

2020 Annual Water Quality Report

Cherokee's Safe and Sustainable Water Begins Here!

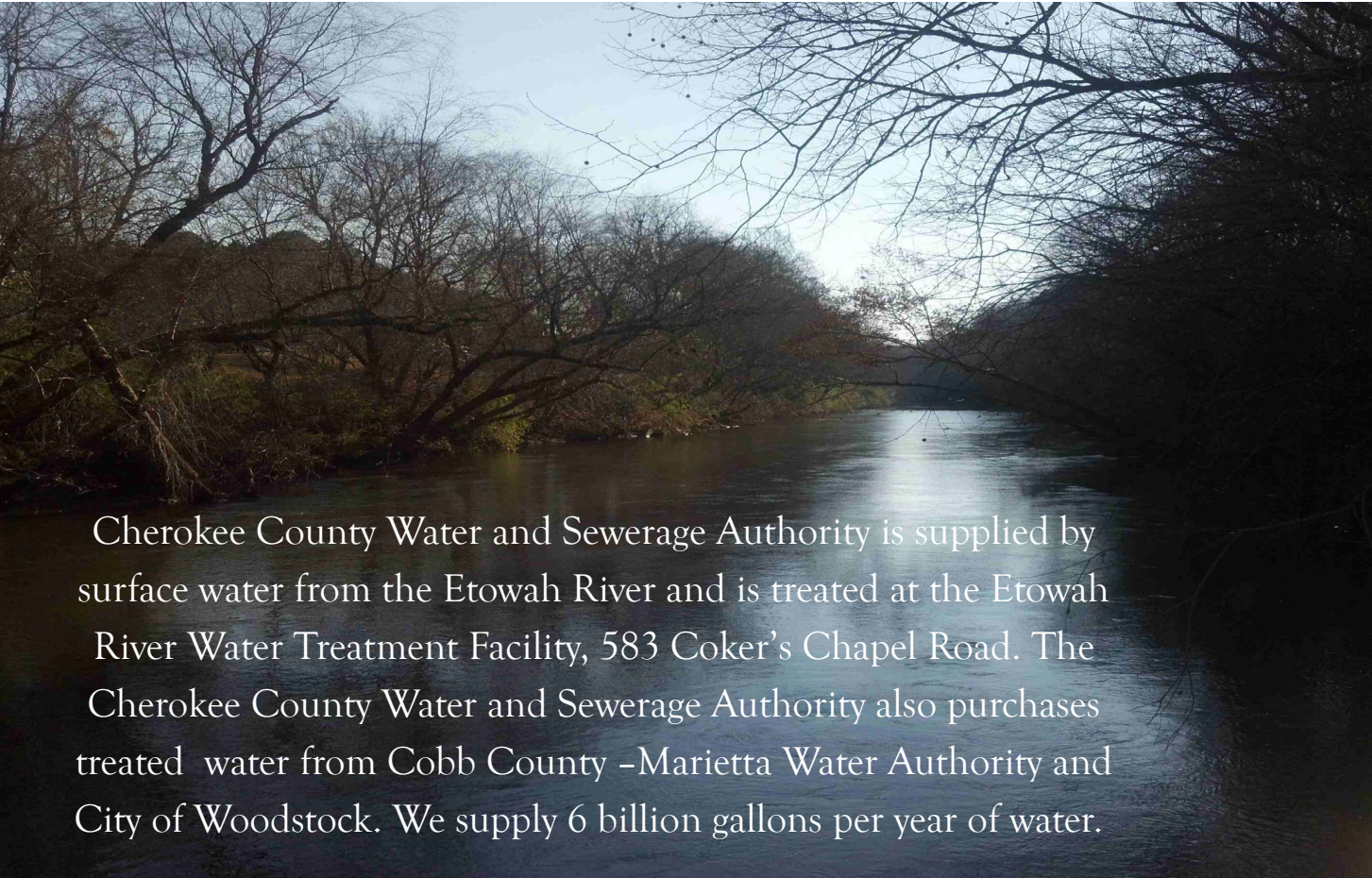
Presented by the  (January 1, 2020 through December 31, 2020)

Cherokee County Water & Sewerage Authority

Georgia Water System I.D. Number: (GA) - 0570002

Cherokee County Water and Sewerage Authority is proud of the high quality drinking water it provides. This annual water quality report shows the source of our water, lists the results of our tests and contains important information about water and health.





Cherokee County Water and Sewerage Authority is supplied by surface water from the Etowah River and is treated at the Etowah River Water Treatment Facility, 583 Coker's Chapel Road. The Cherokee County Water and Sewerage Authority also purchases treated water from Cobb County - Marietta Water Authority and City of Woodstock. We supply 6 billion gallons per year of water.

