Annual Drinking Water Quality Report for 2018

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).

If you have questions about this report or 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. B.T. Fitzpatrick lll, Town Manager (540) 334-5404

The time and location of the regularly scheduled council meetings are as follows:

2nd Tuesday of each month at 6:00 PM at the Town Hall located at 359 Boones Mill Road

4th Tuesday of each month at 1 PM at the Town Hall located at 359 Boones Mill Road

GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants found in source water may be naturally occurring substances or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

Contaminants that may be present in source water include the following:

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 byproducts of industrial processes and petroleum production, or from gas stations, urban stormwater runoff, and septic systems

Radioactive contaminants, 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. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

All 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).

VULNERABLE POPULATIONS

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).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

Our water supply is provided by one spring and three wells. The primary raw water source is our spring. The water is treated by adding a chlorine solution and soda ash for continuous disinfection and pH adjustment. The spring and wells are not located within the Boones Mill town limits. Your pure mountain spring water comes from the town's spring located at the foot of Cahas Mountain. A source water assessment of our system was conducted in 2002 by the Virginia Department of Health. The source of your water was determined to be of high susceptibility to contamination. These determinations were based upon 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 five years. The report is available by contacting your water system representative at the phone number given elsewhere in this drinking water report.

DEFINITIONS:

Contaminants in your drinking water are routinely monitored according to federal and state regulations. The table on the next page shows the results of this monitoring for the period of January 1st through December 31st2018. 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 these terms:

Non-detects (ND) - lab analysis indicates that the contaminant is not detectable, based on the limits of the analytical equipment used.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or one penny in $10,000.

Parts per billion (ppb) or Micrograms per liter (mg/l) - one part per billion corresponds to one minute in 2,000 years or one 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 cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 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.

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 Residual Disinfection Level Goal (MRDLG) – 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.

Maximum Residual Disinfectant Level (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.

WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Inorganic Contaminants						
Contaminant/Unit of Measurement	**MCLG**	**MCL**	**Level Found**	**Violation**	**Date of sample**	**Typical source of Contamination**
Nitrate ppm	10	10	0.36	**No**	Sept 2018	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium ppm	2	2	0.49	**No**	November 2017	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits.
Lead and Copper						
Contaminant/Unit of Measurement	**MCLG**	**MCL**	**Level Found**	**Violation**	**Date of sample**	**Typical source of Contamination**
Copper ppm	1.3	AL=1.3	0.29 (90th percentile) Range: <0.02 to 0.29 None exceeded the AL	**No**	September 2018	Corrosion of household plumbing systems; Erosion of natural deposits
Lead ppb	0	AL=15	1.09 (90th percentile) Range: <2 to 2.2 No sample exceeded the AL	No	September 2018	Corrosion of household plumbing systems; Erosion of natural deposits
Disinfection Byproducts						
Contaminant/Unit of Measurement	**MCLG**	**MCL**	**Level Found**	**Violation**	**Date of sample**	**Typical source of Contamination**
HAA5s (Total Haloacetic Acids) ppb	N/A	60	<1 ppb	No	August 2017	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) ppb	N/A	80	<0.5 ppb	No	August 2017	By-product of drinking water disinfection
Chlorine ppm	MRDLG =4	MRDL =4	Max 2.4 Range: 1.0 to 2.4	No	Monthly 2018	Water additive used to control microbes
Microbiological						

Contaminant/Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of sample	Typical source of Contamination
Total Coliform Bacteria	0	> 1	One Sample (confirmation samples were negative)	No	Feb 2018	Naturally present in the environment

The results in this table are from testing done in 2018. However, the State allows us to monitor for some contaminants less than once a year because the concentrations of these contaminants do not change frequently. We constantly monitor for various contaminants to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Other contaminants were either not present or below the detection limits of the laboratory equipment. Some of our results, though representative, are more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards 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 the one-in-a-million chance of having the described health effect for other contaminants.

Additional information on Lead:

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.

Town of Boones Mill 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 are available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Operations Update for 2018

In July of 2018, we asked the Western Virginia Water Authority to assist with operation of the town's water and wastewater facility's and distribution system. After seeing significant improvements to the quality and reliability of our water and sewer systems the town council approved a three-year contract with the Authority to continue providing operation and maintenance services including utility billing through 2021. All water service, billing and quality concerns should be directed to the Western Virginia Water Authority at 540-853-5700. If you have other concerns or comments please don't hesitate to contact the town offices at the phone number listed below.

VIOLATIONS: The Town of Boones Mill had no violations in 2018.

This Drinking Water Quality Report was presented by:

B.T. Fitzpatrick, Town Manager and

Robert Deitrich, Water System Operator

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