Annual Drinking Water Quality Report for 2017
Cove Creek – Scott County PSA
PWSID # 1169150

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2017 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 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:

Scott County Public Service Authority, Mike Dishman, Executive Director, 156 Legion Street, Weber City, VA 24290; 276-386-7751

The time and location of regularly scheduled PSA board meetings are as follows:

The Scott County PSA Board of Directors meets the 2nd Tuesday of each month at 9:00 a.m. in the board room of the Scott County administrative offices located on the 2nd floor of the Scott County Community Services Building at 190 Beech Street, Gate City, Virginia.

GENERAL INFORMATION

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 stormwater 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 stormwater 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 come from gas stations, urban stormwater runoff, and septic systems. (5) 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. 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 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).

SOURCES OF YOUR DRINKING WATER

The sources of your drinking water are surface water and ground water as described below:

- Washington County Service Authority (WCSA) water treatment plant located near Abingdon. The source of supply for the water treatment plant is the Middle and South Forks of the Holston River. Treatment is by chemical and physical means including filtration to remove particulate matter, chlorination for disinfection, and fluoridation for the promotion of dental health.
- Bristol Virginia Utilities water treatment plant. The source of supply for the water treatment plant is South Holston Lake.
- Chilhowie/WCSA water treatment plant. The sources of supply for the water treatment plant are three springs.
- Reservation Spring located in Taylor's Valley, south of Damascus, Virginia.

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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 our monitoring for the period of January 1st to December 31st, 2017. 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:

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

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.

Maximum Contaminant Level, or 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, 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.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of filtration treatment processes.

Non-detects (ND) - lab analysis indicates that the contaminant is not present.

Not Applicable (N.A.) – there is not a MCLG or a MCL for this particular contaminant.

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.

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.

Picocuries per liter (pCi/L) - Picocuries per liter is a measure of the radioactivity in water.

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

WATER QUALITY RESULTS

Cove Creek Water System

Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected	Violation?	Range	Date of Sample	Typical Sources of Contamination
Trihalomethanes (ppb)	N.A.	80	66	No	33 – 84	2017	By-product of drinking water disinfection
Haloacetic Acids (ppb)	N.A.	60	33	No	15 - 48	2017	By-product of drinking water disinfection
Nitrate (ppm)	10	10	0.57	No	N/D – 0.57	2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium (ppm)	2	2	0.036	No	0.026 – 0.036	2017	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Alpha emitters (pCi/l)	0	15	1.4	No	ND – 1.4	2014	Erosion of natural deposits
Chlorine (ppm)	4.0	4.0	0.53	No	0. 3 – 0.8	2017	Water additives to control microbes
Turbidity (NTU)	N.A.	TT, 1 NTU max	0.096	No	0.01 - 0.096	2017	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.
		TT,<0.3 NTU 95% of time	100 %	No	N.A.		
Total Organic Carbon (ppm)	N.A.	TT, MET when > or = 1	1.04	No	1.0 – 1.1	2017	Naturally present in the environment
Fluoride (ppm)	4	4	0.74	No	ND – 0.74	2017	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Lead and Copper Contaminants

Contaminant (units)	MCLG	Action Level	90^{th} Percentile	Date of Sample	Number of Sample Sites Exceeding Action Level	Violation?	Typical sources of Contamination
Copper (ppm)	1.3	1.3	0.023	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

The water quality results in the above tables are from testing done in 2014 and 2017. However, 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, though accurate, is more than one year old.

MCLs are set at very stringent levels by the U.S. Environmental Protection Agency. 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 one-in-a-million chance of having the described health effect for other contaminants.

There were no violations in 2017.

ADDITIONAL INFORMATION FOR 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. Scott County Public Service Authority 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 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 or at http://www.epa.gov/safewater/lead.

ADDITIONAL HEALTH INFORMATION

In 2016, the **Washington County Service Authority** 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, an 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 2017, the average Cryptosporidium concentration in the raw water at the Middle Fork of the Holston River water treatment plant was 0.175 oocysts per liter for the 12 samples collected. During 2017, no Cryptosporidium were detected in the 12 raw water samples collected at the Chilhowie/WCSA Regional water treatment plant. 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 treatment plant, we anticipate meeting the future treatment requirements of the LT2ESWTR.