

# **Annual Drinking Water Quality Report for 2022**

**Town of Orwell public water system**

**P.O. Box 5, Orwell, NY 13426**

**Public Water Supply ID # 3704360**

## **INTRODUCTION**

To comply with State and Federal regulations, the Town of Orwell will be issuing an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water awareness and the need to protect our drinking water sources.

Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard.

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 William Potter, Town Supervisor, at 315-298-3236. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled water board meetings. The meetings are held on the first Monday of each month at 7:00 PM at the Town Hall located in the Village of Orwell.

## **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 New York State Department of Health (NYS DOH) and the Environmental Protection Agency (EPA) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The NYS DOH and the Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

## **FACTS AND FIGURES:**

Our water system serves 150 people via 90 service connections. The Town of Orwell's water source consists of a dug well, a spring house and one gravity-fed infiltration gallery. These wells are located on County Route 2 near the water tower. The well water is pumped into one 150,000-gallon water storage tower. The Town has an average daily consumption of 25,000 gallons. The water is disinfected with liquid sodium hypochlorite (chlorine) using an injection pump, filtered, and treated with Ultraviolet (UV) light at the pump house prior to distribution. This year our system will be transitioning to purchase our water from Town of Richland to address seasonal water yield issues associated with our current sources and to address elevated Nitrate levels that exceeded the New York State Department of Health (NYSDOH) Maximum Contaminant Limit (MCL) in the first quarter of 2022. In the interim, we will operate our current system in full compliance with NYSDOH requirements.

### **SOURCE WATER ASSESSMENT:**

The New York State Department of Health (NYS DOH) has completed a source water assessment for this system. Possible and actual threats to this drinking water source were evaluated by reviewing limited existing mapped data and available information from past sanitary surveys. The state source water assessment provides a susceptibility rating based on the potential risk posed by each possible source of contamination and how easily contaminants could move through the subsurface to the wells. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. See section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected. The source water assessment was completed to provide owners and operators with additional information to help them protect your source waters into the future.

The source water assessment has rated our system as having an elevated susceptibility to viruses, protozoa, bacteria, herbicides/pesticides, halogenated solvents, metals, cations/anions, nitrates, petroleum products & other industrial organics. This is primarily due to the fact that we draw water from a shallow unconfined aquifer that occurs just below the ground surface. There is no overlying layer to protect it from potential sources of contamination. Please note that the finished water delivered into your home meets the New York State's drinking water standards for microbial contamination. Petroleum and organic products have never been detected in the source water.

County and state health departments will use this risk assessment information to direct future source water protection activities. These may include water quality monitoring, wellhead protection, resource management, planning, and education programs. A copy of the assessment can be obtained by contacting us, as noted below.

### **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, total trihalomethanes, haloacetic acids, radiological 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 Oswego County Health Department at (315) 349-3564.

## Table Of Detected Compounds

Contaminate	Violation (Yes/No)	Date of Sample	Lv. Detected (Avg/Max Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
<b>Inorganic Contaminants</b>							
Copper 90th percentile*	No	Dec-22	176.5 ug/L Range (30.6 - 181.3)	ppb	1300 ug/l	AL = 1300 ug/L	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead 90th percentile*	No	Dec-22	1.8 ug/L Range (0-2.3)	ppb	n/a	AL = 15.0 ug/L	Corrosion of household plumbing systems, erosion of natural deposits
Barium	No	3/7/2022	0.0057 mg/L	mg/L	2mg/l	2mg/L	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chloride	No	8/2/2022	4.4 mg/L	mg/L	N/A	250 mg/L	Naturally occurring or indicative of road salt.
Nitrate (As Nitrogen)**	Yes	2022	9.5 Average Range (7.34 - 12.2)	mg/L	10 mg/L	10mg/L	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	No	6/14/2016	0.8 mg/L	mg/L	N/A	2 mg/L	Naturally occurring, road salt, water softener treatment, animal waste.
Sulfate	No	8/2/2022	4.78 mg/L	mg/L	N/A	250 mg/L	Natural occurring.
Zinc	No	8/2/2022	27.4 ug/L	ug/L	N/A	5,000 ug/l	Naturally occurring; Mining waste.

## Table Of Detected Compounds (Cont.)

Contaminate	Violation (Yes/No)	Date of Sample	Lv. Detected (Avg/Max Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
<b>Disinfection By-Products</b>							
Total Trihalo-methanes (TTHM)	No	8/2/2022	9.2 ug/L	ug/L	N/A	80 ug/L	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.

Haloacetic Acids (HAA5)	No	8/2/2022	9.5 ug/L	ug/L	N/A	60 ug/L	By-product of drinking water disinfection
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### Radioactive Contaminants

<b>Radium 226</b>	No	3/7/2022	0.105 pCi/L	pCi/L	0pCi/L	5 pCi/L <sup>3</sup>	Erosion of natural
<b>Radium 228</b>	No	3/7/2022	0.459 pCi/L	pCi/L	0pCi/L	5 pCi/L <sup>3</sup>	Erosion of natural deposits
<b>Gross Alpha</b> (including Radon & Uranium)	No	3/7/2022	0.709 pCi/L	pCi/L	0pCi/L	15 pCi/L <sup>5</sup>	Decay of natural deposits and man-made emissions

**Notes:**

\* Levels presented for copper and lead represents the 90th percentile of the 5 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 90th percentile value is equal to or greater than 90% of the values detected in your water system. In this case 5 samples were collected and the 90th percentile value was the second highest value. The action levels for copper and lead were not exceeded at any of the 5 sites tested. Therefore our system meets corrosion control treatment, source water treatment and lead service line requirements.

\*\* - Compliance samples for Nitrate were collected from the Town Hall. MCL violation issued by OCHD on 1/25/22 and was rescinded on 8/12/22 after nitrate levels dropped below 10.0 mg/L in 2nd and 3rd quarters.

**DEFINITIONS:**

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

**Maximum Contaminant Level** – 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 Contaminant Level Goal** – The “Goal” (MCLG) 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.

**Non-Detects (ND or <number value)** – Laboratory analysis indicates that the tested compound is not present in the sample.

**Parts per million (ppm) or Milligrams per liter (mg/L)** – Corresponds to one part of liquid in one million parts of liquid (parts per million – ppm). Or one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb) or Micrograms per liter (ug/L)** – Corresponds to one part of liquid in one billion parts of liquid (parts per billion – ppb). Or one part per billion corresponds to one minute in 2,000 years, or a

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

As you can see by the table, we had an MCL violation for nitrate in the first quarter of 2022. This violation was rescinded by OCHD after nitrate levels fell below the MCL level of 10.0 mg/L in the second, third and fourth quarters of 2022.

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

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 your drinking water meets health standards. During 2022 our system met all monitoring and reporting requirements.

### **DO I NEED TO TAKE PRECAUTIONS? IS OUR WATER SAFE FOR EVERYONE?**

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). Please note that testing of the water at this system has shown that this water is suitable for drinking water purposes, and contains very low amounts of contaminants and should not pose any health risks.

### **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 fire fighting 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**

Thank you for allowing us to continue providing 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 to address improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please review the attached water source protection, and water conservation tips sheet. Please call our office if you have questions.