Annual Drinking Water Quality Report for 2022

Town of Burkeville ***PWS ID No. 5135110***

INTRODUCTION

This Annual Drinking Water Quality Report for the 2022 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:

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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 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:

- **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, 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) or by visiting www.epa.gov/safewater.

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) or www.epa.gov/safewater.

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater drawn from six (6) drilled wells. The wells are located throughout the Town of Burkeville. Well Nos. 1, 2, 3, 4 and 5 are treated with sodium hypochlorite for disinfection purposes, soda ash for pH adjustment, and an orthophosphate compound for corrosion control. Well No. 7 is untreated.

A source water assessment of our system was conducted in 2003 by the Virginia Department of Health. The wells 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 assessment report is available by contacting your water system owner noted on the cover page of this report.

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 1st through December 31st, 2021. 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 (/g/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.

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.

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

The results in the table are from testing done between 2018 and 2022. 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 results, though representative, are more than one year old.

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	No more than 1 present sample/mo.	**None Detected**	No	Monthly 2022	Naturally present in the environment
Lead and Copper Contaminants						
Contaminant	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Copper (ppm)	AL= 1.3	AL= 1.3	**0.2** (90th Percentile) Range: 0.05 – 0.3 All five samples collected were below the Action Level	No	August 2021	Corrosion of household plumbing systems; Naturally present in the environment
Lead (ppb)	0	AL = 15	**2.5** (90th Percentile) Range: < 2 – 2.6 All five samples collected were below the Action Level	No	August 2021	Corrosion of household plumbing systems; Erosion of natural deposits
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Samples	Typical Source of Contamination
Nitrate (ppm)	10	10	Highest Level: **7.14** Range: 0.99 - 7.14	No	June 2022 December 2022	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppm)	2	2	Highest Level: **0.101** Range: 0.022 - 0.101	No	March & June 2021	Erosion of natural deposits, discharge from refineries, discharge of drilling wastes
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (*including uranium*) (pCi/L)	0	15	Highest Level: 3.8 Range 1.1 - 3.8	No	2018/2021	Erosion of natural deposits
Combined radium (pCi/L)	0	5	Highest Level: 1.7 Range: ND - 1.7	No	2018/2021	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	Highest Level: **Not Detected**	No	August 2020	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) (ppb)	N/A	80	Highest Level: **Not Detected**	No	December 2022	By-product of drinking water disinfection
Chlorine (ppm)	MRDL G = 4	MRDL = 4	Highest Quarterly Avg: **0.16** Range: 0.03 – 0.4	No	Tested Monthly	Water additive used to control microbes

Aesthetic Quality						
Contaminant (Unit of Measurement)	MCLG	SMCL	Level Found	Exceedance	Date of Sample	Typical Source of Contamination
Iron (ppm)	N/A	0.3	Highest Level: **0.099** Range: ND - 0.099	No	March & June 2021	Erosion of natural deposits
Manganese (ppm)	N/A	0.05	Highest Level: **< 0.01**	No	March & June 2021	Erosion of natural deposits
Sodium (mg/L)	20	N/A	Highest Level: **125** Range: 45.6 - 125	No	March & June 2021	Erosion of natural deposits, byproduct of treatment system

** Iron and manganese are naturally occurring minerals that can be found in groundwater in this region. These minerals are not a health concern; however, they can result in aesthetic problems such as affecting the clarity and taste of the water. Secondary Maximum Contaminant Levels (SMCL) have been established for these minerals, with 0.3 mg/L for iron and 0.05 mg/L for manganese.

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

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 *Crestview Trailer Court* owner 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 or at http://www.epa.gov/safewater/lead.

VIOLATION INFORMATION

The Town of Burkeville received a failure to report violation for failure to send out a consumer confidence report. During the reporting of the consumer confidence report cycle for 2021, we were required to send reports out by July, 1 2022 and the report did not go out until Early September 2022.