Annual Drinking Water Quality Report
Town of Vinton

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2021 is designed to provide you with valuable information about your drinking water quality. We are committed to providing 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 meets all state and federal requirements administered by the Virginia Department of Health (VDH). If you have questions about this report, 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:

Town of Vinton - (540) 983-0646

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. Substances (referred to as contaminants) in source water 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.

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).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 AND TREATMENT OF YOUR DRINKING WATER

Your drinking water is groundwater obtained from ten drilled wells. Water is distributed throughout the system by booster stations, storage tanks, and distribution piping. Chlorination treatment is provided before the water enters the storage tanks.

SOURCE WATER ASSESSMENTS

A source water assessment has been completed by VDH. The assessment determined that the wells may be susceptible to contamination because they are located in an area that promotes migration of contaminants from land use activities of concern. More specific information may be obtained by contacting the water system representative listed above.

QUALITY OF YOUR DRINKING WATER

Your drinking water is routinely monitored according to Federal and State Regulations for a variety of contaminants. The tables that follow show the results of our monitoring for the period of January 1, 2021 through December 31, 2021.

Most of the results in the table are from testing done in 2021. 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.

DEFINITIONS

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 (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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 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 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.

Maximum Residual Disinfectant 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 contamination.

Non-detects (ND): The substance was not found by laboratory analysis.

Parts per billion (ppb) or Micrograms per liter (µg/L): 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): A measure of the radioactivity in water.

WATER QUALITY RESULTS

INORGANIC CONTAMINANTS						
Contaminant (Unit)	MCLG	MCL	Level Found	Violation	Sample Date	Typical Source of Contamination
Barium (ppm)	2	2	Well 2 (Mansard): ND Well 3 (Bush 1): 0.0034 Well 4 (Stonebridge): ND Well 5 (Route 24): ND Well 6 (Spring Grove): ND Well 7 (Bush 2): 0.0083 Well 8 (Bush 3): 0.0057 Well 9 (Craig): 0.0038 Well 10 (Chestnut): 0.022 Well 11 (Melissa): ND	No	2021	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	Well 2 (Mansard): 0.65 Well 3 (Bush 1): 0.41 Well 4 (Stonebridge): 0.95 Well 5 (Route 24): 0.86 Well 6 (Spring Grove): 0.83 Well 7 (Bush 2): 0.77 Well 8 (Bush 3): 0.42 Well 9 (Craig): 0.54 Well 10 (Chestnut): 0.42 Well 11 (Melissa): 0.41	No	2021	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	Well 2 (Mansard): 0.25 Well 3 (Bush 1): 1.30 Well 4 (Stonebridge): 0.17 Well 5 (Route 24): 0.10 Well 6 (Spring Grove): 0.70 Well 7 (Bush 2): 0.31 Well 8 (Bush 3): 1.90 Well 9 (Craig): 0.86 Well 10 (Chestnut): 0.29 Well 11 (Melissa): ND	No	2021	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
DISINFECTION BYPRODUCTS						
Contaminant (Unit)	MCLG	MCL	Level Found	Violation	Sample Date	Typical Source of Contamination
Total Trihalomethanes (ppb)	NA	80	6.0 (ND – 9.0)	No	2021	By-product of drinking water chlorination
Haloacetic Acids (ppb)	NA	60	1.0 (ND – 1.0)	No	2021	By-product of drinking water chlorination
DISINFECTION RESIDUAL						
Contaminant (Unit)	MRDLG	MRDL	Level Found (Range)	Violation	Sample Date	Typical Source of Contamination
Chlorine (ppm)	4	4	0.81 (0.53 – 1.20)	No	Monthly	Water additive used to control microbes

RADIOLOGICAL CONTAMINANTS

Contaminant (Unit)	MCLG	MCL	Level Found	Violation	Sample Date	Typical Source of Contamination
Alpha emitters (pCi/L)	0	15	Well 2 (Mansard): 1.3 Well 3 (Bush 1): 3.3 Well 4 (Stonebridge): 0.44 Well 5 (Route 24): 2.0 - 13.6 Well 6 (Spring Grove): 3.0 Well 7 (Bush 2): 1.3 Well 8 (Bush 3): 1.8 Well 9 (Craig): -4.1 Well 10 (Chestnut): 1.0 Well 11 (Melissa): 0.89	No	2019 2019 2019 2017 2019 2016 2019 2016 2017 2018	Erosion of natural deposits
Beta emitters (pCi/L)	0	50*	Well 2 (Mansard): 1.1 Well 3 (Bush 1): 3.2 Well 4 (Stonebridge): 0.72 Well 5 (Route 24): 2.4 – 16.1 Well 6 (Spring Grove): 3.5 Well 7 (Bush 2): 2.9 Well 8 (Bush 3): 3.3 Well 9 (Craig): -2.8 Well 10 (Chestnut): 1.3 Well 11 (Melissa): 3.5	No	2019 2019 2019 2017 2019 2016 2019 2016 2017 2018	Decay of natural and man-made deposits
Combined Radium-226/228 (pCi/L)	0	5	Well 2 (Mansard): 1.3 Well 3 (Bush 1): 2.0 Well 4 (Stonebridge): 0.89 Well 5 (Route 24): 0.52 - 0.8** Well 6 (Spring Grove): 3.76 Well 7 (Bush 2): 2.17 Well 8 (Bush 3): 1.6 Well 9 (Craig): -0.94** Well 10 (Chestnut): 1.3** Well 11 (Melissa): 0.86**	No	2019 2019 2019 2017 2019 2016 2019 2016 2017 2018	Erosion of natural deposits

LEAD AND COPPER

Contaminant (Unit)	MCLG	MCL	90th Percentile	Exceedance	Sample Date	Typical Source of Contamination
Lead (ppb)	0	AL=15	6.4 Two (2) samples exceeded the AL.	No	2020	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.32 No samples exceeded the AL.	No	2020	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED CONTAMINANTS

Contaminant (Unit)	MCLG	MCL	Level Found	Exceedance	Sample Date	Typical Source of Contamination
Sodium (ppm)	NA	NA	Well 2 (Mansard): 9.6 Well 3 (Bush 1): 12.0 Well 4 (Stonebridge): 10.3 Well 5 (Route 24): 10.8 Well 6 (Spring Grove): 9.4 Well 7 (Bush 2): 11.1 Well 8 (Bush 3): 9.4 Well 9 (Craig): 12.1 Well 10 (Chestnut): 14.0 Well 11 (Melissa): 10.4	NA	2021	Erosion of natural deposits; De-icing salt runoff; Water softeners

* The MCL for beta particles is 4 mrem/yr. EPA considers 50 pCi/L to be the level of concern for beta particles.

** If the results of the alpha emitters sample had been above 5 pCi/L, our system would have been required to do additional testing for radium-226. Because the alpha emitters were low, the combined radium result represents the amount of radium-228 detected.

RESULTS INFORMATION

We constantly 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.

Maximum Contaminant Levels (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.

Sodium - There is presently no established standard for sodium in drinking water. An EPA advisory recommends water containing 30 to 60 mg/L should not be used as drinking water due to esthetics such as taste and color. Water containing more than 20 mg/L should not be used by persons whose physician has placed them on severely restricted sodium diets.

LEAD 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 Vinton Public Works 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 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

Water Quality Violations – None

Monitoring and Reporting Violations – None

This Drinking Water Quality Report was prepared by the water company with the assistance and approval of the Virginia Department of Health. Please call if you have questions.

Signature: _____ Date: 6/23/22