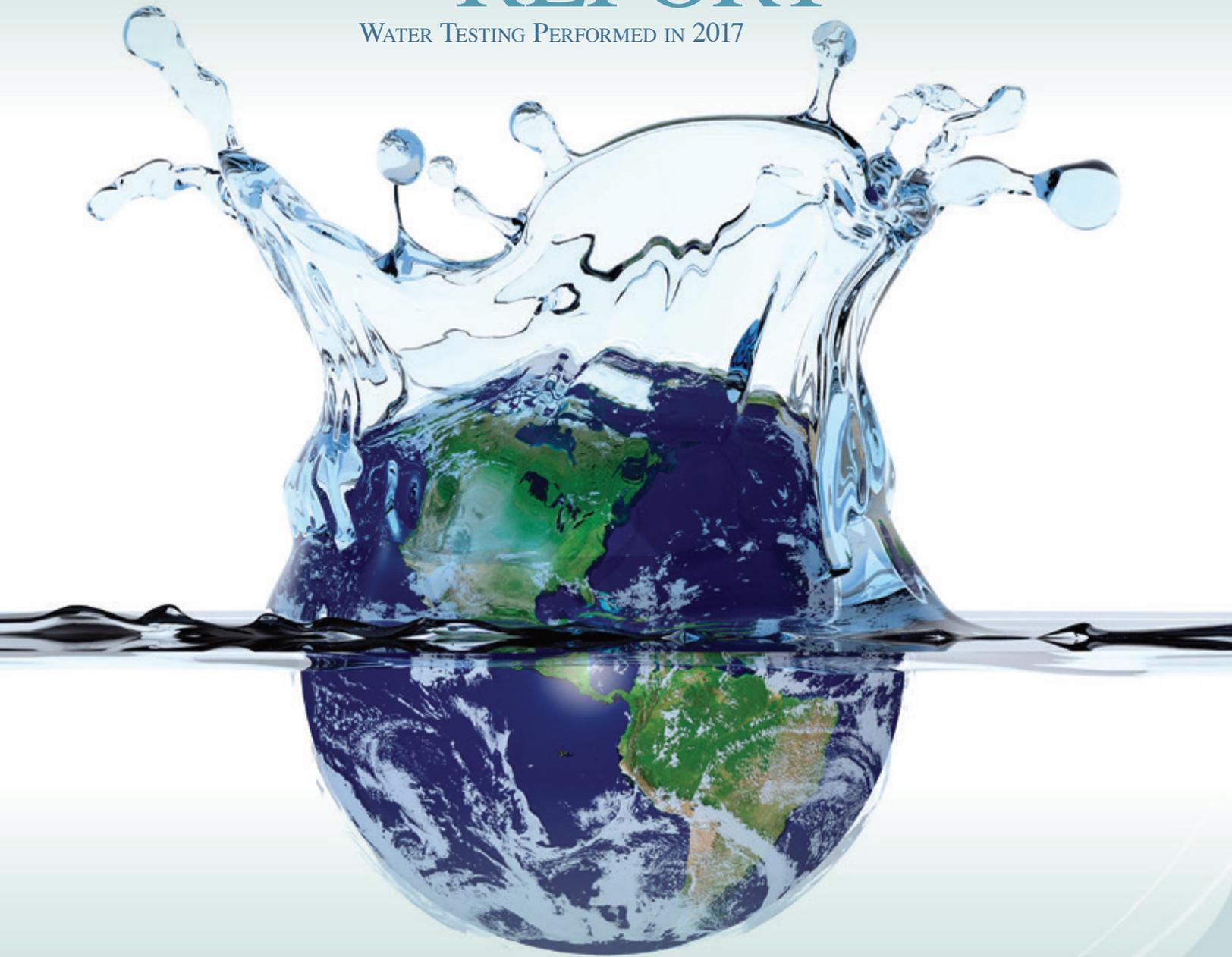


# ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017



*Presented By*  
**Town of Weaverville**

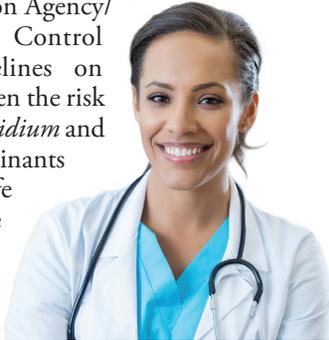
## Quality First

Once again, we are pleased to present our annual water quality report. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

## 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 (Environmental Protection Agency/ 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>.



## 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 120 square miles. The Town of Weaverville maintains connections with Asheville-Buncombe Regional Water Authority 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.

