

| Contaminant (units) | MCL Violation Y/N | Your Water | Range Low - High | MCLG | MCL | Likely Source of Contamination |
|--|-------------------|--------------|------------------|--------|--------------|---|
| Nitrate (as Nitrogen) (ppm) | N | 0.52 | N/A | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Fluoride (ppm) | N | 0.53 | 0.10 – 0.66 | <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 |
| TTHM [Total trihalomethanes] (ppm) | N | 0.030 | 0.014 - 0.082 | <0.060 | 0.080 | By-product of drinking water chlorination |
| HAA5 [Total Haloacetic Acids] (ppm) | N | 0.020 | 0.011 – 0.036 | <0.040 | 0.060 | By-product of drinking water chlorination |
| Chlorine (ppm) | N | 2.16 | 1.78 – 2.44 | 4 | 4 | Water additive used to control microbes |

| | Sample Date | 90 th Percentile | # of sites above AL | MCLG | AL | Likely Source of Contamination |
|---------------|-------------|-----------------------------|---------------------|------|--------------|--|
| Copper | August 2015 | 0.0876 | 0 | 1.3 | 1.3 | Corrosion of household plumbing systems; erosion of natural deposits |
| Lead | August 2015 | 0.0044 | 1 | 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) | 2016 | N | 33 | 5 - 52 | N/A | 80 | Byproduct of drinking water disinfection |
| HAA5 (ppb) | 2016 | N | 23 | 9 - 26 | 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 | 2016 | N | 38 | 12 - 69 | | | |
| 254 | 2016 | N | 26 | 8 - 38 | | | |
| 246 | 2016 | N | 55 | 31 - 79 | | | |
| HAA5 (ppb) | | | | | N/A | 60 | Byproduct of drinking water disinfection |
| 106 | 2016 | N | 27 | 8 - 37 | | | |
| 254 | 2016 | N | 22 | 6 - 28 | | | |
| 246 | 2016 | N | 27 | 16 - 36 | | | |

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 | Higher | Lower | Moderate |
| Winkler’s Creek | 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:
http://www.ncwater.org/files/swap/SWAP_Reports/0195010_7_16_2015_85_11.pdf

2016 Annual Drinking Water Quality Report



Town of Boone Water Treatment Facility

PWSID # 01-95-010

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

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 6 years, including 2016.

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.



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.

| Contaminate | Dates Tested | Avg. Results oocysts/L | Result Range oocysts/L |
|-----------------|-------------------------------------|------------------------|------------------------|
| Cryptosporidium | Monthly Aug. 2006 – July 2008 | 0.131 | 0 – 1.2 |

During 2016, or during any compliance period that ended in 2016, 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 performed 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, 2016.** 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.

drinking water.

intended to reduce the level of a contaminant in

Treatment Technique (TT) - A required process

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.

Non-Detects (ND) - Laboratory analysis indicates

that the contaminant is not present at the level of

applicability/not required for that particular water

system or for that particular rule.

Nephelometric Turbidity Unit (NTU) - A measure of the

clarity of water. Turbidity in excess of 5 NTU is

just noticeable to the average person.

Maximum Contaminant Level Goal (MCLG) - The

level of a contaminant in drinking water below

which there is no known or expected risk to health.

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.

Important Drinking Water Definitions:

the same protection for public health.

contaminants in bottled water, which must provide

water systems. FDA regulations establish limits for

certain contaminants in water provided by public

prescribes regulations which limit the amount of

In order to ensure that tap water is safe to drink, EPA

and mining activities.

occurring or be the result of oil and gas production

radioactive contaminants, which can be naturally-

urban stormwater runoff, and septic systems; and

production, and can also come from gas stations,

by-products of industrial processes and petroleum

synthetic and volatile organic chemicals, which are

uses; organic chemical contaminants, including

agriculture, urban stormwater runoff, and residential

may come from a variety of sources such as

mining, or farming; pesticides and herbicides, which

wastewater discharges, oil and gas production,

from urban stormwater runoff, industrial or domestic

metals, which can be naturally-occurring or result

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

minerals, 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

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.

to have your water tested. Information on lead

concerned about lead in your water, you may wish

using water for drinking or cooking. If you are

flushing your tap for 30 seconds to 2 minutes before

you can minimize the potential for lead exposure by

When your water has been sitting for several hours,

variety of materials used in plumbing components.

high quality drinking water, but cannot control the

The Town of Boone is responsible for providing

associated with service lines and home plumbing.

primarily from materials and components

and young children. Lead in drinking water is

health problems, especially for pregnant women

If present, elevated levels of lead can cause serious

Water Hotline (800-426-4791).

contaminants are available from the Safe Drinking

infection by *Cryptosporidium* and other microbial

guidelines on appropriate means to lessen the risk of

from their health care providers. EPA/CDC

These people should seek advice about drinking water.

infants can be particularly at risk from infections.

or other immune system disorders, some elderly, and

undergone organ transplants, people with HIV/AIDS

cancer undergoing chemotherapy, persons who have

immuno-compromised persons such as persons with

in drinking water than the general population.

Some people may be more vulnerable to contaminants

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).

What EPA Wants You to Know

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>