The source of our water at CCWSA is the Etowah River, which flows from its headwaters in Lumpkin County through Dawson County into the Northeast portion of Cherokee. Tributaries (smaller bodies of water such as creeks or streams) such as Amicalola Creek, Cochran's Creek, Yellow Creek and many more flow into the Etowah River. After leaving Cherokee County the Etowah continues West and South joining other river systems and continuing into Mobile Bay, AL. Our drought contingency reservoir, the Hollis Q. Latham Reservoir, located on Yellow Creek supplements water withdrawals of the drinking water plant in times of drought.

The Etowah River Water Treatment plant just along the Etowah River has been in operation since 1986. This plant has the capacity to treat up to 38 MGD (million gallons per day). In 2020, the average of 17 MGD was treated. We provide clean reliable drinking water to more than 180,000 people daily.

From our water plant we pump water to water storage tanks (water towers) all over Cherokee County, as well as into the distribution system. The tanks store water to ensure continuous supply during high demand periods. These high demand times happen when many people are using water at the same time. This usually occurs in the morning (6-9 am) and the evening (5-8 pm). The tanks refill during low demand, periods usually during nighttime hours. From the tanks the water flows to a meter directly outside your home typically close to the road. Once the water has gone through the meter you have purchased it.

For more information, call Cherokee County Water and Sewerage Authority at (770) 479-1813, x246, Lori Forrester, CCWSA Public Information Specialist. Water Quality Data for community water systems throughout the United States is available at www.waterdata.com.



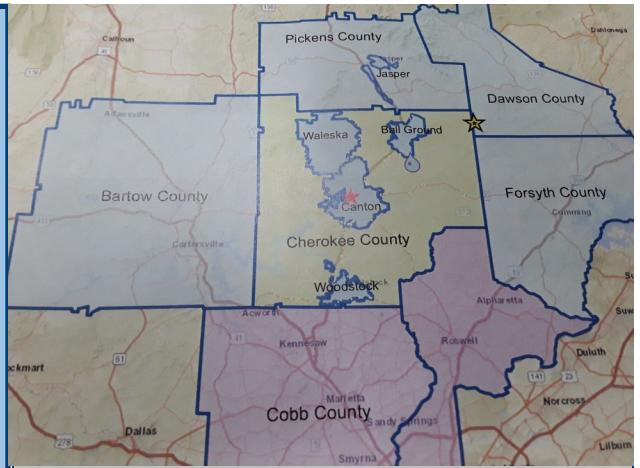
Learn more about the Cherokee County Water and Sewerage Authority water system at www.ccwsa.com.

Lead and Copper in Drinking Water

Lead does not come from the treatment plants and water mains. It comes from lead service lines running between the water main in the street to the home and from plumbing inside the home. We do not have lead service lines in our system. Cherokee County Water and Sewerage Authority (CCWSA) is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. CCWSA collects samples for lead and copper analysis every

three years as required by the Georgia Environmental Protection Division, in accordance with federal rules. Since lead and copper enter drinking water primarily through plumbing materials used in individual homes the US Environmental Protection Agency requires systems to monitor drinking water at customer taps. If lead concentrations exceed an action level of 15 ppb or if copper concentrations exceed an action level of 1300 ppb in more than 10% of customer taps sampled, the system must undertake a number of additional actions to control corrosion. Additionally, CCWSA treats our drinking water with an orthophosphate to control corrosion within the water distribution system. The phosphate provides a layer of protection on the walls of the distribution pipes that decreases the potential corrosion of metals into the drinking water. CCWSA monitors corrosion within the water system through a corrosion coupon monitoring program. The program consists of mild steel strips that are placed throughout the distribution system and analyzed on a quarterly basis to determine the corrosion rate.

Orthophosphate levels, along with the pH and alkalinity of CCWSA's finished drinking water, are tested multiple times daily at our water production plant to maintain very high water quality in the distribution system. 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 EPA's website: <http://www.epa.gov/your-drinking-water/basic-information-about-lead-drinking-water>



Source Water Assessment

Freese and Nichols, Inc. was contracted by Cherokee County Water and Sewerage Authority in 2017 to complete a source water assessment itemizing potential sources of surface water pollution to our water resources. Your drinking water is supplied from the Etowah River. A Source Water Assessment is a study and report that provides the following information:

- Identifies the area of land that contributes the raw water used for drinking water.
- Identifies potential sources of contamination to the drinking water supply.
- Provides an understanding of the drinking water supply's susceptibility to contamination.

The results of this assessment can be found on the Internet at <http://ccwsa.com/water/source-water-assessment/> or you can request information by mail from CCWSA.

