

CHARETTE WATER SYSTEM - WSID #5621

Consumer Confidence Report - 2023

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2023. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards over the years, we have dedicated ourselves to providing drinking water that meets all state and federal standards. We continually strive to deliver the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. This report is designed to inform you about the quality water and services we deliver to you every day. Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

To learn more, please call Patricia M. Beavers, Water System Operator at 802.763.3937 or write 19 Johnson Circle, Tunbridge, Vermont 05077. There are no regularly scheduled meetings; however, you can call your Property Manager, Tom Young at Vermont Housing at 802.295.4182

We take drinking water seriously and have qualified conscientious individuals on our staff who review the analysis and confirm the result if it is concerning around the maximum contaminant levels.

The water quality information presented in the tables is from the most recent round of testing done according to the regulations. All data shown were collected during the last calendar year unless otherwise noted in the tables.

We again wish to thank the customers who allow us to sample at their home every month to ensure water quality. We appreciate your assistance in allowing us to do our job well. The last several years have been extremely challenging enough and drinking water is essential. Each year Mother Nature presents further challenges. We continue to ask you to help us help you by doing your part to keep the water safe when making its way to your tap. Each autumn check your service connection and get the heat tape ready and working properly for a cold winter. Make sure the connection through your skirting is easy to get into during deep freezes and piles of snow. Please report low pressure and wet spots you notice in your yard. Check your outside hose bib or spigot to make sure it isn't frozen, leaking or broken. We appreciate conservation during dry times as well. Check your home regularly for leaks. This includes all fixtures especially the toilet that will make a sound when the bowl is continuously filling. When we save a little, we save a lot. Also, please do not put fat, oil or grease and other material down your sinks or drains. Please reuse a can or glass jar for all cooking grease and dispose of it with the household trash.

Water Source Information: Your water comes from:

Source Name	Source Water Type
WELL #2	Groundwater
WELL #3	Groundwater
WELL #4	Groundwater
BULK WATER HAULING	Surface Water

The State of Vermont Water Supply Rule requires Public Community Water Systems to develop a Source Protection Plan. This plan delineates a source protection area for our system and identifies potential and actual sources of contamination. Our plan was updated on September 2, 2021.

Drinking Water Contaminants The sources of drinking water (both tap water and bottled water) include surface water (streams, lakes) and ground water (wells, springs). As water travels over the land's surface or through the ground, it dissolves naturally-occurring minerals. It also picks up substances resulting from the presence of animals and human activity. Some "contaminants" may be harmful. Others, such as iron and sulfur, are not harmful. Public water systems treat water to remove contaminants, if any are present.

In order to ensure that your water is safe to drink, we test it regularly according to regulations established by the U.S. Environmental Protection Agency and the State of Vermont. These regulations limit the amount of various contaminants: 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, may come from a variety of sources such as storm water run-off, agriculture, and residential users.

Radioactive contaminants, which can be naturally occurring or the result of mining activity

Organic contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water run-off, and septic systems.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the past year. It also includes the date and results of any contaminants that we detected within the past five years if tested less than once a year. The presence of these contaminants in the water does not necessarily show that the water poses a health risk.

Terms and abbreviations - In this table you may find terms you might not be familiar with. To help you better understand these terms we have provided the following definitions:

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

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.

Locational Running Annual Average (LRAA): The average of sample analytical results for samples taken at a particular monitoring location during four consecutive calendar quarters.

Maximum Contamination Level (MCL): The “Maximum Allowed” MCL is the highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLG’s as feasible using the best available treatment technology.

Maximum Contamination Level Goal (MCLG): The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLG’s allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. Addition a disinfectant may help control 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 disinfectants in controlling microbial contaminants.

Nephelometric Turbidity Unit (NTU): NTU is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Parts per million (ppm) or Milligrams per liter (mg/l): (one penny in ten thousand dollars)

Parts per billion (ppb) or Micrograms per liter (ug/l): (one penny in ten million dollars)

Parts per trillion (ppt) or Nanograms per liter (ng/l): (one penny in ten billion dollars)

Picocuries per liter (pCi/L): a measure of radioactivity in water

Running Annual Average (RAA): The average of 4 consecutive quarters (when on quarterly monitoring); values in table represent the highest RAA for the year.

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

90th Percentile: Ninety percent of the samples are below the action level. (Nine of ten sites sampled were at or below this level).

