

Rutland City Water Treatment Division

2012 Report to Consumers on Water Quality

This report is a snapshot of the quality of the water that we provided in 2012. 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

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.

2012 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 definitions:

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

Maximum Contamination Level (MCL): The "Maximum Allowed" MCL is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of disinfectants in controlling microbial contaminants.

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

Action Level (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 (ug/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

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
Nitrate	1/5/2012	Ppm	10	10	0.21	0.21 – 0.21	See notes below	NO
Calcium	9/9/2010	mg/L			12	12.0 – 12.0		NO
Total Hardness (as CaCO ₃)	9/9/2010	mg/L			48	48.0 – 48.0		NO
Magnesium	9/9/2010	mg/L			4.5	4.5 – 4.5		NO
Fluoride	Daily	mg/L	4	4	1.3 1/24/2012	0.6 – 1.3	See notes below	NO

Radionuclides

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

Turbidity	Daily	NTU	100% of samples < 1 NTU	NA	0.08 5/8/2012	0.04 – 0.08	Soil runoff.	NO
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Disinfection Byproducts	Date Tested	Unit	MCL	MCLG	RAA	Range	Typical Source	Violation
TTHMs [Total Trihalomethanes]	Quarterly	Ppb	80.0	0	47.0	18.0 – 47.0	By-product from drinking water chlorination	NO
Total Haloacetic Acids	Quarterly	Ppb	60.0	0	66.0	27.0 – 66.0	By-product from drinking water chlorination	YES

Lead and Copper	Date Tested	90 th Percentile	95 th Percentile	Range	Unit	AL	Sites over AL	Typical Source
Copper	8/2010	0.2	0.3	0 – 0.03	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead	8/2010	1	3	0 – 42.0	ppb	15	1	Corrosion of household plumbing systems; Erosion of natural deposits.

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 2012. 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
MCL, Average	Maximum Contaminant Level Violation	Total Haloacetic Acids (HAA5)	01/01/2012 - 03/31/2012

Water-Quality Table Footnotes

With the exception of turbidity, all analyses were performed at an independent state certified laboratory.

Total Trihalomethanes – Our running annual average is 47 ppb.

Total Haloacetic Acids – We exceeded the MCL during one sampling period and we are working to bring those levels into compliance.

Our running annual average is 66 ppb.

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.

The 90th percentile action level for copper is 1.3 mg/L our level was 0.272 mg/L and for lead it is 0.015 mg/l our level was 0.003 mg/L.

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.

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.

Typical source of Nitrate - Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Typical source of Fluoride - Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

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.

Unregulated Contaminants

During testing, performed once each year, our water showed a radon 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.

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>.

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. In animal studies, some haloacetic acids have been associated with reproductive or developmental effects.

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 Temporary Operating Permit.

Date Identified	Deficiency	Facility
8/8/2008	Inadequate Water Quality - Level Exceedance	Rutland City Water Department Water System

Haloacetic acids are a group of disinfection byproducts that form when a disinfectant reacts with naturally occurring organic matter in the drinking water. The City of Rutland has completed a pilot study designed to identify the source of haloacetic acids and to come up with ways to reduce their presence in our drinking water. The selected alternative to bring the system into compliance with federal haloacetic acid regulations is switching our secondary disinfectant from chlorine to monochloramine. Based upon information gathered during the pilot study, this change is expected to reduce disinfection byproducts, including haloacetic acids, to a fraction of their current levels. The City is currently designing and permitting a chloramination system. However, since the second quarter of 2012, the City has been in compliance with federal haloacetic acid regulations due to a number of factors. The City will continue to monitor concentrations and only switch to monochloramine if and when it appears necessary to maintain compliance with federal regulations.

Public Notice - Temporary Operating Permit Issued: March 16, 2011

The **Rutland City Water Department Water System (the Water System)**, a public water system under the laws of the State of Vermont, was recently reissued a Temporary Operating Permit. The Secretary of the Agency of Natural Resources found that such issuance will not unreasonably contribute to a public health risk, although the **Rutland City Water Department Water System** does not presently comply with certain requirements of the Federal Safe Drinking Water Act and applicable state statutes and rules. The nature and extent of the noncompliance are as follows:

The Water System currently exceeds the established maximum contaminant level for the total haloacetic acids group of disinfection by products in the drinking water.

Chlorine disinfection by product sample results collected at Stage 1 Disinfection By Product Rule locations for total haloacetic acids (HAA5) currently exceed the established federal maximum contaminant level of 0.060 mg/L. *Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.* Users may choose to utilize carbon filtration (pitcher style or faucet mounted) which is known to reduce disinfection by products, and are encouraged to consult their doctor with specific health concerns. The Water System is required under a schedule for compliance within a temporary permit to operate as issued by the Department of Environmental Conservation to achieve compliance with the MCLs for disinfection by product concentrations by October 1, 2013, if not before.

The Water System is following through on specific requirements of the Drinking Water and Groundwater Protection Division to eliminate all potential sanitary hazards and provide for future system durability and reliability. In accordance with the Vermont Water Supply Rule, the Division has requested the timely resolution of all water system deficiencies. To obtain more specific information regarding these necessary public drinking water improvements, please call Evan Pilachowski of Rutland City Water Department Water System at (802) 773-1813.

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.