

# ***Annual Drinking Water Quality Report for 2017***

## ***Town of Orwell Water District***

*P.O. Box 5, Orwell, NY 13426*  
*(Public Water Supply ID# NY3704360)*

### **INTRODUCTION**

To comply with State regulations, the Town of Orwell will be annually issuing 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. Last year, your tap water met all State drinking water health standards. 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 Butch Levack, water operator, at 315-766-7415. 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 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 150 people via 90 service connections. The Town of Orwell's water source consists of two dug wells and one gravity-fed infiltration gallery. The first well is 12 feet deep, and the second well is 6 feet deep. 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.

### **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, disinfection byproducts, and synthetic organic compounds. Our system sampled for total coliform, disinfection byproducts, lead and copper, inorganic compounds and nitrate in 2017. 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 (OCHD) at (315) 349-3557.

**TABLE OF DETECTED COMPOUNDS**

<b>Contaminant</b>	<b>Violation Y/N</b>	<b>Date of Sample</b>	<b>Level Detected (Maximum Range)</b>	<b>Unit Measure -ment</b>	<b>MCLG</b>	<b>Regulatory Limit (MCL, AL)</b>	<b>Likely Source Of Contamination</b>
<b>Inorganic Contaminants</b>							
<b>Copper</b> 90 <sup>th</sup> percentile*	No	9/22/15	186 ug/l  Range 21.5 - 208 ug/l	ppb	1300 ug/l	AL=1300 ug/l	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Lead</b> 90 <sup>th</sup> percentile*	No	9/22/15	3.9 ug/l  Range 0.5 - 6.2 ug/l	ppb	n/a	AL=15.0 ug/l	Corrosion of household plumbing systems, erosion of natural deposits
<b>Barium</b>	No	12/28/17	6.0 ug/l	ppb	2,000 ug/l	2,000 ug/l	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
<b>Sodium</b>	No	6/14/16	800 ug/l	ppb	N/A	N/A	Naturally occurring; Road Salt; Water Softeners; Animal Waste
<b>Chloride</b>	No	12/5/12	473 mg/l	ppb	N/A	250 mg/l	Naturally occurring or indicative of road salt contamination.
<b>Zinc</b>	No	6/14/16	0.006 mg/l	ppm	N/A	5 mg/l	Naturally occurring; Mining waste.
<b>Nitrate</b> (as Nitrogen – Average value)	No	10/17/17	5.4 mg/l  (3.8 – 6.4)	ppm	10.0 mg/l	10.0 mg/l	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
<b>Disinfection By-Products</b>							
<b>Total Trihalomethanes (TTHMs)</b>	No	12/28/17	7.4 ug/l	ppb	80 ug/l	N/A	By-Product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
<b>Haloacetic Acids (HAA5)</b>	No	12/28/17	8.1 ug/l	ppb	60 ug/l	N/A	By-Product of drinking water chlorination needed to kill harmful organisms.

<b>Radiological Contaminants</b>							
<b>Gross Beta</b> (including Radon & Uranium)	No	11/19/13	0.49 pCi/L	pCi/L	0 pCi/L	50 pCi/L	Erosion of natural deposits
<b>Radium-228</b>	No	11/19/13	0.75 pCi/L	pCi/L	0 pCi/L	5 pCi/L	Erosion of natural deposits

Note: \*Levels presented for copper and lead represents the 90<sup>th</sup> 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 90<sup>th</sup> 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 90<sup>th</sup> 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.

**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 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).

**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, but we have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the New York State requirements. Although nitrate was detected below the MCL, it was detected at 6.6 ppm which is greater than one-half of the MCL. Therefore, we are required to present the following information on nitrate in drinking water:

“Nitrate in drinking water above 10 ppm is a health risk for infants less than six months in 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.”

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

During 2017, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements. We did not, however, sample for disinfection byproducts in August as required by our sample schedule and were issued a Subpart 5-1 violation by OCHD.

## **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**

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.