

*Annual Drinking Water Quality Report for 2021  
Town of Carroll Water District  
Frewsburg Water Department  
5 West Main Street  
Frewsburg, NY 14738  
Public Water Supply ID# NY0600365*

**INTRODUCTION**

To comply with State regulations, Frewsburg Water Department annually issues a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact, Daniel Sisson, Water Supervisor, or Brad Long at 716-569-6406. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings. The meetings are held on the second Wednesday of every month at 6:30 PM at the Town of Carroll Town Hall, 5 West Main Street, Frewsburg, NY.

**WHERE DOES OUR WATER COME FROM?**

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves 2,500 people through 800 service connections. Our water source consists of three groundwater wells, #5, #4, and #2A. The water from well #4 is disinfected with chlorine and pumped into the distribution system. The water from well #2A and well #5 is treated using a stripping tower to remove any volatile organic contaminants then disinfected with chlorine prior to being pumped into the distribution system.

**ARE THERE CONTAMINANTS IN OUR DRINKING WATER?**

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Chautauqua County Health Department at 716-753-4481.

On August 26, 2020, New York State adopted guidelines for Public Water Supplies to begin monitoring for Per- and polyfluoroalkyl substances (PFAS) on a routine basis. These substances include Perfluorooctanoic acid (PFOA), Perfluorooctane sulfonate (PFOS), and 1,4-Dioxane. An MCL of 10 parts per trillion was established for PFOA and PFOS, while 1,4-Dioxane was given a 1 part per billion MCL. Systems of our size were required to begin this required monitoring by February 25, 2021. We collected our first round of monitoring samples on February 4. We are pleased to report that wells #4 and #5 did not have any detections. Well 2A did have detections of PFOS and PFOA, however they were at much lower levels than what were reported in the table from the 2017 sampling. We will continue sampling for these contaminants quarterly in 2021. If there are any issues, we will notify you immediately.

**Table of Detected Contaminants**

| Contaminant   | Violation | Date of Sample | Level Detected                  | Unit Measure-ment | Regulatory Limit (MCL/AL) | MCLG | Likely Source of Contamination  |
|---|-----------|----------------|---------------------------------|-------------------|---------------------------|------|---|
| <b>INORGANIC CONTAMINANTS</b>                                 |           |                |                                 |                   |                           |      |   |
| Nitrate Well #2A  | No        | 12/2/21        | 5.78                            | mg/l              | 10 (MCL)                  | 10   | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.  |
| Nitrate Well 5  | No        | 6/3/21         | 2.11                            | mg/l              | 10 (MCL)                  | 10   | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.  |
| Lead <sup>(1)</sup>   | No        | 9/15/20        | 3.55<br>Range=<br>ND-4.22       | ug/l              | 15 (AL)                   | 0    | Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.   |
| Copper <sup>(2)</sup>   | No        | 9/15/20        | 0.0766<br>Range=<br>0.018-0.097 | mg/l              | 1.3 (AL)                  | 1.3  | Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.   |
| Barium (Well #2A)   | No        | 11/19/20       | 0.297                           | mg/l              | 2 (MCL)                   | 2    | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.   |
| Barium (Well #4)  | No        | 11/19/20       | 0.339                           | mg/l              | 2 (MCL)                   | 2    | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.   |
| Barium (Well #5)  | No        | 11/19/20       | 0.108                           | mg/l              | 2 (MCL)                   | 2    | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits  |
| Arsenic (Well #4)   | No        | 11/19/20       | 3.1                             | ug/l              | 10 (MCL)                  | N/A  | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.   |
| Iron (Well #4)  | No        | Quarterly 2021 | Avg.=57.3<br>Range:<br>ND-229   | ug/l              | 300 (MCL)                 | N/A  | Naturally occurring. Iron has no health effects   |
| Manganese (Well #4)   | No        | Quarterly 2021 | Avg.=264.5<br>Range:<br>252-272 | ug/l              | 300 (MCL)                 | N/A  | Naturally occurring; can be associated with landfill contamination.   |
| Fluoride (Well #4)  | No        | 11/19/20       | 0.1                             | mg/l              | 2.2                       | N/A  | Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.   |
| <b>VOLATILE ORGANIC CONTAMINANTS</b>                          |           |                |                                 |                   |                           |      |   |
| Methylene Chloride (Dichloromethane)                          | No        | 3/5/20         | 0.73                            | ug/l              | 5                         | N/A  | Used as a solvent in paint strippers, as a propellant in aerosols, as a process solvent in the manufacturing of drugs, as a metal cleaning and finishing solvent. |
| <b>STAGE 2 DISINFECTION BYPRODUCTS (Hazzard Street)</b>       |           |                |                                 |                   |                           |      |   |
| Total Haloacetic Acids  | No        | 8/27/20        | 1.79                            | ug/l              | 60(MCL)                   | N/A  | By-products of drinking water chlorination.   |
| Total Trihalomethanes   | No        | 8/27/20        | 11.95                           | ug/l              | 80 (MCL)                  | N/A  | By-products of drinking water chlorination TTHM's are formed when source water contains large amounts of organic matter.  |
| <b>STAGE 2 DISINFECTION BYPRODUCTS (Maple Grove Cemetery)</b> |           |                |                                 |                   |                           |      |   |
| Total Haloacetic Acids  | No        | 8/19/21        | 1.49                            | ug/l              | 60(MCL)                   | N/A  | By-products of drinking water chlorination.   |
| Total Trihalomethanes   | No        | 8/19/21        | 7.83                            | ug/l              | 80 (MCL)                  | N/A  | By-products of drinking water chlorination TTHM's are formed when source water contains large amounts of organic matter.  |

