Contaminant (units)	MCL Violation Y/N	Your Water	Range Low - High	MCLG	MCL	Likely Source of Contamination
Nitrate (as Nitrogen) (ppm)	N	**0.57**	N/A	10	**10**	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (ppm)	N	**0.50**	0.01 – 0.71	<1.00	**4**	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Barium (ppm)	N	**0.030**	N/A	2	**2**	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine (ppm)	N	**2.17**	0.20 – 2.74	4	**4**	Water additive used to control microbes

	Sample Date	90th Percentile	# of sites above AL	MCLG	**AL**	Likely Source of Contamination
Copper	August 2018	**0.0530**	0	1.3	**1.3**	Corrosion of household plumbing systems; erosion of natural deposits
Lead	August 2018	**0.0015**	0	0	**0.015**	Corrosion of household plumbing systems; erosion of natural deposits

Contamination (units)	TT Violation Y/N	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio Low-High	MCLG	Likely Source of Contamination	Compliance Method (Step 1 or ACC#__)
Total Organic Carbon (removal Ratio) (TOC)-Treated	N	**35%**	35%	N/A	Naturally present in the environment	ACC 1 (Source Water TOC <2.0 mg/L)

Stage 1 Disinfection Byproduct Compliance - Based upon Running Annual Average (RAA)

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest RAA)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2018	N	23.5	11 - 38	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	2018	N	18.25	1 - 33	N/A	60	Byproduct of drinking water disinfection

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

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)					N/A	80	Byproduct of drinking water disinfection
106	2018	N	45.25	16 – 80			
254	2018	N	25	12 – 42			
246	2018	N	66.75	39 – 110			
HAA5 (ppb)					N/A	60	Byproduct of drinking water disinfection
106	2018	N	29.75	13 - 47			
254	2018	N	21.25	11 – 36			
246	2018	N	31.25	19 – 49			

TTHM: ***Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.***

HAA5: ***Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.***

Radiological Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/L)	3/30/16	N	1.4	0	15	Erosion of natural deposits
Beta/photon emitters (pCi/L)	3/30/16	N	2.21	0	50 *	Decay of natural and man-made deposits
Combined radium (pCi/L)	3/30/16	N	0.0707	0	5	Erosion of natural deposits
Uranium (pCi/L)	3/30/16	N	0.0417	0	20.1	Erosion of natural deposits

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 (PCSs). 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.

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.

The relative susceptibility rating of each source for the Town of Boone was determined by combining the contaminant rating (number and location of PCSs 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). The assessment findings are summarized in the table below:

Source Name	Inherent Vulnerability Rating	Contaminant Rating	Susceptibility Rating
South Fork Winkler's Creek	Higher	Lower	Moderate
	Higher	Lower	Moderate

Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, 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, 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 by phone at 919-707-9098.

The complete SWAP Assessment report for TOWN OF BOONE may be viewed on the Web at: https://www.ncwater.org/files/swap/SWAP_Reports/0195010_9_1_2017_85_11.pdf

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 Town of Boone 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.

Important Drinking Water Definitions:

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

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.

Nephelometric Turbidity Unit (NTU) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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.

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

Town of Boone
Water Treatment Facility
PWSID # NC 01-95-010

376 Deck Hill Rd
P.O. Drawer 192
Boone, NC 28607
Phone: 828-268-6998

2018 Annual Drinking Water Quality Report

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. 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. Our water sources are Winkler's Creek, and South Fork of the New River. If you have any questions about this report or concerning your water utility, please contact Jody Prevette or any of the operators at the Water Plant, at 268-6998. We want our valued customers to be informed about their water utility. If you want to learn more, please call the water plant and schedule a tour. We would be glad to show you how your facility operates, and show you all our test records.

Boone has received the AWOP award for the past 8 years, including 2018.

The Area Wide Optimization Program (AWOP) was developed to help water systems meet successively more stringent regulations and achieve higher levels of water quality. Target turbidity levels are 0.1 NTU, well below the regulatory limit of 0.3 NTU. Water treatment plants that consistently achieve such a low level of turbidity achieve significant water quality benefits.

Contaminate	Dates Tested	Avg. Results oocysts/L	Result Range oocysts/L
Cryptosporidium	Monthly Oct. 2016 – Sept. 2018	0.004	0 – 0.10

During 2018, or during any compliance period that ended in 2018, we did not receive a violation.

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table lists all the drinking water contaminants that we detected in the last round of sampling for the particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. Some tests were only preformed once while others are a RAA (Running Annual Average). **Unless otherwise noted, the data presented in the 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.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised 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.