



Oneida Area 2022 Annual Water Quality Report

Oneida Water Department

109 N. Main Street, Oneida NY 13421

Visit us on the web at oneidacityny.gov/water

Introduction

To comply with State regulations, the City of Oneida Water Department has issued this Annual Water Quality Report. 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. 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.

City of Oneida Water Department Profile

Oneida's Florence Creek Water System was constructed in 1926. In early 1980, the City's current water treatment plant was completed to provide filtration to the City's upland supply, for the first-time correcting problems of taste, odor and color.

Today the City of Oneida Water Department serves more than 20,000 people and provides an average daily water supply of 2.6 million gallons (2.6 MGD). The Water Department employs 17 individuals who treat, monitor, maintain, construct, and distribute water through more than 88.4 miles of mains in two counties, three cities, five towns, and four villages. This water supply has become a valuable regional asset through the cooperation of the municipal leaders and dedicated employees.

Communities Served by Oneida Water			
Public Water Supply	Identification Number	POPULATION (2020 census)	Water Consumption (gallons-2022)
City of Oneida	NY2602381	9,658	425,862,000
Village of Oneida Castle		610	11,918,000
Village of Wampsville		573	16,008,000
Transmission Main *		966	47,667,000
Sherrill Kenwood Water	NY3202419	3,256	92,959,000
Village of Vernon	NY3202412	1,277	126,673,000
Town of Stockbridge	NY2602379	1,031	22,985,000
Taberg Water District	NY3202409	467	10,525,000
Durhamville Water District	NY3230025	499	10,067,000
Prospect Street Water District	NY3230026	460	6,715,000
Sconondoa Highbridge WD	NY3233159	56	1,104,000
Town of Verona WD	NY3230037	1,281	176,721,000
Marble Hill WD	NY3230058	22	703,000
Total Population Total Metered Sales		20,156	949,907,000
		Clear Water Flow Percent = 12.1%	
		1,080,945,000	131,038,000

* Includes portions of the Town of Annsville, City of Rome, and Town of Verona

Water Supply

The City of Oneida starts with a high quality surface water source from Glenmore Reservoir on Florence Creek, which is located twenty miles north of the City in the Town of Annsville, Oneida County. The dam impounds water from a 13.8 square mile watershed on the edge of the Tug Hill Plateau. The watershed is mainly forestlands with approximately half being State Reforestation. The 378-foot long and 45-foot high dam, constructed in 1926 in this rural location, provides water storage to buffer seasonal water demands as well as dry weather supply. The reservoir holds 299 million gallons of water. The City owns the 500-acre site on which the reservoir and dam are located. Last year, our system did not experience any restriction of our water source.

Water Treatment

The City of Oneida reservoir and watershed receive regular inspections. While no contamination has been observed, treatment is required to ensure safe water is entering the distribution system.

Situated one-half mile downstream from the dam is the City's Water Treatment Plant. This conventional flocculation/sedimentation facility with a production capacity of 4 million gallons per day (4 MGD) was completed in 1980. The plant includes a rapid mix basin, flocculation facilities, (2) contact basins, (4) dual media filters, and a clear-well tank.

After the process of chemical addition, contact and filtration- microorganisms, including some that can cause disease (pathogens) may still be found in filtered water. Chlorination equipment is utilized to provide sufficient chlorine to kill any pathogens that may be present and to provide a chlorine residual in the water entering the distribution system. In order to inhibit corrosion of our distribution pipes we introduce zinc orthophosphate into the distribution system. This compound provides a thin protective coating to our pipes.

Grade 1A and IIA operators operate the plant, 365 days a year. During daily operation of the plant, chemical testing is done by the operators at our onsite laboratory.

Distribution

A 20"-24" transmission main transports the water from the water treatment plant's clearwell tank into the City. A pump station at Lake Street increases the capacity of the 20-mile pipeline from 2.8 MGD to 3.5 MGD with one pump operating. The water is distributed through a network of 88.4 miles of cast iron, asbestos cement and ductile iron water main throughout the City.

Baker and Clark Tanks provide distribution storage. These two domed concrete storage tanks have a combined capacity of 15 million gallons and are used to balance pressure in the distribution system and to ensure an adequate water supply for fire protection. A chlorination facility is located at the site to further treat all water leaving the tanks.

Who should take special precautions

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 (1-800-426-4791).

Source Water Assessment

The New York State Department of Health (NYSDOH) has evaluated Glenmore Reservoir's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this public water system (PWS). This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable drinking water standards.

