

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2021 is designed to provide you with valuable information about your drinking water quality. The Homestead Water Company is 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), Office of Drinking Water.

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:

Mr. Philip Edins, Homestead Water Company at (540) 839-7707

GENERAL INFORMATION

The source of drinking water (both tap water and bottled water) includes, 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 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 that must provide the same protection for public health.

Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

Because our sources are surface water influenced, we measure turbidity daily at our filtration plant. Turbidity has no known health effects; however, it may interfere with disinfection and provide a medium for bacteria growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches. Our filtration plant produces water below the Virginia Department of Health (VDH) established limit of 0.3 NTU. We do not anticipate our turbidity levels will ever pose a significant risk to the health of our customers.

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).

SOURCES AND TREATMENT OF YOUR DRINKING WATER

Your drinking water is obtained from McAllister, Chaplin and Cascade springs. Your water is continuously disinfected and filtered by membrane filtration.

SOURCE WATER ASSESSMENTS

A source water assessment has been completed by VDH. The assessment determined that our sources might be susceptible to contamination because it is 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.

Lead Contaminants

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. 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 or at <http://www.epa.gov/safewater/lead>.

QUALITY OF YOUR DRINKING WATER

Your drinking water is routinely monitored according to Federal and State Regulations for a variety of contaminants. The table on the following pages shows the results of our monitoring for the period of January 1st to December 31st, 2021.

DEFINITIONS

In these tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent 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.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity 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) - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - (mandatory language) The "Maximum Allowed" (MCL) is 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 - (mandatory language) The "Goal" (MCLG) is the level of a contaminant in drinking water below that there is no known or expected risk to health. MCLGs allow for a margin of safety.

Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Level 1 Assessment - A level 1 assessment is 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 level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E-coli MCL violation has occurred and / or why total coliform bacteria have been found in our water system on multiple occasions.

WATER QUALITY RESULTS

Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Turbidity NTU	NA	TT=0.3 NTU	Max- 0.017	No	Daily 2021	Soil runoff
		Lowest monthly percent meeting <0.3 NTU – 95 %	All monthly samples were < 0.3 NTU 100 % of the time			
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Nitrate ppm	10	10	0.48	No	August 2021	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium ppm	-	-	2.7	No	August 2021	Erosion of natural deposits; de-icing salt runoff; water softeners
Barium ppm	2	2	0.028	No	August 2021	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters pCi/L	0	15	0.4	No	October 2018	Erosion of natural deposits
Combined Radium pCi/L	0	5	ND	No	October 2018	Erosion of natural deposits
Gross Beta pCi/L	0	50	ND	No	October 2018	Decay of natural and man-made products
Lead & Copper						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Exceedance	Date of Sample	Typical Source of Contamination
Lead ppb	0	AL=15	2 (90 th percentile) None of the ten samples collected exceeded the AL.	No	August 2020	Corrosion of household plumbing systems; Erosion of natural deposits
Copper ppm	1.3	AL=1.3	0.124 (90 th percentile) None of the ten samples collected exceeded the AL.	No	August 2020	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Disinfection By-Products						
Contaminant/Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
TTHM's (Total Trihalomethanes) ppb	0	80	3.3	No	August 2021	By-product of drinking water chlorination
Haloacetic acids (HAAs) ppb	NA	60	1.8	No	August 2021	By-product of drinking water chlorination
Disinfectant Residual Contaminants						
Contaminant/Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Chlorine mg/l	4	4	0.48 to 0.92	No	Monthly	By-product of drinking water chlorination

Results in the table are from testing done in 2018, 2020 and 2021. 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.

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 (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 MCL's 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

We did not have any violations during the year 2021.