**RADIOLOGICAL (WELL 2A)**

|   |    |                    |                                    |       |                    |                    |  |
|---|----|--------------------|------------------------------------|-------|--------------------|--------------------|--|
| Gross Beta <sup>(3)</sup>                         | No | 3/30/16            | 2.4                                | pCi/l | 50 (MCL)           | 0                  | Decay of natural deposits and man-made emissions.  |
| <b>RADIOLOGICAL (WELL #5)</b>                     |    |                    |                                    |       |                    |                    |  |
| Gross Alpha (Well #5)                             | No | 3/19/15<br>5/28/15 | Avg.=1.30<br>Range=<br>1.26-1.34   | pCi/L | 15(MCL)            | 0                  | Erosion of natural deposits.   |
| Gross Beta <sup>(3)</sup> (Well #5)               | No | 3/19/15<br>5/28/15 | Avg.=0.769<br>Range=<br>0.289-1.25 | pCi/L | 50 (MCL)           | 0                  | Decay of natural deposits and man-made emissions.  |
| Radium 226 (Well #5)                              | No | 3/19/15<br>5/28/15 | Avg.=0.238<br>Range=<br>0.15-0.326 | pCi/L | 5 (MCL)            | 0                  | Erosion of natural deposits  |
| Radium 228 (Well #5)                              | No | 3/19/15<br>5/28/15 | Avg.=0.373<br>Range=<br>0.155-0.59 | pCi/L | 5 (MCL)            | 0                  | Erosion of natural deposits.   |
| Uranium (Well #5)                                 | No | 3/19/15<br>5/28/15 | Avg.=0.402<br>Range=<br>0.283-0.52 | ug/l  | 30 (MCL)           | 0                  | Erosion of natural deposits.   |
| <b>RADIOLOGICAL (WELL #4)</b>                     |    |                    |                                    |       |                    |                    |  |
| Gross Beta <sup>(3)</sup>                         | No | 3/30/16            | 1.0                                | pCi/L | 50 (MCL)           | 0                  | Decay of natural deposits and man-made emissions.  |
| <b>PERFLUOROALKYL SUBSTANCES (PFAS)</b>           |    |                    |                                    |       |                    |                    |  |
| PFOA <sup>(4)</sup>                               | No | 9/2/17             | 8.56                               | ng/L  | 10                 | N/A                | Releases from fluoropolymer manufacturing or processing facilities, wastewater treatment plants and landfills; firefighting foams. |
| PFOS <sup>(4)</sup>                               | No | 9/2/17             | 5.37                               | ng/L  | 10                 | N/A                | Releases from fluoropolymer manufacturing or processing facilities, wastewater treatment plants and landfills; firefighting foams. |
| PFBS <sup>(4)</sup>                               | No | 9/2/17             | 2.68                               | ng/L  | N/A <sup>(5)</sup> | N/A <sup>(5)</sup> | Releases from fluoropolymer manufacturing or processing facilities, wastewater treatment plants and landfills; firefighting foams. |
