

CHARETTE WATER SYSTEM - WSID #5621

Consumer Confidence Report – 2020

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. 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 802.828.6904.

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 let us into their homes to sample every month to ensure water quality. We appreciate your assistance in allowing us to do our job well. Each year Mother Nature presents some 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 approved in November 2019. Please see the Educational letter and Map at the end of this Report. Please let us know if you wish to see the Plan.

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:

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 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 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.

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

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

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

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

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

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

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

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.

Detected Contaminants CHARETTE WATER SYSTEM

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.3	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
Arsenic	06/05/2019	12.6	0 - 12.6	ppb	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	02/14/2017	0.092	0.092 - 0.092	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Iron	02/13/2018	0.08	0.08 - 0.08	ppm	NA	NA	
Manganese	02/13/2018	15	15 - 15	ppb	NA	NA	Erosion of natural deposits. Vermont Department of Health has established a Health Advisory of 300 ppb. Manganese equal to or greater than 50 ppb can lead to unacceptable taste or staining of fixtures.
Nitrate	05/14/2019	0.1	0.1 - 0.1	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Combined Radium (-226 & -228)	09/10/2015	0.657	0.657 - 0.657	pCi/L	5	0	Erosion of natural deposits
Gross Alpha Particle Activity*	09/10/2015	0.24	0.24 - 0.24	pCi/L	NA	0	Erosion of natural deposits
Radium-226	09/10/2015	0.26	0.26 - 0.26	pCi/L	5	0	Erosion of natural deposits
Radium-228	09/10/2015	0.397	0.397 - 0.397	pCi/L	5	0	Erosion of natural deposits

*Gross Alpha particle activity results include Uranium activity. However, the EPA has set a maximum contaminant level (MCL) for “adjusted” Gross Alpha particle activity (including radium-226 but excluding Uranium) at 15 pCi/L. To determine compliance with the “adjusted” Gross Alpha MCL, a separate Uranium result is required for the adjustment calculation, and it must be converted from mass (ug/L) to activity (pCi/L). The estimated Uranium activity is then subtracted from the Gross Alpha particle activity lab result to yield the “adjusted” Gross Alpha result in pCi/L.

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2017	31	31 - 31	ppb	80	0	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	2017	15	15 - 15	ppb	60	0	By-product of drinking water chlorination

Lead and Copper	Collection Year	90th Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
Lead	2017	0	0 – 0	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	2017	0	0 – 0	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

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

Lead/Copper samples are collected every three years. Our next round is due in 2020.

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. CHARETTE 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>.

While your drinking water meets EPA’s standard for arsenic, it does contain low levels of arsenic. EPA’s standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems

In 2019, every public water system was required to collect PFAS samples by November 30th.

Charette Mobile Home Park collected their samples on October 7, 2019 and there were NO detections of PFAS in the drinking water. Therefore, there is no information on PFAS to report. The language below is informational to the users on the water system. We are expected to collect another round of PFAS samples in the Fourth Quarter 2020

Per- and Polyfluoroalkyl Substances (PFAS) are contaminants you may see reported in your Consumer Confidence Report (CCR) for the first time.

What are PFAS?

PFAS are a group of over 4,000 human-made chemicals (they do not occur naturally) that have been used in industry and consumer products worldwide since at least the 1950s. These chemicals are used to make household and commercial products that resist heat and chemical reactions and repel oil, stains, grease, and water. Some common products that may contain PFAS include non-stick cookware, water-resistant clothing and materials, cleaning products, cosmetics, food packaging materials, and some personal care products. Due to their resilient chemical nature, they don't readily degrade once they are released into the environment. In addition, the common use of these chemicals in industry and consumer products has led to their widespread impact on the environment. The impact of these chemicals on your drinking water continues to be studied.

Why are PFAS being tested in my drinking water?

In May 2019, Act 21 (S.49), an act relating to the regulation of per- and polyfluoroalkyl substances (PFAS) in drinking and surface waters, was signed by Governor Scott. This Act provides a comprehensive framework to identify PFAS contamination and to issue new rules to regulate PFAS levels in drinking water.

What if PFAS have been detected in my drinking water?

Act 21 set an interim standard for the detected concentration of five PFAS in drinking water, or the combined concentration of any of the 5 PFAS, which should not exceed **20 parts per trillion (ppt)**. The interim standard is based on the Health Advisory established by the Vermont Department of Health. The five PFAS are:

(PFNA): Perfluorononanoic Acid

(PFOA): Perfluorooctanoic Acid

(PFOS): Perfluorooctane Sulfonic Acid

(PFHpA): Perfluoroheptanoic Acid

(PFHxS): Perfluorohexane Sulfonic Acid

If your water has been tested and the **sum any of the five PFAS listed above is confirmed to exceed 20 ppt**, a Do Not Drink notice will be issued informing you not to use your water for drinking or cooking, brushing teeth, making ice cubes, making baby formula, washing fruits and vegetables or any other consumptive use. You will be advised to use another source of water for consumption which may include bottled water.

An additional 13 PFAS were required to be tested for, per Act 21. These additional 13 PFAS, listed below, currently do not have an established health-based standard and are not counted toward the combined standard of 20 ppt:

(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

Where can I learn more about PFAS in drinking water?

For information about the health effects of PFAS, please visit www.healthvermont.gov/water/pfas or call the Vermont Department of Health at 1-800-439-8550. If you have specific health concerns, contact your health care provider.

Spring 2020

Dear Neighbor,

We are working with the Vermont Drinking Water and Groundwater Protection Division to develop a program to protect our groundwater supply. Groundwater as a drinking water supply source is generally of high quality; however, it is vulnerable to contamination from a wide range of activities which take place on the ground surface. Once the groundwater is contaminated, it is difficult and expensive to clean to a level which is suitable for drinking.

