LUDLOW VILLAGE WATER DEPT - VT0005323

Consumer Confidence Report - 2022

The Village of Ludlow Water Department is pleased to present you with the Annual Water Quality Report for the calendar year of 2022. Included are details regarding where your water comes from, what it contains and how it compares to Environmental Protection Agency (EPA) and Vermont State standards. We continually strive to adopt new and better methods to deliver the best quality drinking water to you every day.

To learn more, please attend any of our regularly scheduled meetings which are held on the 1st Tuesday of each month at 5:00 pm in the Howard Barton, Jr. Conference Room, or feel free to stop by the Water/Wastewater Plant Office located at 212 Pleasant Street Extension any weekday between 7:00 am and 3:00 pm.

The person who can answer questions about this report is Joseph Gaudiana - 802-228-8431 – wwtf@tds.net

Water Source Information

Your water comes from:

Source Name	Source Water Type
INFILTRATION GALLERY	Groundwater
PW-1	Groundwater
UNDERGROUND SPRINGS	Groundwater
DW-2 (TW99-1)	Groundwater

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 human and other animal 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 amounts 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 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)
Parts per trillion (ppt) or Nanograms per liter (ng/l): (one penny in ten billion 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).
Per- and polyfluoroalkyl substances (PFAS): a group of over 4,000 human-made chemicals (they do not occur naturally) that have been used in industry and consumer products worldwide and includes:

- **(PFNA): Perfluorononanoic Acid**
- **(PFOA): Perfluorooctanoic Acid**
- **(PFOS): Perfluorooctane Sulfonic Acid**
- **(PFHpA): Perfluoroheptanoic Acid**
- **(PFHxS): Perfluorohexane Sulfonic Acid**
- **(11Cl-PF3OUdS): 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic Acid**
- **(9Cl-PF3ONS): 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic Acid**
- **(DONA): 4,8-Dioxa-3H-perfluorononanoic Acid**
- **(HFPO-DA): Hexafluoropropylene Oxide Dimer Acid**
- **(NEtFOSAA): N-ethyl perfluorooctanesulfonamidoacetic Acid**
- **(NMeFOSAA): N-methyl perfluorooctanesulfonamidoacetic Acid**
- **(PFBS): Perfluorobutane Sulfonic Acid**
- **(PFDA): Perfluorodecanoic Acid**
- **(PFDoA): Perfluorododecanoic Acid**
- **(PFHxA): Perfluorohexanoic Acid**
- **(PFTA): Perfluorotetradecanoic Acid**
- **(PFTrDA): Perfluorotridecanoic Acid**
- **(PFUnA): Perfluoroundecanoic Acid**

Detected Contaminants LUDLOW VILLAGE WATER DEPT

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.161	0.010 - 0.590	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Fluoride	01/04/2022	0.8	0.4 - 0.8	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	10/21/2022	0.32	0.32 - 0.32	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection Byproducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2022	5	5 - 5	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Collection Year	90th Percentile	Range	Unit	AL*	Sites Over AL	Typical Source
Lead	2020	1.2	0 - 133	ppb	15	1	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	2020	0.14	0.071 - 0.17	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

*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 2022. 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 MAJOR	Failure to Monitor	Nitrate	04/01/2022 - 06/30/2022

A “Failure to Monitor” violation occurred for Nitrate testing in 2022. A communication error occurred between the chief operator and the assistant operators. We were required to take a water sample between April and June and the sample was taken in October. The results from that test were similar to the numbers in the past, .32 milligrams per liter. That equals about 1/3 of one part per million, well below the Action Level of 10 parts per million. We now record all monitoring tests on a newly created data sheet to be sure that the error will not happen again in the future.

Health Information Regarding Drinking Water

Some people in the general population may be more vulnerable to contaminants in drinking water than others. 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. LUDLOW VILLAGE WATER DEPT is responsible for providing high quality drinking water, but cannot control the variety of materials used in residential household 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 can 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.

Where can I learn more about PFAS in drinking water?
For information about the health effects of PFAS, please visit www.healthvermont.gov/water/pfas or call the Vermont Department of Health at 1-800-439-8550. If you have specific health concerns, contact your health care provider.

Questions:
If you have any questions regarding the Village of Ludlow's water service, please feel free to contact the Water Department. We want our water customers to be informed about their water quality. You are welcome to attend any of the Water Commission's regularly scheduled meetings that are held on the 1st Tuesday of each month at 5:00 pm in the Howard Barton, Jr. Conference Room, or feel free to stop by the Water/Wastewater Plant Office located at 212 Pleasant Street Extension.

Owner/Official:
Village of Ludlow Water Department
P.O. Box 359 (37 Depot Street)
Ludlow, VT 05149
– Municipal Office/Business Office: (802) 228-2842
– Water & Wastewater Plant Office: (802) 228-8431
– Wastewater Plant Physical Location: 212 Pleasant Street Extension
– Water Plant Physical Location: 34 Snell Hill Road
– wwtf@tds.net

Water Superintendent
Scott Murphy, Ludlow Municipal Manager

Chief Operator(s)
Charles M. Craig: thru August 12, 2022
Joseph Gaudiana: August 13, 2022 - present

Operators In Training
Christopher Strong
Seth McLaughlin