

Water Quality Report—2009

**Brattleboro Water Department
Department of Public Works
211 Fairground Road
Brattleboro, VT 05301
WSID # 5290**



**Our mission is to provide safe,
clean, dependable drinking
water at an affordable price.**

This report is a snapshot of the quality of water that we provided between January 1 through December 31, 2008. 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.

Where does your water come from?

The majority of Brattleboro's drinking water is supplied from the Pleasant Valley Reservoir and Water Filtration Plant located off Pleasant Valley Road. We also supplied a portion of your water from the Retreat Meadows Well Water Plant located along the West River. Pleasant Valley Reservoir is a man-made surface water supply operated by the Town of Brattleboro. The watershed supplying Pleasant Valley Reservoir includes the drainage area of Sunset Lake, the upper reaches of Stickney Brook, all of Kelly Brook and Langille Brook. Retreat Meadows Well Plant is supplied by three gravel packed wells that are not influenced by surface water.

We have a Source Protection Plan avail-

able from our office that provides more information such as potential sources of contamination. The Vermont Water Supply Division approved our updated Source Protection Plan in 2005. Copies can be viewed or obtained at The Department of Public Works.

Source Name	Source Water Type
Well #1	Ground Water
Well #2	Ground Water
Well #3	Ground Water
Pleasant Valley Reservoir	Surface Water
Langlie Brook Diversion	Surface Water
Kelly Brook Diversion	Surface Water
Stickney Brook Diversion	Surface Water

Drinking Water Contaminants

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 surface of the land or through the ground, it dissolves naturally occurring minerals. It also

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picks up substances resulting from human activity and from animals. 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 organisms* (viruses and bacteria) may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants* (salts and metals) 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 agriculture, storm water runoff, residential uses, and careless disposal of household chemicals.
- *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 run-off, and septic systems.

- *Radioactive contaminants*, which can be naturally occurring or the result of mining activity.

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).

W A T E R Q U A L I T Y D A T A

The tables on the following page lists all the drinking water contaminants that we detected during the 2008 calendar year. It also includes the date and results of any contaminants that we detected within the past five years, 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 the following 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 health. MCLGs 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. MCLs are set as close to the MCLGs as feasible using the best available treatment.

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. Additional 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: 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)

Pico curies 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.

Level of Detected Contaminants, Brattleboro Water Department

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were found in the Calendar Year of 2008				

Chemical Contaminant	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
BARIUM	2/05/2008	0.011	0.011	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
MANGANESE	2/05/2008	0.009	0.009	mg/l	0.05		

Radionuclide	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2008							

No Detected Results were Found in the Calendar Year of 2008							
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Lead and Copper	Date	90 th Percentile	95 th Percentile	Range	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2008-2010	0.15	0.2	0.02-0.19	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits. Leaching from wood preservative
LEAD	2008-2010	2	3	1-44	ppb	15	1	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection Byproducts	Monitoring Period	RAA	Range	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2008	29	10-54	ppb	60	0	By-product of drinking water disinfection
TTHM	2008	50	11-93	ppb	80	0	By-product of drinking water disinfection

Violation(s) that occurred during the year.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. The table below lists any drinking water violations we incurred during 2008. 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 2008			

Water System News

Over the past year much of Public Works focus has been on our Waste Water Treatment Plant's proposed upgrade. During this time both our surface water plant at Pleasant Valley and ground water plant on Route 30 produced good quality water with few problems. Water mains were flushed both spring and fall alleviating the discolored water problems of the year before.

Well #1 along the West River was redeveloped last summer. Redeveloped is a term for a complete cleaning of the well screen and the surrounding gravel pack, allowing water to more easily flow into the well casing for pumping.

2008 has been a year of additional testing, mandated under several new Federal rules and regulation. We have completed about 70% of the sampling of raw surface water under the **Long Term 2 Enhanced Surface**

Water Treatment Rule (LT2). These raw water samples are being tested for cryptosporidium, giardia lamblia, E. coli, and total coliform bacteria. The LT2 is a two-year program with samples submitted every month. Based on the data from this study, the EPA and State will determine the vulnerability of our source to the microbial contaminants, and if required, additional treatment to our water supply. The cost of this two-year program will be around \$14,000.

Stage 2 Disinfection By Product Rule.

In addition to our normal quarterly sampling at four sites for trihalomethanes and haloacetic acids, we are testing at eight additional sites where TTHM's and HAA5's are sampled every other month for a one-year period. This program began in October of 2008. The results from this program may determine future disinfection practices and treatment

methods. Each of the six bi-monthly tests costs approximately \$2,150 or \$12,900 for the rule.

Unregulated Contaminant Monitoring Regulation #2

Starting in October of 2008, we also began quarterly sampling for the UCMR2. Samples representing water from the entry point to the distribution system, from both the surface water and ground water supplies are sent to a contract lab to monitor for ten additional chemical contaminants. This expands the list of contaminants that the EPA regulates in a water supply. These 10 chemical compounds represent insecticides, flame-retardants, and explosives. The data from this study will help to formulate safer use practices, and up to date regulations. The cost of this program, which includes six samples (2 from the Wells, and 4 from Pleasant Valley) is \$2,400.

WaterSense, a partnership program sponsored by the U.S. Environmental Protection Agency, makes it easy for Americans to save water and protect the environment. Look for the WaterSense label to choose quality, water-efficient products. Many products are available, and don't require a change in lifestyle. To learn more about this program, please visit the WaterSense web site at

<http://www.epa.gov/watersense/index.htm>



We encourage anyone with questions or concerns regarding our water supply to contact one of the persons listed below. You can also find additional information on our home page at www.sover.net/~brattdpw or on the Town web site at www.brattleboro.org.

Owner/Operator and Public Participation Opportunities

If you have any questions about this report or concerning your water quality, please contact the person(s) listed below. We want our customers to be informed about their water quality. If you would like to learn more, please attend any of our regularly scheduled meetings. The Brattleboro Selectboard holds regular meetings on every other Tuesday evening. These meetings are normally held in the Selectboard's Meeting Room at 230 Main Street. Please refer to the local newspapers for exact times and dates.

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