## 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.

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 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.

## 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.

## 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.

**34**  
BILLION

The number of gallons of water produced daily by public water systems in the U.S.

## Public Meetings

Questions regarding water quality should be directed to the Lawrence T. Sprinkle, Jr. Water Treatment Facility treatment staff at (828) 658-2417. Questions regarding billing should be directed to Town Hall Administration at (828) 645-7116. Water connections, water leaks, and questions about water distribution should be directed to the Town of Weaverville Public Works Department at (828) 645-0606. Information regarding Town Council meetings and other Town

of Weaverville events should be directed to Town Hall Administration. An electronic version of this Consumer Confidence Report and other information can be found at <http://www.weaverrillenc.org>.

## 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](http://www.epa.gov/lead).



## Water Treatment Process

Our source (raw) water comes from a flowing river. Flowing river conditions can, and sometimes do, change dramatically during the treatment process. Certified treatment operators monitor, adjust chemical applications, and routinely test numerous sampling points 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, raw, 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, named “floc,” which settles naturally to produce a filtering effect on the water. Effluent from the upflow process is evaluated, and any additional treatment application requirement is determined.

This further 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. Final treatment includes mandated chlorine, a corrosion inhibitor, and pH adjustments.

The Lawrence T. Sprinkle, Jr. Water Treatment Facility does not add fluoride to its treatment process.



## Source Water Assessment

SWAP is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources. The NC Department of Environment and Natural Resources conducted assessments of water sources across North Carolina. Assessment ratings of "Higher," "Moderate," or "Lower" were assigned to each source. It is important to know that a "Higher" rating does not imply bad water quality. It is a gauge of the water source's potential to become contaminated.

Complete SWAP reports for our system may be viewed on the Internet at [https://www.ncwater.org/files/swap/SWAP\\_Reports/0111025\\_9\\_12\\_2017\\_11\\_17.pdf](https://www.ncwater.org/files/swap/SWAP_Reports/0111025_9_12_2017_11_17.pdf).

According to the Source Water Assessment, the Ivy River source had a susceptibility rating of "Higher."

Our Asheville emergency supply was assigned a rating of "Higher" for the Mills River source, a rating of "Moderate" for the North Fork source, a rating of "Higher" for the French Broad source, and a rating of "Lower" for the Bee Tree Reservoir source. Asheville's SWAP report can be seen at this link: [https://www.ncwater.org/files/swap/SWAP\\_Reports/0111010\\_8\\_31\\_2017\\_17\\_22.pdf](https://www.ncwater.org/files/swap/SWAP_Reports/0111010_8_31_2017_17_22.pdf)



### BY THE NUMBERS

The number of gallons of water produced daily by public water systems in the U.S.

**34**  
BILLION

**1**  
MILLION The number of miles of drinking water distribution mains in the U.S.

The amount of money spent annually on maintaining the public water infrastructure in the U.S.

**135**  
BILLION

**300**  
MILLION The number of Americans who receive water from a public water system.

The age in years of the world's oldest water found in a mine at a depth of nearly two miles.

**2**  
BILLION

**151**  
THOUSAND The number of active public water systems in the U.S.

## QUESTIONS?

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

## 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.

### 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]	1.23	0.20–2.04	No	Water additive used to control microbes
Fecal Indicators [enterococci or coliphage] (# positive samples)	2017	TT	NA	0	NA	No	Human and animal fecal waste
Haloacetic Acids [HAA] (ppb)	2017	60	NA	27	17–36	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	44	27–72	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 [TOC] <sup>1</sup> (removal ratio)	2017	TT	NA	1.90	1.00–2.86	No	Naturally present in the environment
Turbidity <sup>2</sup> (NTU)	2017	TT = 1 NTU	NA	0.07	0.04–0.07	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

### 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%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	1.3	ND	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2017	15	0	ND	0/20	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)	2017	6.5-8.5	NA	7.6	7.4–7.8	No	Naturally occurring

<sup>1</sup> Depending on the TOC in our source water, the system MUST have a certain percentage removal of TOC or must achieve alternative compliance criteria. If we do not achieve that percentage removal, there is an alternative percentage removal. If we fail to meet the alternative percentage removal, we are in violation of a Treatment Technique.

<sup>2</sup> Turbidity 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% or more of the monthly samples must be less than or equal to 0.3 NTU.

## 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 under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

**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.

**SMCL (Secondary Maximum Contaminant Level):** SMCLs are established to regulate the aesthetics of drinking water like appearance, taste and odor.

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