BARRE TOWN WATER SYSTEM - VT0005566

Consumer Confidence Report - 2020

This report is a snapshot of the quality of the water that we provided in 2020. 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. We are committed to providing you with information because informed customers are our best allies. This report is designed to inform you about the quality water and services we deliver to you every day. To learn more, please attend any of our regularly scheduled meetings which are held:

6:00 PM on Tuesday nights at Barre Town Municipal Building located at 149 Websterville Road in Websterville, VT.

The person who can answer questions about this report is:

Town Engineer, Josh Martineau Telephone: 802-479-2595 and/or Email: jmartineau@barretown.org

Water System Operator, Jay Hrubovcak Telephone: 802-476-3522 and/or Email: jhrubovcak@barretown.org

Water Source Information

Your water comes from:

Source Name	Source Water Type
WELL 1	Groundwater
BARRE CITY - DIX RESERVOIR	Surface Water
GRANITEVILLE SOURCES	Ground Water under the Influence of 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. Please contact us if you are interested in reviewing 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:

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 BARRE TOWN WATER SYSTEM

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.421	0.020 - 1.070	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Barium	02/26/2020	0.026	0.026 - 0.026	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Iron	02/26/2020	0.038	0.038 - 0.038	ppm	NA	NA	
Nitrate	02/26/2020	1.3	1.3 - 1.3	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
PFBS	12/29/2020	3.52	3.52 - 3.52	ppt	NA	NA	Belongs to a group of manmade chemicals used widely in manufacturing and consumer products

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Combined Radium (-226 & -228)	02/26/2020	0.192	0.192 - 0.192	pCi/L	5	0	Erosion of natural deposits
Radium-226	02/26/2020	0.192	0.192 - 0.192	pCi/L	5	0	Erosion of natural deposits

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2020	45	45 - 45	ppb	80	0	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	2020	23	23 - 23	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	2020	2.8	0 - 19.4	ppb	15	1	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	2020	0.17	0.023 - 0.17	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.

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. BARRE 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.

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.

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.

WEBSTERVILLE WATER SYSTEM - VT0005247

Consumer Confidence Report - 2020

This report is a snapshot of the quality of the water that we provided in 2020. 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. We are committed to providing you with information because informed customers are our best allies. This report is designed to inform you about the quality water and services we deliver to you every day. To learn more, please attend any of our regularly scheduled meetings which are held:

6:00 PM on Tuesday nights at Barre Town Municipal Building located at 149 Websterville Road in Websterville, VT.

The person who can answer questions about this report is:

Town Engineer, Josh Martineau Telephone: 802-479-2595 and/or Email: jmartineau@barretown.org

Water System Operator, Jay Hrubovcak Telephone: 802-476-3522 and/or Email: jhrubovcak@barretown.org

Water Source Information

Your water comes from:

Source Name	Source Water Type
QUARRY HOLE (BARCLAY QUARRY)	Surface Water
QUARRY HOLE (NO. 1)	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. Please contact us if you are interested in reviewing 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:

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 WEBSTERVILLE WATER SYSTEM

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.763	0.120 - 1.440	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Nitrate	02/26/2020	0.093	0.093 - 0.093	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)	02/18/2019	1.2	1.2 - 1.2	pCi/L	5	0	Erosion of natural deposits
Radium-226	02/18/2019	0.614	0.614 - 0.614	pCi/L	5	0	Erosion of natural deposits
Radium-228	02/18/2019	0.586	0.586 - 0.586	pCi/L	5	0	Erosion of natural deposits

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2020	36	36 - 36	ppb	80	0	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	2020	44	44 - 44	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	2018	2.1	0 - 2.5	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	2018	0.31	0.078 - 0.31	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.

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. WEBSTERVILLE 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.

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
07/27/2017	Operation and Maintenance (O&M) Manual Needed	
10/17/2019	Inadequate Water Pressure (Under Normal, Peak, or Maximum Flow Conditions)	

To be Completed by the Water System. *Describe any interim measures taken or work completed for the deficiencies listed above:*

Public Notice - Permit to Operate Issued:

The Water System is required to notify all users of the following compliance schedule contained in the Permit to Operate issued by the State of Vermont Agency of Natural Resources:

1. **On or before December 1, 2016**, the permittee shall submit record drawings and an update to the Water System's Operations and Maintenance Manual which describe the newly installed system controls to the Division.

