



Vermont Department of Environmental Conservation

Agency of Natural Resources

Drinking Water and Groundwater Protection Division

One National Life Drive - Main 2 [phone] 802-828-1535

Montpelier, VT 05620-3521 [fax] 802-828-1541

<http://dec.vermont.gov/water>

March 15, 2019

CARL ROGERS

PO BOX 116

WEBSTERVILLE, VT 05678

Re: 2018 Consumer Confidence Report for BARRE TOWN WATER SYSTEM - VT0005566

Dear CARL ROGERS:

It's that time of year again! All Public Community Water Systems are required to provide Consumer Confidence Reports (CCRs) to their customers by **July 1, 2019**.

The enclosed template is designed to help Public Community Water Systems create an individual CCR for Calendar Year 2018. Please read it carefully **as there are sections that must be completed and included in the Public Community Water System CCR**. Be sure to review the accuracy of the data included in the template. Once completed, please copy and distribute the CCR to all consumers. The Environmental Protection Agency (EPA) requires all of the data and nearly all of the information provided in the template to be included in the CCR. CCR's may be reconstructed to include a summary promoting confidence in the use of the drinking water that is provided, good news items, or additional local information. The CCR is an excellent tool for promoting water efficiency and conservation as well as to convey recent water system information such as the hiring of new employees, noting employee accomplishments, recent water system improvements, rate information, or explaining the need for updated treatment facilities.

Revised Total Coliform Rule (RTCR): The RTCR was implemented on April 1, 2016 and has certain reporting requirements that must be included in your CCR. This may include updated health information, an explanation of treatment technique violations and a discussion about Level 1 and/or Level 2 Assessments. **If you triggered a Level 1 or Level 2 Assessment, you must complete that section of the CCR by entering the number of corrective actions required as well as the number of corrective actions completed in the bracketed sections provided.** You should also confirm that the number of Assessments that were required is accurate.

If applicable, the following sections may be included in the template:

1. Public Notification - Permit to Operate with a compliance schedule: For water systems currently operating under a Permit to Operate which contains a compliance schedule, the permit public notice language has been inserted into the CCR template. This fulfills the annual public notice requirement specified in Section II D of the Permit to Operate.

2. Public Notification - Uncorrected Significant Deficiencies: Community Water Systems are required to provide annual public notification by July 1st of any uncorrected significant deficiency(s) identified by the Division during a sanitary survey until each significant deficiency is corrected. If the Division has on record uncorrected significant deficiencies for the Public Community Water System they are listed in the CCR template along with the date identified. **In addition to listing significant deficiencies, the system is required to add information about the State approved plan and schedule for correction including interim measures, progress to date and any interim measures completed.** An explanation for each significant deficiency listed is provided in the most recent sanitary survey letter issued by the Division. Reminder - Systems are also required to correct any minor deficiencies identified during the most recent sanitary survey.

Distribution Of CCR: In addition to distributing the CCR to customers, Public Community Water Systems are must make "good faith" efforts to reach all consumers beyond mailing only to billing addresses of the water system. Students, renters, and

workers are examples of the kinds of consumers who may be reached by the “good faith” efforts. Note that the **Consumer Confidence Report Certificate of Delivery** requests that you indicate what other method(s) were used to reach non-bill paying consumers. Select the most appropriate methods to reach those consumers. Options include but are not limited to:

- Posting a direct link to the Public Community Water System’s CCR on the system’s or municipality’s website
- Advertising availability of CCR in news media
- Posting CCR in public places, e.g., libraries, schools or post offices
- Delivering multiple copies for distribution by a single biller customer such as apartment buildings or large private employers
- Delivering the CCR to community organizations

A copy of the CCR along with the completed, signed and dated Certificate of Delivery (enclosed) must be submitted to the Drinking Water and Groundwater Protection Division by July 1, 2019.

Submittal options include:

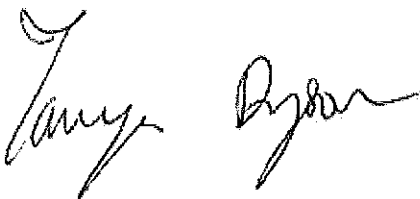
- Email - Tanya.Dyson@vermont.gov
- Fax - 802-828-1541
- Mail - Montpelier address listed in the box at the bottom left of the **Certificate of Delivery**.

Systems are required to keep a copy of the CCR on file for a minimum of three (3) years.

If you have any questions, wish to receive an electronic copy of the template, or need assistance in preparing your CCR, please contact me at 802-461-6143 or email me at: Tanya.Dyson@vermont.gov.

Sincerely,

Tanya Dyson
Compliance Analyst



Note:

Wholesalers: The EPA requires Wholesalers to provide information contained in their CCR to corresponding Consecutive System(s) by **April 1st** annually.