Check website for summer/winter hours



Effective January 1, 2021

Catch and Release only on all species of Bass. No Bass (Largemouth or Spotted Bass) may be possessed, put on a stringer, in a cooler, or other means of keeping bass. All bass caught must be released at the time and location of the catch. This policy is put into place to help promote our Bass population and healthier size. DNR along with CCWSA employees will enforce this policy. Sun-fish, catfish, and crappie can continue to be harvested according to State regulations.

CCWSA is implementing a fish tagging program on Bass species. If you catch a fish that has been tagged please help us research by recording the tag number, area number of the catch (Please check with the Reservoir Office for area # maps), weight, length, date, and species (Large Mouth or Spotted Bass).

There will be no organized fishing tournaments for the year of 2021.

The Reservoir encompasses 334 acres with about 15 miles of shoreline and is surrounded by 150 foot buffer.

The lake is located in Cherokee and Dawson Counties;

the entrance address is 5436 Cowart Road in Dawsonville, GA 30534.

A daily use fee of five (\$5) dollars per vehicle, with on site pay box and instructions.

A yearly pass may be purchased at the Reservoir Office for \$50 (check or cash)

Board Meetings

We encourage public interest and participation in our community's decisions affecting drinking water. The public is welcome.

Regular Board Meetings are held the last Monday of each month either in-person at 110 Railroad Street or virtually. Even numbered months at 4:00 pm. Odd numbered months at 9:00 am. Please call for the holiday schedule.

Health Information

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 Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

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.

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-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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm-water runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
- **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 Environmental Protection Agency (EPA) and Food and Drug Administration (FDA) are both responsible for the safety of drinking water. EPA regulates public drinking water (tap water), while FDA regulates bottled drinking water.

An Explanation of the Water Quality Data Table

The table shows the results of our water quality analyses. Every regulated contaminant that we detected in the water is listed here.

This table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement.

Definitions of MCL and MCLG are important.

Maximum Contaminant Level or 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 or 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 contaminants.

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

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

The data presented in this report is from the most recent testing done in accordance with regulations.

Key To Table:

AL=Action Level

MCL=Maximum Contaminant Level

MCLG=Maximum Contaminant Level Goal

NTU=Nephelometric Turbidity Units

ppm=parts per million, or milligrams per liter (mg/l): one part per million is equivalent to one minute in 2 years or one penny in 10 thousand dollars;

ppb=parts per billion: one part per billion is equivalent to one minute in 2,000 years or one penny in 10 million dollars; or micrograms per liter (µg/l)

TT=Treatment Technique—A required process intended to reduce the level in drinking water.

N/A=not applicable

Test Results

Contaminant	Year	Units	MCL/ MRDL	Goal (MCLG)	Amount Detected	Range Detected	Major Sources	Violation
Inorganic Contaminants								
Copper ¹	2018	ppb	AL = 1300	0	43.5	5.3-180 50 samples	Corrosion of household plumbing systems; Erosion of Natural deposits; Leaching from wood preservatives.	NO
Fluoride ²	2020	ppm	4	4	0.66	0.63-0.72	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	NO
Lead ³	2018	ppb	AL=15	0	2.1	0-21 50 samples	Corrosion of household plumbing systems	NO
Nitrate /Nitrite ⁴	2020	ppm	10	10	0.34	NA	Runoff from fertilizer use; Leaching from septic tanks; sewage ; Erosion of natural deposits	NO
Chlorine	2020	ppm	4	N/A	1.4	0.2-1.4	Drinking water additive used for disinfection	NO
Organic Contaminants								
Total Organic Carbon	2020	ppm	TT	N/A	0.77	0.70-0.98	Naturally present in the environment	NO
Turbidity ⁵	2020	NTU	TT=1	0	0.14	0.03-0.15	Soil runoff	NO
Volatile Organic								
Total Trihalomethanes	2020	ppb	80	0	36.1	21.3-51.4	By-product of drinking water disinfection.	NO
Haloacetic Acids	2020	ppb	60	0	26.0	17.3-39.0	By-product of drinking water disinfection.	NO

Table Footnotes:

1—Of the 50 sites tested, none were above the action level of 1300 ppb. No violation occurs if 90% of sample results are below 1300 ppb. Tested every 3 years — next round of sampling will occur in 2021.

2—Fluoride is added to the drinking water to help in the prevention of dental cavities (caries) in children.

3— Of the 50 sites tested, one sample exceeded the action level (AL) of 15 ppb. This customer was notified immediately. No violation occurs if 90% of sample results are below 15 ppb. Tested every 3 years—next round of sampling will occur in 2021.

4—Nitrate and Nitrite are measured together.

5— Turbidity is the measure of the cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of monthly samples must be below 0.30 NTU. During the reporting year, 100% of all samples taken to measure turbidity met water quality standards.

