Annual Drinking Water Quality Report for 2019

Edgewood Village PWS ID No. 5089315

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INTRODUCTION

This Annual Drinking Water Quality Report for the 2019 calendar year 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 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:

Henry County Public Service Authority 2285 Fairystone Park Highway Bassett, VA 24055	Mr. Darrell Campbell Phone: 276.634.2555 Email: dcampbell@co.henry.va.us

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 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 storm water 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:

- **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, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **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, the United States Environmental Protection Agency (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 EPA'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 C*ryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800.426.4791).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is surface water purchased from the City of Martinsville and distributed to the customers. The City's source of water under normal (non-drought) conditions is the Beaver Creek Reservoir and under emergency and drought conditions are the Leatherwood Creek and/or the Little Beaver Creek. Water is collected and treated by the City of Martinsville Water Treatment Plant. Treatment of the raw surface water includes chemical addition, coagulation, flocculation, settling, filtration, fluoridation, corrosion control, and chlorine disinfection. All of these processes work together to remove the biological, chemical, and physical contaminants to make the water safe for human consumption.

A source water assessment of our system was conducted in 2002 by the Virginia Department of Health. The reservoir and creeks were 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: Attn: Water Resources Department, City of Martinsville, 55 West Church St., PO Box 1112, Martinsville, Va. 24114, calling 276.403.5157 or by email: mkahle@ci.martinsville.va.us

WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are many low-cost or no-cost ways to conserve water. Water your lawn at the least sunny times of the day. Fix toilet and faucet leaks. Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath. Turn the faucet off while brushing your teeth and shaving; 3-5 gallons go down the drain per minute. Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

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 1 through December 31, 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:

Non-detects (ND) - lab analysis indicates the contaminant is undetectable, 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 (μg/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) - a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - 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.

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

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 Disinfectant Level Goal (MRDLG) – the level of a drinking water disinfectant below which there is no known or expected health risk. 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.

Variances & exemptions - state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

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.

Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	1 positive monthly sample	**Non-detects**	No	Monthly 2019	Naturally present in the environment
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Turbidity (NTU)	NA	TT=1 NTU max	**0.29** Max	No	***Continuous/ every 2 hours	Soil runoff (Turbidity itself is not harmful, but high levels may indicate other treatment problems).
		TT=95% of monthly samples must be <0.3 NTU	Lowest Monthly Percentage of samples < 0.3 NTU = **100%**			
Fluoride (ppm)	4	4	Avg.: **0.67** Range: 0.42 to 0.84	No	***Daily	Erosion of natural deposits; water additive which promotes stronger teeth; discharge from fertilizer and aluminum factories
Total Organic Carbon - TOC (ppm)	NA	TT-TOC (Removal ratio greater than or equal to 1.0)	Min. Rolling Avg. Removal Ratio: **1.35** Range: 1.00 to 1.66	No	***Monthly 2019	Naturally present in the environment
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Combined radium (pCi/L)	0	5	**1.1**	No	***May 2016	Erosion of natural deposits
Disinfectant / Disinfection Byproduct Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Total Haloacetic Acids (HAA5) (ppb)	N/A	60	Highest Compliance Avg.: **37** Range: 22 – 42	No	Quarterly 2019	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N/A	80	Highest Compliance Avg.: **89** Range: 47 - 57	**Yes**	Quarterly 2019	By-product of drinking water disinfection
Chlorine (ppm)	MRDLG 4.0	MRDL 4.0	Highest Quarterly Avg.: **1.01** Range 0.06 – 1.33	No	Monthly 2019	Water additive used to control microbes
Lead and Copper Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Copper (ppm)	1.3	1.3	**0.023** (90th Percentile) Range: <0.001 - 0.04	No	September 2017	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	**2** (90th Percentile) Range: <1 – 4	No	September 2017	Corrosion of household plumbing systems; Erosion of natural deposits

***Sampled at the City of Martinsville Water Treatment Plant**

The results in the table are from testing done between 2016 and 2019. 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 results, though representative, are more than one year old.

The EPA 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 one-in-one-million chance of having the described health effect for other contaminants.

Other drinking water constituents you may be interested in are as follows:

ALUMINUM: Routine compliance sampling in August 2019 detected aluminum at a concentration of ***0.12 mg/L*.** This sample result is within the Secondary Maximum Contaminant Level (SMCL) range recommended by the EPA of 0.05 – 0.20 mg/L. The presence of aluminum at concentrations above the SMCL may result in a discoloration of the water or a metallic taste in the drinking water, and products made with the water such as coffee and tea. Aluminum is introduced to water naturally and by additives used to treat water.

MANGANESE: Also in the compliance sampling collected during August 2019, manganese was determined to be **0.023 mg/L**, which is below manganese's SMCL of 0.05 mg/L. There are no health effects associated with manganese at these concentrations. However, the presence of manganese may affect the aesthetics of the water quality, including taste and clarity. Manganese is introduced to water naturally.

SODIUM: In compliance samples collected during July 2019, the sodium content was determined to be **10.4 ppm**, which is below the maximum recommended level of 20 ppm by EPA. The recommended level is established for those individuals on a sodium-restricted diet. If you have any concerns about the sodium level in your drinking water, you may wish to consult with your physician. Sodium is naturally occurring in the environment and can be added to water by some of the treatment chemicals.

We are pleased to report to you that there were no detections of total coliforms or fecal coliforms in the monthly samples collected during calendar year 2019.

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. The Henry 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 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.

***VIOLATION INFORMATION*:**

The Edgewood Village consecutive water system **did** receive monitoring violations during the 2019 calendar year. These violations was for exceeding the Primary Maximum Contaminant Level (PMCL) for Total Trihalomethanes (TTHM) during the *first quarter (January – March) and second quarter (April - June) of 2019*. Although all samples collected in 2019 were below the PMCL, the running average did exceed the PMCL due to high results from some 2018 samples. Compliance with the PMCL is based on a running annual average (4 quarters average) of the samples collected. The average TTHM levels during these quarters exceeded the PMCL of 80 ppb. TTHM compounds are formed when trace amounts of naturally occurring organic compounds in the raw water source combine with chlorine that is used to disinfect the treated water. Because of the nature of formation of these compounds in the presence of chlorine, increased retention time in the system allows additional formation beyond what is formed in the respective City water supply and thus can account for higher levels detected. All locations do not have the same levels of TTHMs. Higher levels are expected in the areas with highest retention time (generally the furthest points in the system) and during the warmer months of the year. Some people who drink water containing TTHMs in excess of the PMCL over many years could experience problems with their liver, kidneys or central nervous system and may have increased risk of getting cancer. This water system will continue to be monitored for TTHMs. We intend to maintain compliance with the drinking water contaminants. The city's water purification plant is taking multiple steps to decrease the levels of contaminates in the drinking water. These steps are in coordination with health department officials.

OTHER INFORMATION THAT MAY BE OF INTEREST

Construction of a water line to connect the Edgewood Village water service area to the Upper Smith River Water Treatment Plant is scheduled to begin in the summer of calendar year 2020. This should greatly reduce Trihalomethanes compounds in the water for this area.