The assessment area for this drinking water source contains no discrete potential contaminant sources, and only the protozoa land covers contaminate prevalence ratings is greater than low. This rating is attributed to the percentage of pasture land cover used in the analysis, without regard for the actual percentage of such pasture land actively being used for agricultural livestock. This results in this reservoir being assigned a high susceptibility to protozoa, despite the relative absence of such land actually being used for livestock purposes within the watershed. However, the high mobility of microbial contaminants in all such reservoirs results in this drinking water intake being assigned medium – high susceptibility ratings for enteric bacteria and viruses. Furthermore, all open reservoirs are deemed highly susceptible to water quality problems caused by phosphorus additions.

Sources of drinking water

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 Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Water Quality through Testing - *How do you know it's safe?*

The City of Oneida routinely monitors for contaminants in your drinking water according to Federal and State laws. These contaminants include: total Coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, synthetic organic compounds, Cryptosporidium, and Giardia. In all, the City is required to test for over 125 contaminants. The table presented below depicts the compounds that were detected in your drinking water for the period of January 1st to December 31st, 2022. 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.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average/Maximum) (Range)	Unit of Measurement	MCLG/ MRDLG	Regulatory Limit (MCL, MRDL, MRDLG, TT or AL)	Likely Source of Contamination
Source Water from Glenmore Reservoir							
Total Organic Carbon	No	Monthly	3.8 ² 2.2-6.5	mg/L	N/A	TT	Naturally present in the environment
Finished Water							
Turbidity (EP) ¹	No	Daily	0.08 ² 0.05-0.18	NTU	N/A	TT < 1.0 NTU	Soil Runoff
Turbidity (EP) ¹	No	Daily	100 %	NTU	N/A	TT = 95% of samples < 0.3 NTU	Soil Runoff
Total Organic Carbon	No	Monthly	1.3 ² <1.0-2.1	mg/L	N/A	TT	Naturally present in the environment
Inorganics							
pH	No	Continuous	6.9– 7.3	Std. Units	N/A	N/A	Naturally occurring
Odor	No	3/24/2022	1	T.O.N. Units	N/A	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources.
Nitrate	No	3/24/2022	0.24	mg/l	10	MCL=10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Copper (EP)	No	3/24/2022	49	µg/L	1,300	AL = 1,300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Magnesium	No	3/24/2022	1.2	mg/L	N/A	N/A	Naturally occurring
Sodium	No	3/24/2022	6.6	mg/L	N/A	(see health effects) ⁶	Naturally occurring, Road salt.
Copper	No	8-9/2021	250 ³ 24-480	µg/L	1,300	AL = 1,300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Lead	No	8-9/2021	2.6 ⁴ ND- 4.5	µg/L	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits.
Zinc	No	3/24/2022	0.31	mg/L	N/A	MCL = 5	Naturally occurring; Mining waste.
Sulfate	No	3/24/2022	12	mg/L	N/A	MCL = 250	Naturally occurring
Chloride	No	3/24/2022	1.9	mg/L	N/A	MCL = 250	Naturally occurring or indicative of road salt contamination
Barium	No	3/24/2022	3.5	µg/L	2,000	MCL = 2,000	Erosion of natural deposits.
Calcium	No	3/24/2022	3.7	mg/L	N/A	N/A	Naturally occurring
Calcium Hardness as CaCO ₃	No	3/24/2022	14	mg/L	N/A	N/A	Naturally occurring
Alkalinity as CaCO ₃	No	3/24/2022	8.2	mg/L	N/A	N/A	Naturally occurring
Total Dissolved Solids	No	3/24/2022	44	mg/L	N/A	N/A	Naturally occurring
Disinfectants							
Chlorine Residual	No	Continuous	1.1 ⁵ 0.89-1.6	mg/L	N/A	MRDL = 4	Water additive used to control microbes.

In the table on the preceding page, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've 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.

Entry Point (EP) - A representative sampling location after the last point of treatment but before the first consumer connection

Haloacetic Acids (HAA5): mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid

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

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.

Milligrams per liter (mg/L) – corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

N/A- Not applicable

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per billion (ppb) or Micrograms per liter (µg/L) - one part per billion corresponds to one part of liquid in one billion parts of liquid.

T.O.N. - threshold odor number - The greatest dilution of a sample with odor-free water that still yields a just-detectable odor.