Consecutive Systems: Consecutive Systems must ensure that the Wholesaler’s CCR is distributed to the Consecutive System’s users in addition to the Consecutive System’s CCR. **Wholesalers** are not responsible for providing data on contaminants that Consecutive Systems must monitor (coliform, lead and copper, and DBPs) unless there is a prior written agreement between the Wholesaler and Consecutive System that specifies that the Wholesaler will include the Consecutive System’s information.

Consumer Confidence Report

Electronic Delivery Options

The EPA released a memo outlining how a water system may use electronic CCR delivery in January 2013. Three elements must be met in order to use electronic delivery to comply with the requirement to “directly deliver” the CCR. Electronic delivery may be used in conjunction with other delivery methods.

1. Electronic delivery must provide the CCR in a manner that is “direct.” Paper or electronic communication (e.g., email, a water bill, post card notification) which lists a specific URL which provides a direct link to the CCR. The link must take the consumer to the entire CCR so the consumer does not have to navigate to another webpage to find any CCR content.
2. If a customer is unable to receive a CCR by the chosen electronic method, the CCR must be provided by an alternative method allowed by the rule.
3. If using an electronic delivery, a prominently displayed message and the direct URL must be included in ALL notifications of CCR availability.

Options available to deliver a CCR to all customers (one or more may be used):

- 1. Mail - paper copy (traditional method).** Water System mails a paper copy of the CCR to each bill-paying customer.
- 2. Mail - paper notification that CCR is available.** Water System mails to each bill-paying customer a notification that on a website **via a direct URL** the CCR is available and provides a direct URL to the CCR on a publicly available site on the Internet where it can be viewed. A URL that navigates to a webpage that requires a customer to search for the CCR or enter other information does not meet the “direct delivery” requirement. The mail method for the notification may be, but is not limited to, a water bill insert, statement on the water bill or community newsletter.
- 3. Email - emails a direct URL to CCR.** Water System emails to each bill-paying customer a notification that the CCR is available and provides a direct URL to the CCR on a publicly available site on the Internet. A URL that navigates to a webpage that requires a customer to search for the CCR or enter other information does not meet the “directly deliver” requirement.
- 4. Email - emails CCR sent as an attachment.** Water System emails the CCR as email attachment (e.g., portable document format (PDF)).
- 5. Email - emails CCR embedded in the email.** Water System emails the CCR text and tables inserted into the body of an email (not as an attachment).

For detailed information and examples please see EPA’s January 2013 Safe Drinking Water Act - Consumer Confidence Report Rule Deliver Options memo at: www.drinkingwater.vt.gov/pcws.htm

VT0005566 Consumer Confidence Report Certificate of Delivery 2018

BARRE TOWN WATER SYSTEM

I Carl Rogers hereby certify that the Consumer Confidence Report for calendar year 2018 has been distributed to all customers served by the above water system by mail or an alternative direct delivery method specified below and "good faith" efforts were used to reach non-bill paying consumers. Further, I certify that the information in the report is correct and consistent with the compliance monitoring data previously submitted to the Vermont Drinking Water and Groundwater Protection Division. Any intentional deception or misinformation represented in this report could be cited as a violation of U.S. EPA Safe Drinking Water Act of 1996.

Date CCR Distributed: _____

Delivery Methods Used:

Mail Electronic Delivery Alternative direct delivery method(s) list below:

Good faith efforts were used to reach non-bill paying consumers. Those efforts included the following methods:

Consecutive Water Systems only:

Wholesaler CCR was included when distributing our CCR to customers. (A copy of the wholesaler's CCR does not need to be included when sending the certification to the Division if the wholesaler is a Vermont Public Water System)

All Water Systems:

I certify, as the Administrative Contact or the water system Owner that the Consumer Confidence Report has been provided to all customers.

Signed Carl Rogers Print Carl Rogers

Title Town Manager

Phone # 802-479-9331 Date 5/28/19

**Return to: Department of Environmental Conservation
 Drinking Water and Groundwater Protection Division
 One National Life Drive - Main 2
 Montpelier, VT 05620-3521**

*Include a copy of your CCR when submitting this CCR Certification of Delivery form

Date received: _____

BARRE TOWN WATER SYSTEM - VT0005566

Consumer Confidence Report - 2018

This report is a snapshot of the quality of the water that we provided in 2018. 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:

Each Tuesday night at 6:00 P.M. (except for July and August) at the Barre Town Municipal Building located at 149 Websterville Road in Websterville, VT.