To be completed by the Water System:
Describe any interim measures completed or progress to date for the compliance schedule(s) listed above.

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.

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.

Why are we telling you this?

This is an annual report on the quality of water delivered by the City of Barre. It meets the **Federal Safe Drinking Water Act (SDWA)** requirement for "**Consumer Confidence Reports**" and contains information on the source of our water, what's in the water and the health risks associated with any contaminants that may be present. Safe water is vital to our community. Please read this report carefully. If you have any questions, you may call the **Water Filtration Facility 476-6885.**

Where does our drinking water come from?

The City of Barre's water supply is located in the Town of Orange. The surface water fed by streams and springs is stored in three impoundments known as The Thurman W. Dix Reservoir and the Upper and Lower Reservoirs. The Dix Reservoir, designed in 1950, holds almost all (93%) of the raw untreated water.

To help protect the area around the reservoirs, known as the watershed, Barre has developed a **Source Protection Plan** that was approved by the State of Vermont on Dec. 29, 1997, April 2008, 2011 and December 2015. The area totaling 11.1 square miles is broken down into three zones based on distance from the surface water supply.

The Plan provides a more comprehensive look at the possible sources of contamination within our watershed.

The 6 million gallon per day water treatment facility receives water directly from the Lower Orange Reservoir. Our treatment process reduces or eliminates turbidity, bacteria, viruses, parasites, color, taste, odor and organics.

The finished water is transported from the facility to the distribution system via a 20" cast iron water main. The system is comprised of two different zones known as the high and low pressure areas. These areas provide water for approximately **15,000** customers.

Highlights of 2020

1. The Facility produced 483.86 million gallons. Production averaged 1.325 MGD.

Key maintenance activities include: RWP #1 rebuilt, new sodium Hydroxide chemical tank.

2. During a Water Supply Division inspection on July 10, 2018 it was noted that the Route 302 pressure reducing vault piping may have been underwater for ground water intrusion. In the event of pipe failure ground water could enter distribution system. A sump pump was added to the vault to prevent water accumulation.

3. Per and Poly Fluorinated Alkyl Acids were tested for at point of entry to distribution system. NONE were detected. This chemical if detected at or above 20 parts per trillion a do not drink notice would have been issued.

