



Photo Credit: Creative Outbursts

This report is a snapshot of the quality of the water that we provided in 2022. 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 this 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. To learn more, please attend any of our regularly scheduled meetings which are held routinely at the Town Hall or check the website for announcements. (At times during the year, the meetings vary).

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# RANDOLPH VILLAGE - VT0005179

## Consumer Confidence Report - 2022

### Water Source Information

Your water comes from:

Source Name	Source Water Type
PEARL STR. WELL	Groundwater
WELL B	Groundwater
WELL D	Groundwater
WELL E	Groundwater
WELL F	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 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 (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 RANDOLPH VILLAGE

Disinfection Residual	RAA	RANGE	Unit	MRDL	MRDLG	Typical Source
Chlorine	0.477	0.030 - 0.930	mg/l	4	4	Water additive to control microbes

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Arsenic	07/13/2022	8.9	0 - 8.9	ppb	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Fluoride	06/21/2022	1	0 - 1	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Iron	07/13/2022	0.25	0 - 0.25	ppm	NA	NA	
Manganese	11/02/2022	400	0 - 400	ppb	NA	NA	Erosion of natural deposits. Vermont Department of Health has established a Health Advisory of 300 ppb. Manganese equal to or greater than 50 ppb can lead to unacceptable taste or staining of fixtures.
Nitrate	01/05/2022	0.44	0 - 0.44	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Combined Radium (-226 & -228)	01/13/2021	0.256	0.172 - 0.256	pCi/L	5	0	Erosion of natural deposits
Radium-226	01/13/2021	0.256	0.172 - 0.256	pCi/L	5	0	Erosion of natural deposits

Disinfection ByProducts	Collection Year	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2022	16	16 - 16	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	2021	0	0 - 0	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	2021	0.35	0.084 - 0.41	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
WATER SUPPLY RULE VIOLATIONS	Water Supply Rule Violation	PUBLIC NOTICE	04/01/2022 - 06/30/2022
WATER SUPPLY RULE VIOLATIONS	Water Supply Rule Violation	PUBLIC NOTICE	07/01/2022 - 09/30/2022
WATER SUPPLY RULE VIOLATIONS	Water Supply Rule Violation	PUBLIC NOTICE	10/01/2022 -

In each of the instances highlighted, public notices were sent out to water system customers as required. The alleged violations are tied to the timing of the filing of the certification of the distribution of the notices. The Town has struggled with staff capacity for more than a year; positions have been filled, added, or augmented, and remaining vacancies will be filled.

## 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. RANDOLPH VILLAGE 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>.

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems

## 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	Significant Deficiencies	Facility
09/11/2017	Required Storage Facility Inadequate	NORTH RESERVOIR
09/11/2017	Inadequate Water Quality - Level Exceedance	PEARL STR. WELL

**Required storage facility inadequate:** The North wells and reservoir project started in 2023 and will be complete in 2024. The project will replace the existing reservoir.

**Inadequate water quality- Level exceedance:** The Randolph Village Water System has two sources of water: The Pearl Street Well and the Pinnacle Road Bedrock Wellfield (4 wells). The elevated manganese levels are from the Pearl Street Well, as the water testing of the Pinnacle Road wellfield showed manganese levels below 0.010mg/L. Currently, construction is underway for the new North Reservoir, treatment building, and wells at the Ellis lot. Construction started in the spring of 2023; the project is currently on pace for completion in July 2024.

### 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.*

## PUBLIC NOTICE

### **\*\*IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER\*\***

#### **Drinking Water at Randolph Village (WSID 5179)**

#### **Contains Elevated Levels of Manganese**

Manganese is a metal that, in small amounts, is part of a healthy diet. Drinking water may naturally contain manganese but when concentrations are greater than 0.05 milligrams per liter (mg/L), the water may become discolored and have an unpleasant taste. Additionally, over a lifetime the USEPA and the Vermont Department of Health (VDH) have established a health advisory for manganese and recommend that people drink water with levels less than 0.300 mg/L in order to protect the nervous system.

A sample first collected on May 12, 2015 contained a manganese concentration of 0.33 mg/L. As a result, the water system is required to sample Pearl Street a minimum of once each quarter and conduct additional distribution system monitoring. The water system is also required to provide an updated manganese public notice each quarter to system users. Manganese was last sampled on August 15, 2023. Results show (Pearl Street) levels exceed 0.300 mg/L and are further summarized below:

Monitoring period (Quarter) of sampling	Location	Manganese result in mg/L
Third Quarter 2023	6 Pearl Street	0.27
Second Quarter 2023	6 Pearl Street	0.18
First Quarter 2023	6 Pearl Street	0.37
Fourth Quarter 2022	6 Pearl Street	0.40
Third Quarter 2022	6 Pearl Street	0.32, 0.20
Second Quarter 2022	6 Pearl Street	0.38
First Quarter 2022	6 Pearl Street	0.38

The Randolph Village Water System utilizes sequestration treatment for manganese at the Pearl Street well, which keeps the manganese in suspension but does not physically remove it from the water. Sequestration is intended to reduce aesthetic complaints about the color of the water and possible staining of fixtures that come into contact with water high in manganese. However, upon ingestion and digestion, the body breaks down the compounds keeping manganese in solution, which allows the manganese to be absorbed by the body as if there were no treatment at all.

#### **What should you do? What does this mean?**

The body only needs a small amount of manganese to function. Infants up to 1 year of age are especially sensitive to excessive amounts of manganese.

**Do not use** the water for making infant formula or infant food, or for drinking water for infants up to 1 year of age. Instead, use either bottled water or water from an alternate source with a manganese level below 0.300 mg/L. To limit exposure, older children and adults may consider an alternate source of drinking water and cooking water.

**Do not boil the water.** Boiling, freezing, filtering or letting the water stand does not reduce the manganese levels. Excessive boiling can cause manganese to become more concentrated, because manganese remains behind when the water evaporates. Manganese in water is not a health concern when showering and bathing, washing food, or other household uses of water, including washing clothes, and dishes.

#### **What is being done?**

The Randolph Village Water System has two sources of water: The Pearl Street Well and the Pinnacle Road Bedrock Wellfield (4 wells). The elevated manganese levels are from the Pearl Street Well, as the water testing of the Pinnacle Road wellfield showed manganese levels below 0.010mg/L. Currently, construction is underway for the new North Reservoir, treatment building, and wells at the Ellis lot. Construction started in the spring of 2023; the project is currently on pace for completion in July 2024.

The State requires testing for manganese at the point at which it enters the water distribution system, which is the 6 Pearl Street location shown in the table. The State also requires the Town to test at least five other locations throughout the water

distribution system; those five locations were tested in August 2023 and had manganese levels between <.010 mg/L and .018 mg/L. Please note, .010 mg/L is the lowest detection limit and the number used for reporting in situations where results are less than .010 mg/L. Please contact the Town for a list of additional locations and manganese sampling results.

For more information from the water system, please contact the Town of Randolph at (802) 728-5433 (Town Offices), (802) 728-9079 (Water/Wastewater Department), or [stp01@randolphvt.org](mailto:stp01@randolphvt.org).

If you have specific health concerns regarding manganese, contact your health care provider.

Please contact the Vermont Department of Health with questions regarding the potential health effects of manganese at 800-439-8550.

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