Per- and polyfluoroalkyl substances (PFAS): a group of over 4,000 human-made chemicals (they do not occur naturally) that have been used in industry and consumer products worldwide and includes:

- (PFNA): Perfluorononanoic Acid**
- (PFOA): Perfluorooctanoic Acid**
- (PFOS): Perfluorooctane Sulfonic Acid**
- (PFHpA): Perfluoroheptanoic Acid**
- (PFHxS): Perfluorohexane Sulfonic Acid**
- (11Cl-PF3OUdS): 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic Acid**
- (9Cl-PF3ONS): 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic Acid**
- (DONA): 4,8-Dioxa-3H-perfluorononanoic Acid**
- (HFPO-DA): Hexafluoropropylene Oxide Dimer Acid**
- (NEtFOSAA): N-ethyl perfluorooctanesulfonamidoacetic Acid**
- (NMeFOSAA): N-methyl perfluorooctanesulfonamidoacetic Acid**
- (PFBS): Perfluorobutane Sulfonic Acid**
- (PFDA): Perfluorodecanoic Acid**
- (PFDoA): Perfluorododecanoic Acid**
- (PFHxA): Perfluorohexanoic Acid**
- (PFTA): Perfluorotetradecanoic Acid**
- (PFTrDA): Perfluorotridecanoic Acid**
- (PFUnA): Perfluoroundecanoic Acid**

Detected Contaminants CHARETTE WATER SYSTEM

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.35	0.200 - 0.400	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Iron	02/09/2021	0.023	0.023 - 0.023	ppm	NA	NA	Erosion of natural deposits
Nitrate	04/10/2023	0.076	0.076 - 0.076	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

PFAS Contaminants	
Typical Source	A large group of human-made chemicals used widely in manufacturing and consumer products
MCL	20 (individual or sum of the 5 regulated PFAS compounds)
Units	All units in parts per trillion (ppt)

Collection Date	PFHpA	PFNA	PFHxS	PFOA	PFOS	Sum of 5 regulated PFAS compounds
						NO DETECTIONS
11/01/2023	-	-	-	-	-	-
10/07/2020	-	-	-	-	-	-
10/07/2019	-	-	-	-	-	-

*Additional PFAS, not regulated by the Vermont Water Supply Rule, may also have been detected in the past five years. Please contact us if you would like more information on other unregulated PFAS that may be in your drinking water.

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2023	38	38 - 38	ppb	80	0	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	2023	28	28 - 28	ppb	60	0	By-product of drinking water chlorination

Lead and Copper	Collection Date	90th Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
Lead	08/08/2023 - 08/09/2023	0	0 - 0	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	08/08/2023 - 08/09/2023	0.013	0 - 0.025	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits

*The lead and copper AL (Action Level) exceedance is based on the 90th percentile concentration, not the highest detected result.

**Complete lead tap sampling data (i.e. each individual sample result) are available for review. Please contact us if you would like to receive this data.

Health Information Regarding Drinking Water

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 EPA's Safe Drinking Water Hotline (1-800-426-4791). Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline.

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. CHARENTE WATER SYSTEM 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 drinking 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>.

**We continue to haul in water from the Brattleboro Water Department.
Below is a list of their water detections in 2023**

Detected Contaminants BRATTLEBORO WATER DEPT

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.77	0.080 - 1.250	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Nitrate	08/29/2023	0.14	0.069 - 0.14	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

PFAS Contaminants	
Typical Source	A large group of human-made chemicals used widely in manufacturing and consumer products
MCL	20 (individual or sum of the 5 regulated PFAS compounds)
Units	All units in parts per trillion (ppt)

Collection Date	PFHpA	PFNA	PFHxS	PFOA	PFOS	Sum of 5 regulated PFAS compounds
11/07/2023	-	-	-	-	-	-
10/08/2020	-	-	-	-	-	-
10/22/2019	-	-	-	-	-	-

*Additional PFAS, not regulated by the Vermont Water Supply Rule, may also have been detected in the past five years. Please contact us if you would like more information on other unregulated PFAS that may be in your drinking water.

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Combined Radium (-226 & -228)	03/03/2020	0.204	0.204 - 0.204	pCi/L	5	0	Erosion of natural deposits
Radium-226	03/03/2020	0.204	0.204 - 0.204	pCi/L	5	0	Erosion of natural deposits

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2023	40	12 - 58	ppb	80	0	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	2023	27	12 - 43	ppb	60	0	By-product of drinking water chlorination

Lead and Copper	Collection Date	90th Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
Lead	08/08/2023 - 08/15/2023	1.3	0 - 6.6	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	08/08/2023 - 08/15/2023	0.34	0.02 - 0.45	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits

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Uncorrected Significant Deficiencies

The system is required to inform the public of any significant deficiencies identified during a sanitary survey conducted by the Drinking Water and Groundwater Protection Division that have not yet been corrected. For more information please refer to the schedule for compliance in the system's Operating Permit.

Date Identified	Significant Deficiencies	Facility
04/22/2021	No Standby Power	SIGNAL HILL PUMP STATION
04/22/2021	No Standby Power	BLACK MOUNTAIN PUMP STATION
04/22/2021	Building Layout/Operator Safety Inadequate	SIGNAL HILL PUMP STATION

Upcoming and continuing projects for the system:

- **Signal Hill Pump Station Upgrade Project- spring, early summer bidding process 2024**
- **Black Mountain Generator Project- spring, early summer bidding process 2024**
- **Pleasant Valley Water Treatment Plant upgrade completion schedule for summer 2024**