The person who can answer questions about this report is:

Town Engineer, Harry Hinrichsen Telephone: 802-479-2595 and/or Email hhinrichsen@barretown.org or

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

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

Detected Contaminants BARRE TOWN WATER SYSTEM

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.433	0.100 - 0.780	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Barium	01/24/2017	0.025	0.025 - 0.025	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate	01/24/2018	1.4	1.4 - 1.4	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)	01/23/2014	0.672	0.672 - 0.672	pCi/L	5	0	Erosion of natural deposits
Gross Alpha Particle Activity*	03/26/2015	0.157	0.157 - 0.157	pCi/L	NA	0	Erosion of natural deposits
Radium-226	01/23/2014	0.064	0.064 - 0.064	pCi/L	5	0	Erosion of natural deposits
Radium-228	01/23/2014	0.608	0.608 - 0.608	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	2018	30	11 - 34	ppb	80	0	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	2018	7	0 - 19	ppb	60	0	By-product of drinking water chlorination

Lead and Copper	Collection Year	90th Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
Copper	2017	0.97	0.084 - 1.1	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead	2017	2.9	0 - 4.4	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits

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

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 2018. 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	Failure to Monitor	Disinfection Byproducts	07/01/2018 - 09/30/2018

To be Completed by the Water System.

1. Mark calendar in advance to act as reminder for deadlines on reporting, for each quarterly reporting period.

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.

GRANITEVILLE FIRE DISTRICT 4 - VT0005248

Consumer Confidence Report - 2018

This report is a snapshot of the quality of the water that we provided in 2018. 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 of water and services we deliver to you every day. To learn more, please attend any of our regularly scheduled meetings which are held: 2nd Monday of each month at 6:30 at the Community Room Quarry Hill Apartments in Graniteville VT.

The person who can answer questions about this report is: Jen Malnati Telephone: 272-8756 and/or email jenmalnati@yahoo.com

Water Source Information

Source Name	Source Water Type
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
RES I NORTH LINE INF GALL 1-2 (B)	Ground Water under the Influence of Surface Water
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 (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
#1 WELL (RESERVOIR 1)	Ground Water under the Influence of Surface Water
GALE RES INF GALL 2-1+2-1A (A)	Groundwater
RES 1 NORTH LINE INF GALL 1-1 (A)	Ground Water under the Influence of Surface Water
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
WELL 6	Groundwater

Buyer	Seller
BARRE TOWN WATER SYSTEM	BARRE CITY WATER SYSTEM

Detected Contaminants Graniteville Fire District 4

Disinfection	RAA	Range	Unit	MRDL	MRDLG	Typical Source
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Residual						
Chlorine	0.289	0.190-0.460	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Nitrate	07/23/2018	0.22	0.22-0.22	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Disinfection by Products	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2018	2	0-2	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Collection Year	90 th Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
Copper	2015	0.3	0.021-0.31	ppm	1.3	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	2015	4	0-8	ppb	15	0	Corrosion of household plumbing systems; erosion of natural deposits

Violations that Occurred During the Year

Type	Category	Analyte	Compliance Period
MONITORING, ROUTINE MAJOR	Failure to Monitor	Nitrate	04/01/2018-06/30/2018
MONITORING, ROUTINE MAJOR	Failure to Monitor	Volatile Organic Chemicals	04/01/2018-06/30/2018
FOLLOW UP OR ROUTINE TAP M/R (LCR)	Failure to Monitor	Lead & Copper Rule	10/01/2018
MONITORING, ROUTINE (DBP), MAJOR	Failure to Monitor	Disinfection Byproducts	07/01/2018-09/30/2018
MONITORING, ROUTINE (DBP), MAJOR	Failure to Monitor	Chlorine	11/01/2018-11/30/2018
MONITORING, ROUTINE, MAJOR (RTCR)	Failure to Monitor	E. Coli	11/01/2018-11/30/2018

City of Barre

Water Quality Report 2018

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 holds 93% of the raw untreated water.

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. The areas provide water for approximately 15,000 customers.

Highlights of 2018

1. The water system was required to sample for Unregulated Contaminants as specified by the Environmental Protection Agency's Unregulated Contaminant Monitoring 4 rule. Total Organic Carbon was measured at 3 mg/L and Bromide was recorded at 0.005 mg/l. Many other contaminants were tested for with them being under the reported detection limit.
2. The facility produced 452.6 million gallons. Production averaged 1.24 million gallons per day.

Key maintenance activities include: the installation of 5 new 2,000 gallon underground propane storage tanks; rebuilt facility water pump #2; replaced 6,000 gallon fiberglass sodium hypochlorite tank with 3 1,800-gallon high density polyethylene tanks; replaced polyaluminum chloride chemical feed pump; replaced sodium hydroxide chemical feed pump; annual maintenance for stand-by propane generators.

