# Consumer Confidence Report (CCR) Certification Form

**Water System Name:** Rough Branch Water System

**Water System No.: 0437400056** **Report Year: 2018** **Population Served: 192**

The community water system named above hereby confirms that its consumer confidence report has been distributed to customers (and appropriate notices of availability have been given). Further, the System certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency.

**Certified by: Name: Author Sluder** **Title: Water Plant Manager**

**Signature: _____** **Phone #: (828) 359-6750**

**Delivery Achieved Date: _____** **Date Reported _____**

Check all items that apply.

____ CCR was distributed by mail or other direct delivery. Specify other direct delivery methods:
_____

____ "Good Faith" efforts were used to reach non-Bill paying consumers. Those efforts included the following methods.

___ posting the CCR on the Internet at www._____
___ mailing the CCR to postal patrons within the service area.
___ advertising availability of the CCR in news media (attach a copy of announcement)
__ publication of CCR in local newspaper (attach copy)
___ posting the CCR in public places
___ delivery to community organizations
___ delivery of multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large employer.

**Send certification to**:

US EPA Region 4
Atlanta Federal Center
Water Protection Division, Drinking Water Section
Attn: Paul Lad
61 Forsyth Street
Atlanta, GA 30303-3104

# *2018 Annual Drinking Water Quality Report*
# *Cherokee Rough Branch System*

Water System Number: **043700056**

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about your source(s) 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 to providing you with this information because informed customers are our best allies. If you have any questions about this report or concerning your water, please contact Author Sluder, Water Plant Manager at (828) 359-6750. We want our valued customers to be informed about their water utility. If you want to learn more, please call Sabrina Hornbuckle at (828) 359-6104 to learn where and when the Cherokee Tribal Utility Commission is meeting.

## What EPA Wants You to Know

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 (800-426-4791).

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).

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 Rough Branch 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 or at http://www.epa.gov/safewater/lead.

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 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 can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

## When You Turn on Your Tap, Consider the Source

The water that is used by this system is groundwater and is located between the Rough Branch Community and the Blue Ridge Parkway.

## Source Water Assessment Program (SWAP) Results

The complete SWAP Assessment report for the Rough Branch Water System may be viewed at the Cherokee Water Treatment Plant.

It is important to understand that a susceptibility rating of "higher" does not imply poor water quality, only the system's potential to become contaminated by PCSs in the assessment area.

## Help Protect Your Source Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source(s) in several ways: dispose of chemicals properly; take used motor oil to a recycling center, volunteer in your community to participate in group efforts to protect your source.

## Violations that Your Water System Received for the Report Year: No Violations

During 2018, or during any compliance period that ended in 2018, we received no violations

## Water Quality Data Tables of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2018.** The EPA and the State allow 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, is more than one year old.

**Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.**

### Important Drinking Water Definitions:

***Not-Applicable (N/A)*** – Information not applicable/not required for that particular water system or for that particular rule.

***Non-Detects (ND)*** - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

***Parts per million (ppm) or Milligrams per liter (mg/L)*** - One part per million corresponds to one minute in two years or a single penny in $10,000.

***Parts per billion (ppb) or Micrograms per liter (ug/L)*** - One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

***Picocuries per liter (pCi/L)*** - Picocuries per liter is a measure of the radioactivity in water.

***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.

***Maximum Residual Disinfection 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 Disinfection 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.

***Locational Running Annual Average (LRAA)*** – The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

***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.

## Tables of Detected Contaminants

### REVISED TOTAL COLIFORM RULE:

**Microbiological Contaminants in the Distribution System -** For systems that collect ***less than 40*** samples per month

| Contaminant (units) | MCL Violation Y/N | Your Water | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|
| Total Coliform Bacteria (presence or absence) | N/A | N/A | N/A | TT* | Naturally present in the environment |
| *E. coli* (presence or absence) | N | Absent | 0 | Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*<br><br>Note: If either an original routine sample and/or its repeat samples(s) are *E. coli* positive, a Tier 1 violation exists. | Human and animal fecal waste |

**Inorganic Contaminants**

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | Range Low | Range High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| Barium (ppm) | 2017 | N | 0.015 ppm | 0.015 | 0.015 ppm | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |

**Nitrate/Nitrite Contaminants**

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | Range Low | Range High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| Nitrate (as Nitrogen) (ppm) | 2018 | N | ND | N/A | | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |

**Nitrate:** ***Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.***

## Lead and Copper Contaminants

| Contaminant (units) | Sample Date | Your Water | Number of sites found above the AL | MCLG | AL | Likely Source of Contamination |
|---|---|---|---|---|---|---|
| Copper (ppm) ($90^{th}$ percentile) | 2017 | 0.034 ppm | 0 | 1.3 | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits |
| Lead (ppb) ($90^{th}$ percentile) | 2017 | 1.2 ppb | 0 | 0 | AL=15 | Corrosion of household plumbing systems; erosion of natural deposits |

## Radiological Contaminants

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | Range Low High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Alpha emitters (pCi/L) | 2018 | N | 0.47 pCi/L | 0.47-0.47 pCi/L | 0 | 15 | Erosion of natural deposits |
| Combined radium (pCi/L) | 2018 | N | 1.195 pCi/L | 1.195-1.195 pCi/L | 0 | 5 | Erosion of natural deposits |
| Uranium (ug/L) | 2017 | N | 1.14432 ug/L | 1.14432-1.14432 ug/L | 0 | 20.1 | Erosion of natural deposits |

* Note: The MCL for beta/photon emitters is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

## Disinfectant Residuals Summary

| | Year Sampled | MRDL Violation Y/N | Your Water (highest RAA) | Range Low High | MRDLG | MRDL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Chlorine (ppm) | 2018 | 2018 | 1.14 ppm | 0.52 - 1.6 ppm | 4 | 4.0 | Water additive used to control microbes |

## Other Miscellaneous Water Characteristics Contaminants

| Contaminant (units) | Sample Date | Your Water | Range Low High | SMCL |
|---|---|---|---|---|
| Sodium (ppm) | 2018 | 3.1 ppm | 3.1 - 3.1 ppm | N/A |