Because of the high cost associated with groundwater clean-up, we, The Charettes Mobile Home Park water supply system, are in favor of a program of protection which reduces the risk of contamination our groundwater resources. As part of this effort, we have identified that area of land, which directly contributes recharge to the public water supply source - see attached map. This is known as the source protection area (SPA). It is especially important that activities within the source protection area do not discharge contaminants, which may threaten the groundwater which is used for human consumption.

This letter was prepared with the intention of informing you that you have been identified as being located in the source protection area for our water supply system and to increase your awareness of this public groundwater resource. Improperly operated on-site septic disposal systems, accidental chemical spills, and underground fuel storage tanks are only a few examples of land use activities which threaten groundwater quality and of which we hope you will share our concern.

We are asking you to do your best to minimize the release of contaminants in the source protection area which could threaten our groundwater supply. We have information available to help you adopt these preventative practices.

If you have any questions, want further information, or want to discuss this letter or your operating practices, please contact me 802.763.3937, I can, in turn, with your permission, contact the State Department of Environmental Conservation, Drinking Water and Groundwater Protection Division, or whomever else would best respond to your request.

Sincerely,

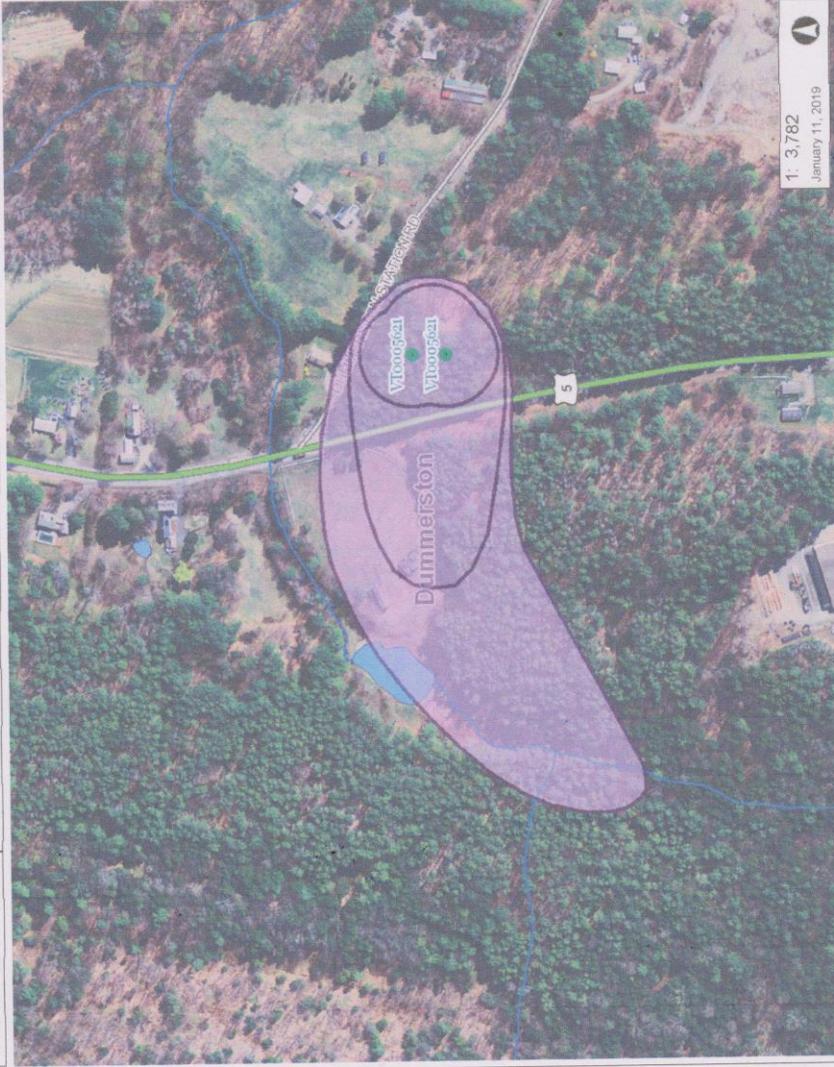
Patricia M. Beavers

Water System Operator

MAP 1

vermont.gov

Charettes SPA - 5621
Vermont Agency of Natural Resources



LEGEND

- Public Water Sources**
 - Active
 - Proposed
 - Inactive
- Ground Water SPA**
 - Active
 - Proposed
 - Inactive
- Roads**
 - Interstate
 - Principal Arterial
 - Minor Arterial
 - Major Collector
 - Minor Collector
 - Local
 - Not part of function Classification S
- Waterbody**
- Stream**
- Town Boundary**

NOTES

Map created using ANR's Natural Resources Atlas
Charettes SPA - 5621

1: 3,782

January 11, 2019

192.0 56.00 112.00 Meters

1" = 315 Ft 1cm = 36 Meters

WGS 1984 Web_Mercator_Auxiliary_Sphere

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DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

**We continue to haul in water from the Brattleboro Water Department.
Below is a list of their water detections in 2019.**

Detected Contaminants BRATTLEBORO WATER DEPT

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.855	0.200 - 1.350	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Nitrate	09/18/2019	0.3	0 - 0.3	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2019	43	9 - 54	ppb	80	0	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	2019	34	10 - 37	ppb	60	0	By-product of drinking water chlorination

Lead and Copper	Collection Year	90th Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
Lead	2017	1.8	0 - 4	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	2017	0.3	0.046 - 0.34	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

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

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Distribution Information

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place and distributing copies by hand or mail.