Total Trihalomethanes (TTHMs) – chloroform, bromodichloromethane, dibromochloromethane and bromoform

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

Notes:

1 – Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement for the year occurred on 9/27/2022 (0.18 NTU). State regulations require that turbidity must always be below 5 NTU which were met during the year. The regulations require that 95% of the turbidity samples collected have measurements below 0.5 NTU. Of all samples collected in 2022, 100% were measured at less than 0.5 NTU.

2 – This level represents the annual average and range of values calculated from sample results.

3 – The level presented represents the 90th percentile of the 30 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 is equal to or greater than 90% of the copper values detected at your water system. In this case, thirty samples were collected at your water system and the 90th percentile value was the twenty seventh highest value (250 µg/L). The action level for copper was not exceeded at any of the sites tested.

4 – The level presented represents the 90th percentile of the 30 sites tested. The action level for lead was not exceeded at any of the sites tested.

5 – This level represents the annual average calculated from the clearwell outlet.

6 – Water containing more than 20mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270mg/L of sodium should not be used for drinking by people with moderately restricted sodium diets.

What does this information mean?

As you can see by the table, our system had no violation. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected near or below the level allowed by the State. We are 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 because of materials used in your homes plumbing. The City of Oneida Water Department is responsible for providing a 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, 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>.

Is our water system meeting other rules that govern operations?

During 2022, the City of Oneida Water Department was issued a treatment technique violation. The violation was issued for failing to submit a revised Water Supply Emergency Plan to Madison County Health Department, which violates Part 5, Subpart 5-1, Section 5-1.33 (e) of the New York State Sanitary Code (NYSSC). The City has submitted the required Water Supply Emergency Plan and it has been approved by the Madison County Department of Health. The City is now in compliance.

Drinking Water

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 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 (1-800-426-4791).

Water Conservation & Money Saving Ideas

Although our area is very fortunate to have access to a water supply which more than meets our demands, conservation efforts by both the city and the consumer are prudent in deterring increasing costs. As a consumer you can participate in this water conservation effort. The following are some ideas, which can be directly applied to your individual homes:

1. Use water-saving, flow-restricting shower heads and low flow faucets (aerators);
2. Repair dripping faucets and toilets that seem to flush by themselves;
3. Replace your toilet with a low flush model;
4. Water your garden and lawn only when necessary. Remember that a layer of mulch in the flower beds and garden is not only aesthetically pleasing but will help retain moisture;
5. When washing your car don't let the hose run continuously;
6. When brushing your teeth, shaving or shampooing avoid running the water unnecessarily; and
7. 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.

Cryptosporidiosis and Giardiasis

New York State law requires water suppliers to notify their customers about the risks of cryptosporidiosis and giardiasis. Cryptosporidiosis and giardiasis are intestinal illnesses caused by microscopic parasites. Cryptosporidiosis can be very serious for people with weak immune systems, such as chemotherapy, dialysis or transplant patients, and people with Crohn's disease or HIV infection. People with weakened immune systems should discuss with their health care providers the need to take extra precautions such as boiling water, using certified bottle water or a specially approved home filter. Individuals who think they may have cryptosporidiosis or giardiasis should contact their health care provider immediately.

For additional information on cryptosporidiosis and giardiasis, please contact Madison County Health Department @ (315) 366-2526.

Cryptosporidiosis

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. During most recent sampling in 2018, (9) samples of Glenmore Reservoir source water were collected and analyzed for Cryptosporidium oocysts. Of these samples, one was confirmed positive. Therefore, our monitoring indicates the presence of Cryptosporidium in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Giardia

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. During most recent sampling in 2018, (9) samples of Glenmore Reservoir source water were collected and analyzed for Giardia cysts. Of these samples, five (5) were confirmed positive. Therefore, our testing indicates the presence of Giardia in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely

present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where hand washing practices are poor.

Leaking toilets are the most common cause of high water bills.

There are a number of signs that a toilet needs some repairs, but many toilets leak without noticeable indications of trouble.

Here are some of the obvious signs of a leaking toilet:

- If you have to jiggle the handle to make a toilet stop running.
- Any sounds coming from a toilet that is not being used are sure signs of leaks.
- If you can see water trickling down the sides of the toilet bowl long after it's been flushed.
- If a toilet turns the water on for 15 seconds or so without you touching the handle (otherwise known as the phantom flusher).

Leaky Toilet Test

Here is a test to see if you have a leaking toilet:

Add food coloring to the toilet tank (not the toilet bowl)

Do not flush for 30 minutes. If the water in the toilet bowl changes color, you have a leaking toilet.

