70	Avg.=0.61		NO
Nitrate/Nitrite (as nitrogen)	ppm	10	10				
Stovall Plant				NA	0.042*	Erosion of natural deposits; fertilizer runoff, By-products of nitrification	NO
Adkins Plant				NA	0.078*		NO
Distribution System				0.02-0.46	Avg.=0.09		NO

*Results obtained by SCDHEC. Average fluoride levels detected by GW's certified laboratory during 2019 were 0.62 ppm (Stovall) and 0.66 ppm (Adkins).

ORGANIC COMPOUNDS				
TOC (Total Organic Carbon)	Average Percent Removal	Range	Possible Sources	Violation
Stovall Plant (samples collected monthly)	TT: 34%	31-41%	Occurs naturally in the environment	NO*
Adkins Plant (samples collected monthly)	TT: 17%	11-21%		NO*
*Due to low raw water TOC levels, Adkins and Stovall plants remain in compliance even when the percent removal is less than the required 35%.				

DISINFECTANTS AND BYPRODUCTS	Units	MCL	MCLG	Range	Average	Possible Sources	Violation
Chloramine	ppm	MRDL=4	MRDLG=4	ND-2.90	2.02	Water disinfectant	NO
Total Trihalomethanes	ppb	80	0	6.7-14.7	LRAA = 11.70	By-products of disinfection	NO
Total Haloacetic Acids	ppb	60	0	6.4-14.2	LRAA = 11.13	By-products of disinfection	NO

As part of the Unregulated Contaminant Monitoring Rule, Greenville Water tested the finished water at both the Adkins and Stovall Water Treatment Plants for six per- and polyfluoroalkyl substances (PFAS) in 2014 and none were detected. As a follow up, in March of 2019 Greenville Water again tested for 39 PFAS compounds at our Table Rock and North Saluda Reservoirs and at Lake Keowee and none of the substances were detected.

NEED WATER FOR COMMUNITY EVENTS?

GREENVILLE WATER HAS THE SOLUTION!

Greenville Water provides drinking water for outdoor community events held in our service area. We do this as a public service to support the community and share information about tap water.

The Water Buffalo is designed to dispense 400 gallons of clean, refreshing tap water into cups or reusable bottles. It is an environmentally friendly way to serve water at your event!

Just as important, we can also provide Hand Wash Stations for outdoor events. Our staff will deliver the stations, fill them with water and stock the station with paper towels and soap. We have six stations available.

To view guidelines and reserve the Water Buffalo and/or Hand Wash Stations for your event, please visit https://www.greenvillewater.com/water-for-community-events/.

MICROBIAL AND PHYSICAL CHARACTERISTICS					
Parameter	Units	MCL	Results	Possible Sources	Violation
Total Coliform	% positive per month	Less than 5% positive per month	0.33% maximum	Common in the environment; human and animal waste	NO
Turbidity	**Units**	**MCL**	**Results**	**Possible Sources**	**Violation**
Stovall Plant	NTU	95% of samples < 0.3	100% samples < 0.3 Maximum = 0.07 Average = 0.03	Soil Runoff	NO
Adkins Plant	NTU	95% of samples < 0.3	100% samples < 0.3 Maximum = 0.07 Average= 0.04		NO
Distribution System	NTU	NA	Average = 0.13		NA

LEAD AND COPPER RULE (2018 RESULTS)						
Parameter	Units	Action Level (AL)	90th Percentile Value	Sample Sites Exceeding Action Level	Possible Sources	Violation
Lead - Customer's Plumbing	ppb	15	0.0	1*	Corrosion of household plumbing	NO
Copper - Customer's Plumbing	ppm	1.3	0.088	0	Corrosion of household plumbing	NO

Lead & Copper: 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. Greenville Water 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 two minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have the water inside your home 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/safewater/lead.

*A repeat sample collected at this site had no lead detected.

UNREGULATED CONTAMINANT MONITORING RULE 4 (UCMR4)				
Contaminants from UCMR4 Sampled during 2019	Sample Location	Average	Range	Source
Bromochloroacetic (ppb)	Distribution System	1.04	0.66 - 1.55	By-product of disinfection
Bromodichloroacetic (ppb)	Distribution System	0.63	ND - 1.04	By-product of disinfection
Dichloroacetic (ppb)	Distribution System	5.35	2.64 - 8.60	By-product of disinfection
Trichloroacetic (ppb)	Distribution System	2.79	2.10 - 3.96	By-product of disinfection
Manganese (ppb)	Distribution System Point of Entry	0.85	ND - 2.2	Naturally occurring

TERMS AND ABBREVIATIONS

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.

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

SU (Standard Units): Unit of measure to indicate water acid/base scale (pH).

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

ppm (parts per million): This is the same as milligrams per liter, or one penny out of $10,000.

ppb (parts per billion): This is the same as micrograms per liter, or one penny out of $10,000,000.

NA (Not Applicable): Does not apply. Ranges are not applicable for sampling conducted by SCDHEC.

ND (Not Detected): Not detected or below detection limits.

NTU (Nephelometric Turbidity Units): Units of measure to indicate water clarity.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water without an unacceptable possibility of adverse health effects. There is convincing evidence that addition of a disinfectant is necessary for the 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 the disinfectants to control microbial contaminants.

LRAA (Locational Running Annual Average): The highest average concentration for 4 consecutive quarters at all sampling locations.

Turbidity: Measure of water clarity and filtration effectiveness.

GREENVILLE WATER

Greenville Water provides service to more than 500,000 residents of the Upstate region of South Carolina. Recognizing that water service is critical to the health and well-being of its customers and for the growth and economic vitality of the community, Greenville Water ensures the reliable delivery of high-quality water through careful stewardship of its resources. Greenville Water is committed to providing exceptional service and utilizing safe and effective methods for providing water, while adhering to and surpassing health and safety standards. Governed by an elected Commission of Public Works, Greenville Water is the state's largest water utility.

IMPORTANT INFORMATION FROM THE EPA

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.

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 radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants 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 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.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, EPA prescribes regulations which 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. 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium or other microbial contaminants are also available from the EPA's Safe Drinking Water Hotline (800-426-4791).

WHAT IF I HAVE QUESTIONS?

If you would like more information about water treatment techniques or about our water quality, contact Greenville Water's Laboratory at (864) 241-7838. You can also visit our website at www.greenvillewater.com or contact us by email at laboratory@greenvillewater.com.

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COMMISSION MEETINGS

Unless otherwise noted, Greenville Water Commission meetings are held on the first Tuesday of each month at 8:15 a.m. Meeting agendas, minutes and schedule are posted online at www.greenvillewater.com.

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GreenvilleWater

QUALITY WATER. SUSTAINABLE FUTURE.