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. 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>

Water Quality Data Tables 2018

Chemical Group	Units	MCL	MCLG	Highest Detected Level	Date	Avg.	Range	VT Health Advisory	Additional Information	Likely Source of Contaminant	Violation Yes or No
Organics											
Nitrate as Nitrogen	ppm	10.0	10.0	0.14	1/23/2018	n/a	n/a	n/a		Runoff from fertilizer use	no
Strontium	ug/L			89.00		n/a	n/a	n/a		Naturally occurring	
Barium	ppm	2.0	2.0	0.02	1/12/2015	n/a	n/a	n/a		Poisons, metal plating and photo	no
Cyanide	ppm	0.2	0.2	<0.01	7/29/2013	n/a	n/a	n/a			no

Hexavalent Chromium	ug/L			0.09		n/a	n/a	n/a		Naturally occurring	
Zinc	ppm	5.0		0.12	3/3/2003	n/a	n/a	n/a	Added as a corrosion inhibitor	Naturally occurring	no
Chlorate	ug/L			520.00	6/6/2018	n/a	n/a	n/a		Product of chlorination	
Fluoride	ppm	4.0	4.0	0.90				n/a	Added to promote dental health	Erosion of natural deposits	no
Manganese	ppm	0.02		0.01	4/25/2017	n/a	n/a	n/a		Discharge from fertilizer	
Organics	Units	MCL	MCLG	Highest Detected Level	Date	Avg.	Range	VT Health Advisory	Additional Information	Likely Source of Contaminant	Violation Yes or No
Bromodichloromethane	ppb	n/a	n/a	4.50	10/18/2018	2.56	1.3-4.5	none	n/a	Byproduct of chlorination	no
Chloroform	ppb	n/a	n/a	40.70	7/17/2018	24.43	10.0-40.7	none	n/a	Byproduct of chlorination	no
Monochloroacetic acid	ppb	n/a	n/a	5.00	1/23/2018	5.00	0.0-5.0	n/a	n/a	Byproduct of chlorination	no
Dichloroacetic Acid	ppb	n/a	n/a	15.30	7/17/2018	10.18	3.6-15.3	n/a	n/a	Byproduct of chlorination	no
Monobromoacetic	ppb	n/a	n/a	3.00	1/23/2018	3.00	0.0-3.0	n/a	n/a	Byproduct of chlorination	no
Trichloroacetic Acid	ppb	n/a	300.00	17.00	4/17/2018	12.43	8.1-17	n/a	n/a	Byproduct of chlorination	no
Total Trihalomethane	ppb	80.00	0.00	43.90	7/17/2018	27.00	10.1-43.9	n/a	n/a	Byproduct of chlorination	no
Total Haloacetic Acid	ppb	60.00	n/a	21.70	7/17/2018	22.62	14.1-31.7	n/a	n/a	Byproduct of chlorination	no
Pathogens	Date										
E.Coli/ Total Coliform	monthly	n/a	n/a	5.00	2018	0.00	0-5.2		Naturally occurring prior to treatment		
Cryptosporidium	monthly	n/a	n/a	0.00	2018	0.00	0.00		Naturally occurring prior to treatment		
Giardia	monthly	n/a	n/a	4.14	2018	0.30	0-4.14		Naturally occurring prior to treatment		
Radionuclides	Units	MCL	MCLG	Highest Detected Level	Date	Avg.	Range	VT Health Advisory	Additional Information	Likely Source of Contaminant	Violation Yes or No
Gross Alpha	pci/L	15.0	n/a	0.384 +/- 0.58	1/20/2015	n/a	n/a	n/a	n/a	Erosion of natural deposits	no
R226	pci/L	5.0	n/a	0.327 +/- 0.425	1/22/2015	n/a	n/a	n/a	n/a	Erosion of natural deposits	no
R228	pci/L	5.0	n/a	0.159 +/- 0.309	1/22/2015	n/a	n/a	n/a	n/a	Erosion of natural deposits	no

Chemical Group	Contaminant Detected	Action Level	90 th Percentile	Sampling Date	# of Sites that exceeded AL	Total # of Sites Sampled	Likely Source	Violation Yes or No
Lead and Copper								
Action Levels	Copper	1.3 mg/L	0.02 mg/L	June-Sept. 2018	0	31	Corrosion of household plumbing systems	no
	Lead	0.015 mg/L	0.001 mg/L	June-Sept. 2018	0	31	Corrosion of household plumbing systems	no

Contaminant Detected	Units	MCL	MCLG	Lowest Monthly % of Samples Meeting MCL	Date	Avg.	Violation Yes or No	Additional Information	Likely Source of Contaminant
Turbidity	ntu	0.30	n/a	100.00	7/6/2018	0.040	no	Measure of cloudiness in water; good indicator of the quality of water	Soil run-off

Disinfectant	Units	MRDL	MRDLG	Finish Water Avg.
Chlorine	ppm	4.00	0.20	0.99

What could we expect to find in our water?

- 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
- 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.