Rutland City Department of Public Works
Water Treatment Division
2019 Report to Consumers on Water Quality

This report is a snapshot of the quality of the water that we provided in 2019. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. 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.

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.

The person who can answer questions about this report is Scott Taggart at 802-773-0379 or email at rutwater@gmail.com.

Water Source Information

Your water comes from

Source Name	Source Water Type
Mendon Brook	Surface Water

About 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.

2019 Water Quality Test Results - 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 definitionsMaximum Contamination Level Goal (MCLG)**:** The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLG's allow for a margin of safety.

- Maximum Contamination Level Goal (MCLG)**:** The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLG's allow for a margin of safety.
- Maximum Contamination Level (MCL): The "Maximum Allowed" MCL is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
- Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of disinfectants in controlling microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in
- drinking water. Addition a disinfectant may help control microbial contaminants.
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- 90th Percentile: Ninety percent of the samples are below the action level. (Nine of ten sites sampled were at or below this level).
- Treatment Technique (TT): A process aimed to reduce the level of a contaminant in drinking water.
- Parts per million (ppm) or Milligrams per liter (mg/l): (one penny in ten thousand dollars)
- Parts per billion (ppb) or Micrograms per liter (µg/l): (one penny in ten million dollars)
- Picocuries per liter(pCi/L)*:* a measure of radioactivity in water
- Nephelometric Turbidity Unit (NTU): NTU is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- Running Annual Average (RAA): The average of 4 consecutive quarters (when on quarterly monitoring); values in table represent the highest RAA for the year

Rutland City water costs less than one cent per gallon, delivered to your home. When you include the cost of sewage treatment to safely return the water to the environment, the total cost is only 1.7 cents per gallon.

Key To Table

AL = Action Level
CDS = Compliance Data System
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
MFL = million fibers per liter
NTU = Nephelometric Turbidity Units
mrem/year = milligrams per year (a measure of radiation absorbed by the body)
pic/l = picocuries per liter (a measure of radioactivity)
ppm = parts per million, or milligrams per liter (mg/l)
ppb = parts per billion, or micrograms per liter (µg/l)
ppt = parts per trillion, or nanograms per liter
ppq = parts per quadrillion, or picograms per liter
RAA = Running Annual Average
TT = Treatment Technique

Contaminant Inorganic Contaminants	Date Tested	Unit	MCL	MCLG	Maximum Detected Level	Range	Typical Source	Violation
Calcium	9/9/2010	ppm			12	12.0 – 12.0		NO
Fluoride[2]	Daily	ppm	4	4	0.78 2/7/ 2019	0.44– 0.78	See notes below[3]	NO
Total Hardness (as CACO3)	9/9/2010	ppm			48.0	48.0 – 48.0		NO
Manganese	1/16/2019	ppm			<0.010	<0.010		NO
Nitrate	1/16/2019	ppm	10	10	0.30	0.30 – 0.30	See notes below[4]	NO
Nitrate - Nitrite	6/5/2014	ppm	10	10	0.30	0.30 – 0.30	See notes below[4]	NO

Radionuclides

Gross Alpha	1/5/2012	pic/l	15	NA	< 3.00	< 3.00	Erosion of natural deposits.	NO

Microbiological Contaminants

Turbidity[1,5]	Daily	NTU	100% of samples <1 NTU	NA	0.07 11/18/2019	0.02 – 0.07	Soil runoff.	NO

Disinfection Byproducts	Date Tested	Unit	MCL	MCLG	LRAA	Range	Typical Source	Violation
Total Haloacetic Acids[6]	Quarterly	ppb	60	0	53	33 – 66	By-product from drinking water chlorination	NO
TTHMs [Total Trihalomethanes][7]	Quarterly	ppb	80	0	42	20 – 58	By-product from drinking water chlorination	NO

Lead and Copper	Monitoring Period	90th Percentile	Range	Unit	AL	Sites over AL	Typical Source
Copper[8,9]	2019 to 2022	0.25	0.049 – 0.310	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead[8,9]	2019 to 2022	1	0 – 2.2	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits.

Unregulated Contaminants	Date Tested	Unit	MCL	MCLG	Maximum Detected Level	Range	Typical Source
Chlorate	1/6/2014	ug/L	NA	NA	110.0	110.0 – 110.0	
Strontium	1/6/2014	ug/L	NA	NA	24.0	23.0 – 24.0	

Disinfectant Residual	Date Tested	Unit	MRDL	MRDLG	RAA	Range	Typical Source
Chlorine	Monthly	Mg/L	4.0	4.0	1.02	0.81 – 1.23	Water additive to control microbes.

Violations that occurred during the year

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of a 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 2019. 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
No Violations Occurred in the Calendar Year 2019			

Revised Total Coliform Rule (RTCR) TT Violation(s)

No RTCR TT Violations

Level 1 Assessment(s)

No Level 1 Assessment was required.

Level 2 Assessment(s)

No Level 2 Assessment was required.