Town of Stockbridge Water District Section

Stockbridge Water District – PWS ID# NY2602379

PO BOX 95 Munnsville NY 13409

Introduction

Last year, our samples demonstrated that contaminants were below the levels allowed by the State. If you have any questions about this report or concerning your drinking water, please contact Alex Stepanski, Town Supervisor, at 315-495-6752 or Jim Chamberlain, Water Superintendent at 315-264-3617. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Town Board meetings the first Monday of each month.

Water District Water Rates for Retail Customers

Residential Customers	
First 8,000 gallons.	\$48.00
Over 8,000 gallons	\$6.00 per 1000 gallons

Where does our water come from?

The Town of Stockbridge purchases 100% of its water from the City of Oneida. Our water systems serve approximately 1,031 people through 724 service connections.

Major Modifications

No Major modifications to the system were completed in 2022.

Are there contaminants in our drinking water?

As the State regulations require, the City of Oneida routinely tests your drinking water total coliform and free chlorine as required. The table presented below depicts which compounds were detected in your drinking water.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average/Maximum) (Range)	Unit of Measurement	MCLG/ MRDLG	Regulatory Limit (MCL, MRDL, MRDLG, TT or AL)	Likely Source of Contamination
Microbiological Contaminants – Sample Monthly							
Chlorine Residual	No	Daily / Monthly	0.7 ⁽¹⁾ (range = 0.2 – 1.7)	mg/L	N/A	MRDL = 4 ⁽²⁾	Water additive used to control microbes.
Total Coliform	No	8/23/22, 10/4/22	2 positive samples ⁽³⁾	N/A	0	MCL = 2 or more positive samples	Naturally present in the environment
Disinfection By products – Stage 2							
Stage 2 - Total Trihalomethanes (TTHMs) ⁽⁴⁾ (Stockbridge)	Yes	3,6,9,12/ 2022	82 ⁽⁸⁾ 31.4 – 136.0	µg/L	N/A	MCL = 80	By-product of drinking water disinfection needed to kill harmful organisms.
Stage 2 - Haloacetic Acids (HAA5) ⁽⁵⁾ (Stockbridge)	No		38 ⁽⁸⁾ 14.0 – 47.0		N/A	MCL = 60	
See City of Oneida AWQR for additional sample information - Physical Parameters, Radioactive Contaminants, Inorganic Contaminants, Synthetic Organic Contaminants, Principal Organic Contaminants, Lead and Copper							

Notes:

- 1 – The levels presented represent the average and range of the levels reported on the microbiological sampling reports.
- 2 – Value presented represents the Maximum Residual Disinfectant Level (MRDL) which is a level of disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. MRDLs are currently not regulated but in the future they will be enforceable in the same manner as MCLs.
- 3 – One positive sample was detected on each date listed. Repeat follow-up sampling was conducted and these samples did not detect Total Coliform, therefore MCL or TTT were not triggered.
- 6 – TTHMs – chloroform, bromodichloromethane, dibromochloromethane and bromoform
- 7 – HAA5 – mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid
- 8 – This level represents the highest Locational Running Annual Average (LRAA) and range of all sample results. Compliance with the MCL for Disinfection Byproducts is based upon the Locational Running Annual Average of all samples collected during four consecutive quarters. The system's LRAA exceeded the MCL in the September quarter with a value of 82 parts per billion (ppb).

What does this information mean?

As you can see by the table, our system had one violation for Disinfection by-products. All other testing was satisfactory. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State, except for Total Trihalomethanes (TTHMs).

Is our water system meeting other rules that govern operations?

The table above shows that we had an MCL violation for total trihalomethanes (TTHMs). Sampling conducted on September 14, 2022 resulted in the Town exceeding the Localize Annual Running Average (LARA) for total trihalomethanes. The MCL standard for Total Trihalomethanes is 80 parts per billion (ppb) and the **LARR** level recorded for the third quarter of 2022 was 82 ppb. When disinfectants

are used in the treatment of drinking water, disinfectants react with naturally occurring organic and inorganic matter present in the water to form disinfection by-products, which includes Total Trihalomethanes. Some people who drink water containing Trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer. Sampling conducted in December showed that results had returned to normal and the Town was no longer in violation.

Is our water system meeting other rules that govern operations?

During 2022, our system was generally in compliance with applicable State drinking water operating, monitoring and reporting requirements. We received a Notice of Violation for Exceeding the MCL for Disinfection By products, October 2022.

Closing

Please call Stockbridge Water Superintendent if you have questions at 315-264-3617 or Madison County Health at 315-366-2526.

See Attached City of Oneida Report for additional required reporting, sampling, treatment