• If present, elevated levels of lead can cause serious health

continued in right column

WATER QUALITY --- DATA TABLE --- 2020

Chemical Group Inorganics:	Units	MCL	MCLG	Highest Detected	Date	Average	Range	Vt. Health Advisory	Typical Source	Violation Yes or No
Nitrate	ppm	10.0	10.0	0.11	1/9/2020	n/a	0.11 - 0.11	n/a	Runoff from fertilizer use; Leaching from septic tanks;sewage;Erosion of natural deposits	No
Cyanide	ppm	0.2	0.2	<0.01`	7/29/2013	n/a	n/a	n/a	Poisons, metal plating & photo processing chemicals: industrial	No
Zinc	ppm	5.0		0.12	3/3/2003	n/a	n/a	n/a	Added as a corrosion inhibitor; Naturally occuring	No
Fluoride	ppm	4.0	4.0	0.94	8/24/2020	0.76	0.60 - 0.94	n/a	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	No
Manganese	ppb	n/a	n/a	47	7/31/2019	n/a	47-47	n/a	Erosion of natural deposits. Vermont Department of Health has established a health advisory of 300 ppb. Manganeese equal to or greater than 50ppb can lead to unacceptable taste or staining of fixtures.	
Calcium	ppm	n/a	n/a	24.00	11/7/2018	n/a	24-24	n/a		No
Hardness (As CACO3)	ppm	n/a	n/a	67.00	11/7/2018	n/a	67-67	n/a		No
Mangesium	ppm	n/a	n/a	1.60	11/7/2018	n/a	1.6-1.6	n/a		No
Organics:	**Units**	**MCL**	**MCLG**	**Highest Detected**	**Date**	**Average**	**Range**	**Highest LRAA**	**Typical Source**	**Violation**
Bromodichloromethane	ppb	n/a	n/a	3.90	10/8/2020	2.60	1.4 - 3.9	n/a	By-product of drinking water chlorination	No
Chloroform	ppb	n/a	n/a	38.90	7/15/2020	24.40	11.7 - 38.9	n/a	By-product of drinking water chlorination	No
Monochloroacetic Acid	ppb	n/a	n/a	<5.0	1/8/2020	<5.0	0.0 - 5.0	n/a	By-product of drinking water chlorination	No
Dichloroacetic Acid	ppb	n/a	n/a	13.20	7/15/2020	8.30	4.6 - 13.2	n/a	By-product of drinking water chlorination	No
Dibromoacetic Acid	ppb	n/a	n/a	<3.0	1/8/2020	<3.0	0.0 - 3.0	n/a	By-product of drinking water chlorination	No
Monobromoacetic	ppb	n/a	n/a	<3.0	1/8/2020	<3.0	0.0 - 3.0	n/a	By-product of drinking water chlorination	No
Trichloroacetic Acid	ppb	n/a	n/a	14.60	7/15/2020	10.50	5.5 - 14.6	n/a	By-product of drinking water chlorination	No
Total Trihalomethanes	ppb	80.00	0.00	42.40	7/15/2020	26.90	13.1 - 42.4	29.2	By-product of drinking water chlorination	No
Total Haloacetic Acids	ppb	60.00	0.00	27.10	7/15/2020	18.80	10.1 - 27.1	19.2	By-product of drinking water chlorination	No
Pathogens	**Date**	**MCL**	**MCLG**	**Highest Detected**	**Sample Year**	**Average**	**Range**	**Health Adv**	**Typical Source**	**Violation**
E.coli/Total Coliform	Monthly	n/a	n/a	5.2	2018	n/a	0 - 5.2	n/a	Naturally occurring sampled from Orange Reservoir prior to treatment	No
Cryptosporidium	Monthly	n/a	n/a	0	2018	n/a	0	n/a	Naturally occurring sampled from Orange Reservoir prior to treatment	No
Giardia	Monthly	n/a	n/a	4.14	2018	0.30	0 - 4.14	n/a	Naturally occurring sampled from Orange Reservoir prior to treatment	No
Radionuclides:	**Units**	**MCL**	**MCLG**	**Highest Detected**	**Date**	**Average**	**Range**	**Health Adv**	**Typical Source**	**Violation**
Gross Alpha	pci/L	n/a	0	0.384	1/7/2015	n/a	0.384 -0.384	n/a	Erosion of natural deposits	No
R226	pci/L	5.0	0	0.327	1/7/2015	n/a	0.327 - 0.327	n/a	Erosion of natural deposits	No
R228	pci/L	5.0	0	0.159	1/7/2015	n/a	0.159-0.159	n/a	Erosion of natural deposits	No
Combined Radium	pci/L	5.0	0	0.486	1/7/2015	n/a	0.486 - 0.486	n/a	Erosion of natural deposits	No
Lead & Copper	**Units**	**Action Level**	**Range**	**90th Percentile**	**Sampling Date**	**Sites over Action level**	**Total # of Sites Sampled**	**Health Adv**	**Typical Source**	**Violation**
Lead	ppb	15ppb	0 - 1.5ppb	0.00	June - Sept 2018	0	31	n/a	Corrosion of household plumbing systems; Erosion of natural deposits:leaching from wood preservatives	No
Copper	ppm	1.3 ppm	0 - 0.067ppm	0.041ppm	June - Sept 2018	0	31	n/a	Corrosion of household plumbing systems; Erosion of natural deposits	No
Contaminant Detected	**Units**	**MCL**	**MCLG**	**Lowest Monthly % of samples Meeting MCL**	**Average**	**Highest Detected**	**Date**	**Health Advisory**	**Typical Source**	**Violation**
Turbidity	ntu	0.30	n/a	100.00	0.046	0.082	7/14/20	n/a	Soil run-off; Turbidity is a measure of cloudiness in the water; it's a good indicator of the quality of water.	No
Disinfectant	**Unit**	**MRDL**	**MRDLG**	**RAA**	**Range**		**Sample Year**	**Health Adv**	**Typical Source**	**Violation**
Chlorine	mg/L	4.00	4.00	1.06	0.88-1.22		2020	n/a	Water additive to control microbes	No

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 City of Barre 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 or at http://www.epa.gov/safewater/lead.