Water-Quality Table Footnotes

[1]With the exception of turbidity, all analyses were performed at an independent state certified laboratory.
[2]Fluoride - We add fluoride to our water for dental care. The medically recommended range for effective dental benefit is 0.7 to 0.9 ppm.
[3]Typical source of Fluoride - Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
[4]Typical source of Nitrate - Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
[5]Turbidity is a measure of cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of disinfectants and our filtration system.
[6]Total Haloacetic Acids – Our running annual average is 53 ppb.
[7]Total Trihalomethanes – Our running annual average is 42 ppb.
[8]Lead and Copper - No samples out of thirty exceeded the action level. Further action is required if four samples out of thirty exceed the action level.
[9]The 90th percentile action level for copper is 1.3 mg/L our level was 0.260 mg/L and for lead it is 0.015 mg/l our level was 0.001 mg/L.

Availability of Monitoring Data for Unregulated Contaminants

Our Water System has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact Jeffrey Wennberg at 802-773-1813 or PO Box 969, Rutland, VT 05702.

Unregulated Contaminants

During testing, performed once each year, our water showed a radon of level of less than 3.0 picocuries per liter (pic/l). The U.S. Environmental Protection Agency (EPA) is preparing a regulation which will specify a Maximum Contaminant Level for radon. Radon is a radioactive gas that occurs naturally in ground water and is released from water into the air during household use. At high exposure levels it can cause lung cancer. Radon readings in our water are low and should not cause concern.

Potential Sources of Contamination

Route 4: a major highway that runs through the watershed, it is very heavily traveled highway with many trucks traveling through carrying many different products.
Alpine pipeline: the sewer line running along route 4 carrying sewage from the businesses and some residential properties located in our watershed. The sewage line is now accepting sewage from Killington Mountain Resort.
Vermont state highway garage: this location stores a large amount of de-icing materials used on the highways in the area.
Pico ski area: a threat if there was an accidental spill of a fossil fuel or a sewage problem.
Hotels, motels, restaurants: heating fuels and cleaning chemicals used.
Residential properties: heating fuels and most have on site septic systems.

Required Additional Health Information

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. Rutland City Water Department 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.

Public Notice - Permit to Operate Issued April 7, 2016: 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 August 1, 2016, the Permittee shall develop and submit to the Division a distribution system improvements plan and schedule for providing acceptable flushing capabilities for all dead end distribution pipes.

Public Notice - 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	Deficiency	Facility
5/19/2016	Inadequate Water Pressure (Under Normal, Peak, or Maximum Flow Conditions)	Distribution System

Public Notice – System Response to Compliance Schedule: On June 15, 2015 the Department of Public Works submitted a plan to the Drinking Water and Groundwater Protection Division listing the actions that will be taken to address dead end water mains. As of January 1, 2020 the Department is ahead of the planned implementation schedule.

Under normal operating conditions all locations on the system have more than adequate water pressure; however under maximum flow conditions, such as when certain hydrants are in use, pressures can be temporarily inadequate in two locations. The top of Gleason Road is one area. To provide relief the Department eliminated two major restrictions in the Gleason Road main in 2017. The other one is Campbell Road. In 2016 and 2017 the City sought and received $1.7 million in bonding authority from the voters to install a new water main from Park Street beneath Otter Creek to feed the dead end main on Dorr Drive, and connect mains on Dorr Drive to Campbell Road, thereby eliminating two dead end mains. The project was completed in 2019. Tests indicate water pressure issues in this area have been resolved.

Workers for Belden Co. install a new water main on Park Street to connect to the dead end main on Dorr Drive. Completed in 2019, this project resolved long-standing water pressure issues west of Otter Creek.

PUBLIC NOTICE
PFAS Testing

The Vermont Legislature required all public water systems to test for the presence of a family of chemicals called per- and polyfluoroalkyl substances (PFAS) by December. Rutland City's test results indicated "non-detect" for every PFAS chemical tested.

PUBLIC NOTICE
Monitoring Data for Unregulated Contaminants

Our Water System has sampled for a series of unregulated contaminants, per the Unregulated Contaminant Monitoring Rule (UCMR), established by the Environmental Protection Agency (EPA). Unregulated contaminants are those that don't yet have a health-based drinking water standard. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a health-based standard. Every five years the EPA develops a new list of UCMR contaminants. The results of our sampling are displayed in the table below.
For more information, please visit www.epa.gov/dwucmr.

Detected Unregulated Contaminants – Rutland City Water Department

Contaminant	Range	Average	Units
HAA5	22.988 - 71.3	47.549	µg/L
HAA6Br	1.902 - 3.544	2.810	µg/L
HAA9	24.89 - 80.602	50.359	µg/L
Total Organic Carbon	1330.1 - 2192.2	1708.250	µg/L

*Regulated Haloacetic Acids (HAA5) are included in the monitoring program to gain a better understanding of co-occurrence with currently unregulated disinfection byproducts.
HAA5 includes: dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid.
HAA6Br includes: bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, dibromochloroacetic acid, monobromoacetic acid, tribromoacetic acid.
HAA9 includes: bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, trichloroacetic acid.

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.