HARDWICK TOWN WATER SYSTEM. ID #VT0005039

Public Drinking Water Consumer Confidence Report – 2020

This report is a snapshot of the quality of the water that the Town provided in the calendar year 2020. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and Vermont State standards. We are committed to providing you with information and the report is designed to inform you about the quality of water and services we deliver to you every day of the year. To learn more, please attend any of our regularly scheduled Select Board meetings which are held on the first and third Thursdays of the month beginning at 6pm at the Memorial Building at 20 Church Street in Hardwick (due to state of emergency operations as of the issuance of this report meetings are held via Zoom until further notice). Visit http://www.hardwickvt.org for more information.

The person who can answer questions about this report is: Shaun Fielder, Town Manager

Telephone: (802) 472-6120 and/ or Email: shaun.fielder@hardwickvt.org

Hardwick Town Water Source Information

Your water comes from:

Source Name	Source Water Type
WELL 1	Groundwater
WELL 2	Groundwater

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. contact us if you are interested in receiving a copy of the source protection 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 2020 testing cycle. 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. For the contaminants detected the result was within the required level per the Safe Drinking Water Act.

Detected Contaminants HARDWICK TOWN WATER SYSTEM **terms and abbreviations are shown following the table information.

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.168	0.100 - 0.290	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Arsenic	05/13/2020	1.6	1.6 - 1.6	ppb	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Ethylbenzene	01/29/2020	3.1	1 - 3.1	ppb	700	700	Discharge from petroleum refineries
Iron	05/13/2020	0.053	0.053 - 0.053	ppm	NA	NA	
Manganese	05/13/2020	29	29 - 29	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.
Toluene	01/29/2020	0.0037	0 - 0.0037	ppm	1	1	Discharge from petroleum factories
Xylenes	01/29/2020	0.0155	0.0075 - 0.0155	ppm	10	10	Discharge from petroleum factories; Discharge from chemical factories

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2019	1	1 - 1	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Collection Year	90th Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
Lead	2018	1.7	0 - 3.1	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	2018	0.081	0 - 0.087	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.

****Terms and abbreviations** - To help you better understand information shown in the table above we are providing 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**

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. HARDWICK TOWN 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.

Violation(s) that occurred during the year

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. The table below lists a drinking water violation we incurred during 2020.

Type	Category	Analyte	Compliance Period
MONITORING, ROUTINE (DBP), MAJOR	Failure to Monitor	Disinfection Byproducts	01/01/2020 - 12/31/2020

A failure to monitoring means we cannot be sure of the quality of our water during a particular time period. This incident occurred due to the fact we missed the August 31, 2020 deadline to perform the disinfection byproducts test. This particular test is required on a one-time annual basis and is conducted in the warmer months of the year. As soon as we recognized we had missed the testing deadline immediate steps were taken to administer it. The test was conducted on September 17, 2020. The results were well within required parameters as defined by the Safe Drinking Water Act and at the time the test was taken indicate a safe drinking water product.

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 contact us.

Date Identified	Significant Deficiencies	Facility
01/28/2020	Inadequate Chemical Application Facilities	TREATMENT PLANT 1

Following a January 2020 inspection, the Drinking Water & Groundwater Protection Division has indicated the 4% production difference of our two well sources could create a situation where chlorine injection is inconsistent. Please note the injection process is required as part of our operations permit and is a preventative disinfection procedure. We will be investigating well output control options to ensure individual well production is more consistent. Please note the chlorine disinfectant residuals for our finished water product were consistent and well within required parameters for all of 2020.

Distribution Information

Please share this information with all the other people who drink this water and especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses).