Annual Drinking Water Report—2018
Town of Bluefield, Virginia
PWSID #1185061

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2018 is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH). We are pleased to report that your drinking water met all state and federal guidelines for calendar year 2018.

If you have any questions about this report, want additional information about any aspect of your drinking water, or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Mr. Todd Miller, Operator in Charge at 276-322-4178
Or visit: http://www.bluefieldva.org and look under departments/water plant.

GENERAL INFORMATION

Drinking water, including bottled drinking 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 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791) or at their website at www.epa.gov/safewater/.

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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. (2) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. (3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses. (4) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also 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. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

SOURCES OF YOUR DRINKING WATER

The Town of Bluefield has two major sources of water, surface water and ground water. The surface water is withdrawn from the Bluestone River and the ground water is from Dill Spring.

Treatment of the raw water consists of chemical addition, coagulation, flocculation, settling, filtration, and chlorination. These treatment processes work together to remove the physical, chemical, and biological contaminants to make the water safe for drinking. All water is disinfected with chlorine and then filtered through dual media filters prior to being introduced into the Town's water distribution system. Fluoride is added to the finished water before entering the distribution system for dental health.

The Town of Bluefield also has a connection to Bluefield Valley Water Company (part of WV-American Water Company) to supplement our system in the event of an emergency. This surface water is withdrawn from several reservoirs in Mercer County, West Virginia. The Town of Bluefield also has an emergency connection with Tazewell County PSA. This surface water comes from Lake Witten, Cox's Branch, and the Clinch River.

The Virginia Department of Health conducted a source water assessment of our system during 2001. The Bluestone River was determined to be of High susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting Todd Miller, Operator in Charge, at the phone number or address given elsewhere in this drinking water quality report.

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The following tables show the results of our monitoring for the period of January 1st to December 31st, 2018. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand there terms:

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 – 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.

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.

Non Detectable (ND) – lab analysis indicates that the contaminant is not present.

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

Maximum Contaminant Level, or MCL – the highest level of a contaminant that is allowed in drinking water. MCLs are set close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal, or 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.

Maximum Residual Disinfectant Level Goal or MRDLG: the level of 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.

Maximum Residual Disinfectant Level or 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.

Treatment Technique or TT: a required process intended to reduce the level of a contaminant in drinking water.

Level 1 assessment: a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 assessment: a very detailed study of the waterworks to identify potential problems and determine (if possible) why an E. coli PMCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Microbiological Contaminants

Contaminant	MCLG	MCL	No. of Samples indicating Presence of Bacteria	Violation (Y/N)	Month of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	1 Positive monthly sample	1	N	June	Naturally present in the environment
E. Coli	0	1 Routine sample and a repeat sample are total coliform positive, and 1 is also E. coli positive	0	N	N/A	Human and animal fecal waste

Regulated Contaminants

Water Quality Results for 2018

Contaminant	MCLG	MCL	Level Detected	Range	Violation	Date of Sample	Source of Contamination
Barium (ppm)	2	2	0.0396	0.0396	No	2018	Naturally Present in the Environment
Fluoride (ppm)	4	4	1.0	0.0 – 1.0	No	2018	Erosion of natural deposits; water additives for strong teeth
Nitrate (ppm)	10	10	1.08	1.08	No	2018	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Alpha emitters (pCi/l)	0	15	0	0	No	2009	Erosion of natural deposits
Turbidity (NTU)	None	TT=1 NTU	0.08 NTU	0.02 - 0.08	No	2018	Soil Runoff
		TT=% of samples < or = 0.3 NTU	100.00%		No	2018	
Copper (ppm)	1.3	AL=1.3	0.0895	0 Samples above AL	No	Sept-2018	Corrosion of household plumbing systems
Lead (ppb)	0	AL=15	31.2	1 Sample above AL	No	Sept-2018	Corrosion of household plumbing systems

Contaminant Units	MCLG	MCL	Level Detected	Violation (Y/N)	Range	Typical Source of Contamination
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.5	N	0.7 – 2.0	Water additive used to control microbes
Haloacetic Acids (ppb)	NA	60	47.1	N	26.7 - 76.1	By-product of drinking water disinfection
Total Trihalomethane (ppb)	NA	80	33.4	N	18.6 – 55.0	By-product of drinking water disinfection
Total Organic Carbon Removal Ratio	NA	TT In compliance if > or = to 1.0	>1.0	N	0.74 – 1.46	Naturally present in the environment

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data presented in the above tables, though accurate, may be more than a year old.

The U.S. Environmental Protection Agency (EPA) sets MCLs at very stringent levels. In developing the standard EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-a-million chance of having the described health effect for other contaminants.

ADDITIONAL HEALTH INFORMATION

It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's 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. The Town of Bluefield 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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 (800-426-4791) or at http://www.epa.gov/safewater/lead.

In 2017, the Town of Bluefield began monitoring for Cryptosporidium in the source water (before treatment) as required by EPA's Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). Cryptosporidium is a microscopic parasite found in surface water throughout the United States. Ingestion of Cryptosporidium may cause cryptosporidiosis, and abdominal infection. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Under the LT2ESWTR, the average Cryptosporidium concentration determines if additional treatment measures are needed. Twenty-four samples are required for analysis over a two-year period. During 2018, the average Cryptosporidium concentration was <1 oocysts per 10 liters for the 12 samples collected. Ten of the samples had no cryptosporidium oocysts detected while 1 sample had 1 oocyst per 10 liters and 1 sample had 3 oocysts per 10 liters. While our monitoring indicates the presence of these organisms in our source water (before treatment), the current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Based on the Cryptosporidium monitoring results so far, and the current performance of the water treatment plant, we anticipate meeting the future requirements of the LT2ESWTR.

ADDITIONAL INFORMATION ABOUT YOUR WATERWORKS

The town received a Gold Level award from the Virginia Department of Health for clarified and filtered water quality in 2018. This is the 11th year in a row we were tied for 1st in the state for clarified and filtered water quality.

MICROBIOLOGICAL CONTAMINANT INFORMATION

There was 1 positive sample for Total Coliform bacteria during 2018. Repeat samples were all negative.

VIOLATION INFORMATION

There were no violations during 2018.

TOWN OF BLUEFIELD
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CONTACT NUMBERS FOR WATER SERVICE

New Service, Change in Service & Discontinuation of Service – 276-322-4628
Water Accounts, Billing & Information – 276-322-4628
Water Leaks (Monday thru Friday 8:00 am to 5:00 pm) – 276-322-4626
Emergencies (After Hours & Holidays) – 276-326-2621
Water Plant – 276-322-4178 Town Hall Fax – 276-326-1204 Water Plant E-mail: miller@bluefieldva.org