Key to Water Quality Data Table

• **Maximum Contaminant level (MCL):** The highest level of a contaminant that is allowed in drinking water.

MCLs are set as close to the MCLG as feasible using the best available treatment.

• **Maximum Contaminant level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

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

• **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).

• **Parts per Million (ppm) or Milligrams per Liter (mg/L):**

One penny in $10,000.

• **Parts per Billion (ppb) or Micrograms per Liter (ug/L):**

One penny in $10 million dollars.

• **Picocuries per Liter (pci/L):** A measure of radioactivity.

• **NTUs:** Nephelometric Turbidity Units

• **n/a:** Not Applicable

• **MRDL** Maximum Residual Disinfectant Level

• **MRDLG** Maximum Residual Disinfectant Goal

• **LRAA** Long Range Annual Average

*The Water System is responsible for the collection of a minimum of 15 bacteriological samples per month.

What could we expect to find in our water?

As water travels over the surface of land or through the ground it dissolves naturally occurring minerals and in some cases radioactive material. It can also pick up substances resulting from human activity or from the presence of animals.

Contaminants that may be present in source water include:

Microbial contaminants: such as viruses and bacteria, which may come from septic systems, agricultural livestock operations and wildlife;

Inorganic contaminants: like salts and metals, which can occur naturally or result from domestic waste water discharges and agricultural uses;

Pesticides and Herbicides: that may come from agriculture and residential uses;

Organic chemical contaminants: that include synthetic and volatile compounds coming from septic tanks and careless disposal of household chemicals, and

Radioactive contaminants: that occur naturally.

Who makes the decisions about our water?

Our City Council. We encourage public interest and participation in our community's decisions that affect drinking water.

How is this done?

By attending the Council meetings on **Tuesday evening at 7:00 p.m.**, in City Hall, **Council Chambers, at 6 North Main Street**, when there are water related issues on the agenda. The Saturday edition of our local newspaper publishes a notice of these meetings.

Health Information

The **EPA (Environmental Protection Agency)** establishes regulations that limit the amount of certain contaminants in drinking water, thus providing the consumer with water that is both palatable and potable (safe). Also, the **FDA (Food & Drug Administration)** promulgates rules and restrictions that limit contaminants in the bottled water industry in order to provide the same protection for the general public.

All drinking water, including bottled water, may contain small amounts of contaminants. Their presence does not always mean that water poses a health risk. However, some people may be more vulnerable to contaminants in drinking water than the general public. Immunocompromised persons with cancer who are undergoing chemotherapy, who have had organ transplants, who suffer from HIV/AIDS or other immune system disorders may be more susceptible to infections. Other groups at greater risk to infections would be the elderly and infant populations. These people should seek advice from their health care provider.

You can contact **EPA's Safe Drinking Water Hotline** at **1-800-426-4791** for more information about contaminants in drinking water and their potential health effects. Their guidelines will provide measures to lessen the risk of infection by Cryptosporidium, Giardia, and other microbial contaminants.

*Gross Alpha particle activity results include Uranium activity. However, the EPA has set a maximum containment level (MCL) for "adjusted" Gross Alpha particle activity (including Radium-226 but excluding Uranium) at 15pCi/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.

City of Barre Water Dept.
6 North Main Street, Suite 5
Barre, VT 05641

US POSTAGE
quadient
FIRST-CLASS MAIL
$000.51 9
04/20/2021 ZIP 05641
043M3121865

BARRE TOWN
PO BOX 116
WEBSTERVIL, VT 05678-0116

05678C116 B002

City of Barre Water Quality Report 2020

CITY OF BARRE
THE GRANITE CENTER OF THE WORLD
INCORPORATED 1895
WASHINGTON COUNTY VERMONT

We are proud to report that water provided to the greater Barre area meets or exceeds established water quality standards!