| PFHpA <sup>(4)</sup>                              | No | 9/2/17             | 2.94                               | ng/L  | N/A <sup>(5)</sup> | N/A <sup>(5)</sup> | Releases from fluoropolymer manufacturing or processing facilities, wastewater treatment plants and landfills; firefighting foams. |
| PFNA <sup>(4)</sup>                               | No | 9/2/17             | 6.11                               | ng/L  | N/A <sup>(5)</sup> | N/A <sup>(5)</sup> | Releases from fluoropolymer manufacturing or processing facilities, wastewater treatment plants and landfills; firefighting foams. |
| <b>PERFLUOROALKYL SUBSTANCES (PFAS) (Well 2A)</b> |    |                    |                                    |       |                    |                    |  |
| PFOA  | No | Quarterly<br>2021  | Avg.=3.12<br>Range=<br>ND-5.13     | ng/L  | 10                 | N/A                | Releases from fluoropolymer manufacturing or processing facilities, wastewater treatment plants and landfills; firefighting foams. |
| PFOS  | No | Quarterly<br>2021  | Avg.=2.36<br>Range=<br>ND-3.81     | ng/L  | 10                 | N/A                | Releases from fluoropolymer manufacturing or processing facilities, wastewater treatment plants and landfills; firefighting foams. |
| PFBS  | No | 12/2/21            | 1.72                               | ng/L  | N/A <sup>(5)</sup> | N/A <sup>(5)</sup> | Releases from fluoropolymer manufacturing or processing facilities, wastewater treatment plants and landfills; firefighting foams. |
| <b>DISINFECTANTS</b>                              |    |                    |                                    |       |                    |                    |  |
| Chlorine Residual Well #2A                        | No | Daily<br>(2021)    | Avg.=0.37<br>Range=<br>0.02-0.58   | mg/l  | 4(MCL)             | N/A                | Water additive used to control microbes  |
| Chlorine Residual Well #5                         | No | Daily<br>(2020)    | Avg.=0.22<br>Range=<br>0.01-0.54   | mg/l  | 4 (MCL)            | N/A                | Water additive used to control microbes  |

**Notes:**

1 – The Lead level presented represents the 90<sup>th</sup> percentile of the 10 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90<sup>th</sup> percentile is equal to or greater than 90% of the Lead values detected at your water system. In this case, 10 samples were collected at your water system and the 90<sup>th</sup> percentile value was 3.55 ug/l. The action level for Lead was not exceeded at any of the sites tested.

2 – The Copper level presented represents the 90<sup>th</sup> percentile of the 10 samples collected. In this case, 10 samples were collected at your water system and the 90<sup>th</sup> percentile value was 0.0766 mg/l. The action level for Copper was not exceeded at any of the sites tested.

3 – The NYSDOH considers 50 pCi/l to be the level of concern for beta particles.

4 – Detected PFAS: Perfluorobutanesulfonic acid (PFBS), Perfluoroheptanoic acid (PFHpA), Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), and Perfluorononanoic acid (PFNA).

