CITY OF MONTPELIER WATER SYSTEM-VT#5272
CONSUMER CONFIDENCE REPORT
Water Quality Report for Calendar Year 2018

This report is a snapshot of the quality of the water that we provided in 2017. Included are the details about where our 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. For more information, please contact Thomas J. McArdle, Director of Public Works, or Kurt S. Motyka, PE, City Engineer, at 802.223.9508.

Water Source Information

The source of raw water prior to treatment is Berlin Pond, located in the town of Berlin. Berlin Pond, fed by streams and springs, is a 270-acre pond impounding 1.5 billion gallons of water. Raw water is transmitted via pipeline to the Water Filtration Facility to be treated for reduction or elimination of bacteria, viruses, parasites, color, taste, odor, turbidity, organic matter, iron and manganese.

The City of Montpelier has developed a Source Water Protection Plan for the Berlin Pond watershed area, approved by the Montpelier City Council on June 27, 2001, and by the Vermont Water Supply Division on September 8, 2001, that provides more information. This plan delineates a source protection area for our system and identifies potential and actual sources of contamination. The City is currently implementing the plan and reports annually to the State on our progress. Since recreational use was permitted on the Pond, modifications have been made to the Source Protection Plan, and the City had an engineering study conducted to examine the potential impacts on water quality. The City is currently negotiating with interested stakeholders on possible limited restrictions.

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: 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. MCLs are set as close to the MCLGs 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. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. Addition of 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 (µg/l): (one penny in ten million 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 process aimed 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 MONTPELIER WATER SYSTEM

Microbiological	Result	MCL	MCLG	Typical Source

Disinfection Residual	RAA	Range	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.773	0.060-1.250	mg/l	4.0	4.0	Water additive to control microbes.

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
FLUORIDE	11/12/2018	0.82	0.4-0.82	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
IRON	4/17/2014	0.036	.036-.036	ppm	NA	NA	
NITRATE	01/09/2018	0.047	0.047-0.047	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Lead and Copper	Monitoring Period	90TH Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
COPPER	2016	0.61	0-0.92	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2016	3.00	0-19	ppb	15	1	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.*

Disinfection By-Products	Monitoring Period	LRAA	Range	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2018	11	7-14	ppb	60	0	By-product of drinking water disinfection
TOTAL TRIHALOMETHANES (TTHM)	2018	19	12-29	ppb	80	0	By-product of drinking water chlorination

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 2017. A failure to perform required monitoring means we cannot be sure of the quality of our water during that time.

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 those 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. The Montpelier 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.

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 Water Supply 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
11/01/2001	Service Connections on Untreated Water Line

Public Notice – Permit to Operate Issued April 17, 2013

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, 2014, the Permittee shall either provide for filtration and disinfection to those service connections currently being served untreated water from the City of Montpelier's raw water transmission line or physically disconnect those service connections from the raw water transmission line.

   The City attempted to negotiate the installation of new services from the Berlin Water System at no cost to the two remaining customers on the raw water transmission line. The customers refused the offer, indicating that they are satisfied with their existing water source. Due to existing deeded rights to the connections, the City has no legal avenue to require their disconnection from the raw water line. The City wrote to the State Water Supply Division on January 4, 2015, informing them of the failed negotiations, and requested the State pursue enforcement through conditions of the customers' water/wastewater permit.

To learn more about your drinking water, please attend any of the City's scheduled Water Board meetings. To find out the exact date and time of the next meeting, please call the City Manager's Office at 223-9502 or visit the City's website at www.montpelier-vt.org.

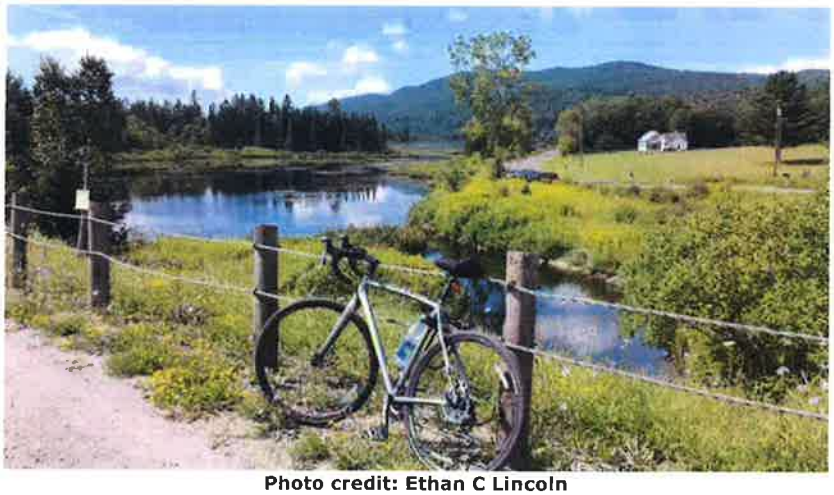

Photo credit: Ethan C Lincoln

Landlords, please share this information with your tenants.

Additional copies of this report are available at the City Clerk/Treasurer's Office, 39 Main Street, Montpelier, and on the City's website: http://www.montpelier-vt.org/DocumentCenter/View/3073