Annual Drinking Water Quality Report

TOWN OF HILLSVILLE WATER SYSTEM

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2019 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 and 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 Darrick Mayes – Utilities Director at 276-728-5533.

The times and locations of regularly scheduled Town Council meetings are the 2nd and 4th Monday of every month at 7:00 pm in the Town Hall, 410 North Main Street, Hillsville, VA 24343.

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. Immunocompromised 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).

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.

SOURCE and TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is (X) surface water ( ) groundwater ( )groundwater under the direct influence of surface water as described below:

Is there any treatment of your drinking water supply? (X) Yes ( ) No If yes, it is described below:

Treatment of the raw creek water consists of chemical addition, coagulation, flocculation, settling, filtration, fluoridation, and chlorination. All of these processes work together to remove the physical, chemical, and biological contaminants to make the water safe for drinking. Hillsville's Water Plant performs approximately 85 laboratory tests per shift to ensure that all these processes are operating properly.

The Virginia Department of Health conducted a source water assessment of our system during 2019. The Little Reed Island Creek source was determined to be of highly susceptible 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 Darrick Mayes 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 table on the next page shows the results of our monitoring for the period of January 1st to December 31st, 2019. 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:

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.

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

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.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

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

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

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

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 our filtration system.

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.

Level 1 assessment - a study of the waterworks to identify potential problems and determine, if possible, why total coliform bacteria have been found in our waterworks.

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 why total coliform bacteria have been found in our waterworks on multiple occasions.

WATER QUALITY RESULTS

I. Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected	Violation (Y/N)	Range	Date of Sample	Typical Source of Contamination
Fluoride (ppm)	0	4	0.79	N	-	2019	Water additive which promotes dental health.
Nitrate plus Nitrite Nitrogen (ppm)	10	10	0.80	N	-	4/1/19	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium (ppm)	2	2	0.020	N	N/A	7/8/19	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.36	N	0.70 – 1.70	2019	Water additive used to control microbes
Total Organic Carbon	NA	TT, met when ≥1	1.00	N	-	2019	Naturally present in the environment
Alpha Emitters (pCi/l)	0	15	0.6	N	-	2014	Erosion of Natural Deposits
Combined Radium (pCi/l)	0	5	0.6	N	-	2014	Erosion of Natural Deposits
Haloacetic Acids (ppb)	NA	60	29	N	24 – 40	2019	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	NA	80	65	N	37 – 87	2019	By-product of drinking water disinfection
Turbidity (NTU)	-	TT=1 NTU max TT<0.3 NTU 95% of the time	0.08 100%	N N	0.05 - 0.08 N/A	2019	Soil Runoff

Monitoring Results for Sodium (Unregulated - No Limits Designated)			
Level Detected (ppm)	Sample Date	Typical Source	Guidance
9.96	7/8/2019	Naturally Occurring; Additional of treatment chemicals/processes.	For individuals on a very low sodium diet (500 mg/day), EPA recommends that drinking water sodium not exceed 20 mg/L. Should you have a health concern, contact your healthcare provider

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, is more than one year old.

MCL's 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.

VIOLATION INFORMATION - Did any MCL or TT violations occur during the year? ( ) Yes (X) No

VIOLATION INFORMATION – Did any monitoring, reporting, or other violations occur during the year? ( ) Yes (X) No

Additional Health Information
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 Hillsville** waterworks 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 two 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 (800-426-4791).

Additional Information for Cryptosporidium
In 2019, the Town of Hillsville began monitoring for Cryptosporidium in our 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 2019, the average Cryptosporidium concentration was .067 oocysts per liter for the 12 samples collected. 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 consistent performance of the treatment plant, we anticipate surpassing any future treatment requirements of the LT2ESWTR.