

ANNUAL WATER QUALITY REPORT

Reporting Year 2022

Presented By
**Town of
Weaverville**



Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

Where Does My Water Come From?

Our source water is the Ivy River, which has two forks that combine at the Highway 19/23 (new I-26) bridge. One fork originates in Madison County and the other in Buncombe County. Both forks have many feeder streams, and the watershed drainage area above our intake covers 112 square miles. The Town of Weaverville maintains connections with the City of Asheville and the Town of Mars Hill Water System for emergency supply. We are committed to ensuring the highest-quality drinking water and providing a safe and dependable supply.

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 at <http://water.epa.gov/drink/hotline>.



Public Meetings

Information regarding Town Council meetings and other Town of Weaverville events is available from Town Hall administration or <http://www.weaverville.org>.

Water Treatment Process

Our source (raw) water comes from a flowing river. Flowing river conditions can change dramatically during the treatment process. Certified treatment operators monitor and routinely test numerous sampling points and adjust chemical applications throughout the treatment process. Water treatment plants and processes vary in design, depending on the source water supply to be treated. Our process consists of a unique upflow clarification chamber prior to the conventionally designed treatment process.

First, untreated water is pumped from our river water source. This water is tested to determine treatment application requirements. Coagulant chemical treatment is applied to the raw water prior to the upflow process. Coagulant chemical treatment creates a chemical “snow” in the water called floc, which settles naturally to produce a filtering effect. Effluent from the upflow process is evaluated, and any additional treatment application requirement is determined.

This treated water enters settling basins, where natural settling of the remaining floc particles results in cleaner prefiltered water. The settled water is then filtered through engineered filtration beds to provide a quality water that is ready for final treatment, which includes mandated chlorine, corrosion inhibitor, and pH adjustments. The Lawrence T. Sprinkle Jr. Water Treatment Facility does not add fluoride in its treatment process.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Randall Wilson, Lawrence T. Sprinkle Jr. Water Treatment Facility Supervisor/ORC, at (828) 658-2417.

Questions regarding billing should be directed to Town Hall administration at (828) 645-7116. Questions or concerns about water connections, water leaks, or water distribution should be directed to the Town of Weaverville Public Works Department at (828) 645-0606.

An electronic version of this Consumer Confidence Report (CCR) and other information can be found at <http://www.weaverville.org>.

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 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

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 we 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 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 at (800) 426-4791 or online at: www.epa.gov/safewater/lead.

Testing for *Cryptosporidium*

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100-percent removal. Monitoring of source water indicates the presence of these organisms, but current test methods cannot determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks; however, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

“Thousands have lived without love, not one without water.”

—W.H. Auden

Sampling of our water source from February 2019 through January 2021 (end of test session) showed a range of *Cryptosporidium* from 0 to 0.1 oocyst per liter. The City of Asheville (our emergency source) reported a range of 0 to 0.2 oocyst per liter. It is important to note that these results are from our raw water source, not our treated drinking water supply. For more information on *Cryptosporidium*, contact the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.



Source Water Assessment

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to potential contaminant sources (PCS). The results of the assessment are available in SWAP Assessment Reports that include maps, background information, and a relative susceptibility rating of higher, moderate, or lower.

The relative susceptibility rating of each source was determined by combining the contaminant rating (number and location of PCS within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). 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 PCS in the assessment area. The assessment findings are summarized in the table below.

SYSTEM NAME	CITY	PWS ID	SOURCE NAME (S)	SUSCEPTIBILITY RATING (S)	SWAP REPORT DATE
Town of Weaverville	Weaverville	01-11-025	Ivy River	Higher	September 2020
Town of Mars Hill (Emergency Source)	Mars Hill	NC0158010	Carter Cove Reservoir Laurel Creek Reservoir	Moderate Moderate	September 2020
City of Asheville (Emergency Source)	Asheville	01-11-010	Bee Tree Reservoir, Mills River, North Fork Reservoir, French Broad	Moderate, Moderate, Higher, Higher	September 2020

The complete SWAP report may be viewed at https://www.ncwater.org/SWAP_Reports/NC0111025_SWAP_Report-20200909.pdf. The Asheville report can be found at https://www.ncwater.org/SWAP_Reports/NC0111010_SWAP_Report-20200909.pdf. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this website may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report online, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate your system name and number and provide your name, mailing address, and phone number. If you have any questions about the SWAP report, please contact the source water assessment staff at (919) 707-9098.

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.

pCi/L (picocuries per liter): A measure of radioactivity.

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 of the percentage of a substance actually removed to the percentage of the substance required to be removed.

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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. We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2022	[4]	[4]	1.38	0.33–2.04	No	Water additive used to control microbes
Combined Radium (pCi/L)	2018	5	0	1.0	ND–1.0	No	Erosion of natural deposits
Fecal Indicators [enterococci or coliphage] (positive samples)	2022	TT	NA	0	NA	No	Human and animal fecal waste
Total Coliform Bacteria (positive samples)	2022	TT	NA	0	NA	No	Naturally present in the environment
Total Organic Carbon [TOC] (removal ratio)	2022	TT	NA	<1	<1–1	No	Naturally present in the environment
Turbidity¹ (NTU)	2022	TT = 1 NTU		0.09	0.04–0.09	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit		100	NA	No	Soil runoff

Stage 2 Disinfection Byproduct Compliance Based upon Location Running Annual Average (LRAA)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL VIOLATION Y/N	YOUR WATER (HIGHEST LRAA)	RANGE LOW-HIGH	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	N			NA	80	Byproduct of drinking water disinfection
B01			44	20-74			
B02			35	9-38			
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	N			NA	60	Byproduct of drinking water disinfection
B01			25	15-35			
B02			27	9-38			

¹Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% of the monthly samples must be less than or equal to 0.3 NTU.

²Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	ND	0/20	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2020	15	0	ND	1/20	No	Corrosion of household plumbing systems; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
pH (units)	2022	6.5-8.5	NA	7.4	7.4–7.8	No	Naturally occurring

UNREGULATED SUBSTANCES²

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	05/03/2022	7.58	ND–7.58	Naturally occurring