GRANITEVILLE FIRE DISTRICT 4 - VT0005248

Consumer Confidence Report - 2020

This report is a snapshot of the quality of the water that we provided in 2020. 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. We are committed to providing you with information because informed customers are our best allies. This report is designed to inform you about the quality water and services we deliver to you every day. To learn more, please attend any of our regularly scheduled meetings which are held:

_June 19, 2020_____ (date/time) at _Graniteville, VT_____ __ (location). The person who can answer questions about this report is: (print) _Padraic Smith_____ Telephone: __(802) 249-8587_____ and/ or Email ___wpadraicsmith@gmail.com___

Water Source Information

Your water comes from:

Source Name Source Water Type	
# 1 WELL (RESERVOIR 1)	Ground Water under the Influence of Surface Water
GALE RES INF GALL 2-1+2-1A (A)	Groundwater
	LINE INF GALL 1-1 (A) Ground Water under the Influence of
RES 1 SOUTH LINE INF GALL (A)	Ground Water under the Influence of Surface Water
RESERVOIR 3 COLLECTION BOX	Groundwater
RES 1	Ground Water under the Influence of Surface Water
RES 2	Ground Water under the Influence of Surface Water
WELL 3 (RESERVOIR 2)	Ground Water under the Influence of Surface Water
BARRE TOWN CONNECTION	Surface Water
RES 1 INF GALL 1-17 (B)	Ground Water under the Influence of Surface Water
RES 1 INF GALL 1-18 (C)	Ground Water under the Influence of Surface Water

	LINE INF GALL 1-2 (B) Ground Water under the Influence of
RES I NORTH LINE INF GALL (C)	Ground Water under the Influence of Surface Water
RES I NORTH LINE INF GALL 1-4 (D)	Ground Water under the Influence of Surface Water
RES I NORTH LINE INF GALL 1-5 (E)	Ground Water under the Influence of Surface Water
RES I NORTH LINE INF GALL 1-6 (F)	Ground Water under the Influence of Surface Water
RES I NORTH LINE INF GALL 1-7 (G)	Ground Water under the Influence of Surface Water
RES I SOUTH LINE INF GALL (B)	Ground Water under the Influence of Surface Water
RES I SOUTH LINE INF GALL (C)	Ground Water under the Influence of Surface Water
RES 1 SOUTH LINE INF GALL (D)	Ground Water under the Influence of Surface Water
RES 1 SOUTH LINE INF GALL (E)	Ground Water under the Influence of Surface Water

GALE RES INF GALL 2-2 TO 2-9 (B) Groundwater

GALE RES INF GALL 2-2 TO 2-9 (C)	Groundwater
GALE RES INF GALL 2-2 TO 2-9 (D)	Groundwater
GALE RES INF GALL 2-2 TO 2-9 (E)	Groundwater
GALE RES INF GALL 2-2 TO 2-9 (F)	Groundwater
GALE RES INF GALL 2-2 TO 2-9 (G)	Groundwater
RES 3 SPRING 3-1 (B)	Groundwater
RES 3 SPRING 3-2 (C)	Groundwater
WELL 6	Groundwater

Buyer Seller	
BARRE TOWN WATER SYSTEM BARRE CITY WA	

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. Please contact us if you are interested in reviewing 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:

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 GRANITEVILLE FIRE DISTRICT 4

Disinfection Residual	RAA	RANGE	Unit			G Typical Source
Chlorine	0.37	0.200 - 0.510	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit			ypical Source

Nitrate	06/16/2020	0.28	0.28 - 0.28	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit			Typical Source
Total Trihalomethanes	2020	54	54 - 54	ppb	80	0	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	2020	20	20 - 20	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	2019	1.5	0 - 1.6	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	2019	0.15	0.027 - 0.17	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.

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 below table lists any drinking water violations we incurred during 2020. A failure to perform required monitoring means we cannot be sure of the quality of our water during that time.

Type	Category	Analyte	Compliance Period

MONITORING, ROUTINE (DBP), MAJOR	Failu		11/01/2020 - 11/30/2020
MONITORING, ROUTINE, MAJOR (RTCR) Failu			11/01/2020 - 11/30/2020

To be Completed by the Water System. *List any steps taken to correct the violations listed above:*

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. GRANITEVILLE FIRE DISTRICT 4 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.

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.

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.