5 – Not applicable at this time, the EPA is currently studying PFAS to determine whether MCLG and MCL are needed.

### **Definitions:**

**Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

**Maximum Contaminant Level Goal (MCLG)**: 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 Residual Disinfectant Level (MRDL)**: The highest level of a disinfectant that is allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of 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 the use of disinfectants to control microbial contamination.

**Action Level (AL)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.

**Non-Detects (ND)**: Laboratory analysis indicates that the constituent is not present.

**Milligrams per liter (mg/l)**: Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

**Micrograms per liter (ug/l)**: Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

**Nanograms per liter (ng/l)**: Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion - ppt).

**Picocuries per liter (pCi/L)**: A measure of the radioactivity in water.

### **WHAT DOES THIS INFORMATION MEAN?**

As you can see by the table, our system had no violations. In 2020, there was a detection of Methylene Chloride (Dichloromethane) during routine monitoring for volatile organic contaminants (VOC's). The level detected was below the maximum contaminant level set by the state. We continued sampling quarterly for VOC's and did not detect this contaminant again. During quarterly sampling in 2021, this contaminant was not detected.

During routine quarterly monitoring for manganese, we continued to detect levels of manganese however they were below the maximum contaminant level. We are required to present the following information on manganese in drinking water:

“The Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be 2,000-5,000 micrograms for adults. However, many peoples diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetable or are vegetarian. The infant population is of greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese.

Excess manganese produces a brownish color in laundered goods and impairs the taste of tea, coffee, and other beverages. Concentrations may cause a dark brown or black stain on porcelain plumbing fixtures. As with iron, manganese may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water.”

Iron is essential for maintaining good health. However, too much iron can cause adverse health effects. Drinking water with very large amounts of iron can cause nausea, vomiting, diarrhea, constipation and stomach pain. These effects usually diminish once the elevated iron exposure is stopped. A small number of people have a condition called hemochromatosis, in which the body absorbs and stores too much iron. People with hemochromatosis may be at greater risk for health effects resulting from too much iron in the body (sometimes called “iron overload”) and should be aware of their overall iron intake. The New York State standard for iron in drinking water is 0.3 milligrams per liter, and is based on iron’s effects on the taste, odor and color of the water.

Although nitrate levels from well #2A were detected below the MCL, they were detected at a level of 5.78 mg/l, which is over half of the MCL. Therefore, we are required to present the following information on nitrate in drinking water:

“Nitrate in drinking water at levels above 10 mg/l is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.”

We have learned through our testing that some contaminants have been detected; however, they were all within the MCL. Lead and copper were detected within the system but of 10 samples collected none were found exceeding the action levels. We are however required to present the following information on Lead in drinking water:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home’s plumbing. We are 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 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 (1-800-426-4791)** or at <http://www.epa.gov/safewater/lead>.

The NYSDOH has a free lead testing program – for more information go to:

[https://www.health.ny.gov/environmental/water/drinking/lead/free\\_lead\\_testing\\_pilot\\_program](https://www.health.ny.gov/environmental/water/drinking/lead/free_lead_testing_pilot_program)

### **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2021, our system was in compliance with applicable State drinking water operating and reporting requirements, but not monitoring requirements. We were issued one minor violation for not analyzing all of the analytes in the sample method for PFAS in the second quarter.

In 2021 we relied mostly on wells #2A and well #5. Well #4 was not used in 2021.

### **DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease-causing microorganisms or pathogens 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 from their health care provider about their drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

## **INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS**

### **Spanish**

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

### **French**

Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

## **WHY SAVE WATER AND HOW TO AVOID WASTING IT?**

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

## **CLOSING**

Regarding your water bills, if you have any address changes, or are moving please contact the Town Clerk's office to have address changes made. The Clerk's office can be reached at 569-5365. You can drop your water bills off at any time, if no one is there, there is a drop box right in front of the Town Hall.

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.