Table continued

Microbiological							
Contaminants	Sample Dates	MCL	MCLG	Level 1 Assessment Trigger ⁶	Level Detected	Likely Source	Violation
Total Coliform	1/1/2020– 12/31/2020	TT	TT	Exceeds 5.0% TC+ samples in a month	0 Positive samples	Naturally Present in the environment	NO
E.coli	1/1/2020– 12/31/2020	0	0	n/a	0 positive samples	Human or animal fecal waste	NO

6 - A PWS (Public Water System) will receive an E.coli MCL violation when there is any combination of an EC+ sample result with a routine/repeat TC+ or EC+ sample result. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. E.coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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/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 (800) 426-4791**.

Water Quality Lab

The CCWSA water laboratory staff serve the community by being out within the service area making sure that the tap water within our distribution system is still safe to drink once it leaves the plant. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems through the Safe Drinking Water Act. In order to do this, staff collects from a master list of 390 sample sites throughout the water distribution system.

The number of samples is determined by GA EPD based on the population. Each month, 130 samples are collected and tested for chlorine residual and total coliform bacteria.

Flushing of lines occurs to maintain water quality. It reduces Total Trihalomethanes

and Haloacetic Acids, which are disinfection byproducts, plus helps maintain chlorine residuals. Flushing is done in more rural areas with less overall usage. In order to protect local waterways, the flushing water is de-chlorinated.



Recognition

Etowah River Water Treatment Plant received the Platinum Award from the Georgia Association of Water Professionals. The water treatment plant received the recognition for complete and consistent Safe Drinking Water Act permit compliance for the 5th year in a row.

Water Plant Tours

Are you interested in seeing where your water comes from and how it treated before it comes out of your faucet?

CCWSA offers water plant tours to the public year round. Tours last 1-2 hours and are available to individuals and small groups.

**Contact Clint Blackwell at
clint@ccwsa.com or 770-479-2911**

Education and Outreach

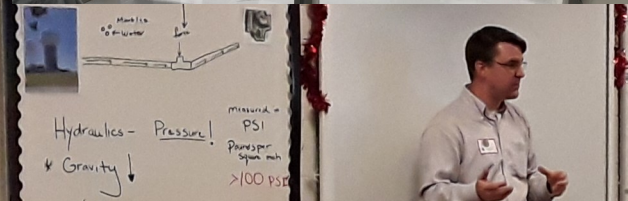
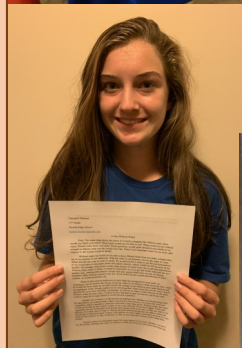


- ◇ Student Contests
- ◇ Georgia Model Water Tower Competition
- ◇ Facility Tours
- ◇ In-person/virtual Water Programs
- ◇ Career Day
- ◇ Science and Engineering Fair (local and state)

Credit: Caleb Miller "Tower at Sunset"

**"FROM TODAY'S YOUTH COME TOMORROW'S LEADERS
— LET'S LEAD SOME TO THE WATER PROFESSION!"**

This is the mission statement of the planning committee for the Georgia Association for Water Professionals (GAWP) Model Water Tower Competition (MWTC). This annual competition was hosted by Cherokee County Water and Sewerage Authority (CCWSA) in Cherokee County for the second time on March 6th, 2020 at E.T. Booth Middle School. This STEM (Science, Technology, Engineering and Mathematics) activity focuses on students learning complex concepts such as hydraulic and structural efficiency while thinking green and using recycled materials. The competition expanded to include 3 schools this year: E.T. Booth, Creekland and Mill Creek Middle School. Approximately 150 students participated in the competition. They had a total of 8 weeks to plan, design and build their water towers. Each school had engineering professionals mentoring them along the way with design, structure, and functionality of the towers. Eight model water towers advanced to the county competition from each school. Prizes were given for 1st, 2nd and 3rd place plus superlatives. E.T. Booth MS's water tower "Snow Day" took home the 1st place prize. Mrs. Reeder, from E.T. Booth, can proudly display the district MWTC waterdrop trophy. In total \$4000 was invested into the MWTC from CCWSA, CedarChem, Bermex, Hayes Pipe Supply Inc, Freese and Nichols, Brown and Caldwell, Engineering Strategies Inc and Hazen and Sawyer. Thank you to all the volunteers that made the competition possible by judging and leading student activities. We are looking forward to this competition being a part of our educational programs for years to come.



Imagine a Day Without Water Essay contest winner Campbell M.

Virtual Programs

CCWSA has a variety of programs on YouTube and Nearpod lessons available to public school teachers and homeschool groups. Contact Lori Forrester for more information—lori.forrester@ccwsa.com