Annual Drinking Water Quality Report for 2023

Village of Waterloo (including portions of the Towns of Waterloo, Fayette, Varick, Romulus, Tyre, Junius, Geneva and Phelps)

The Village of Waterloo • 41 W. Main St., Waterloo, NY 13165

(Village of Waterloo - NY4901199)

Safety and security are our top priorities. The Village of Waterloo strives to deliver safe drinking water to our customers and to keep the utility and system secure and protected. We are proud to deliver this annual report covering the year 2023.

Important Facts About Our Water!

The Village of Waterloo relies on surface water from Seneca Lake, which is located west of the Village of Waterloo, in the heart of the Finger Lakes in upstate New York. Our intake pipe is located far from shore and very deep. We pump an annual average of 1.3 million gallons per day, with a capacity for nearly 4 million gallons per day. Plant Excess Capacity remains at over 2 million gallons per day. Our system is quite watertight. For 2023, the entire system can account for 93% of all water metered from the master meter at the water treatment plant on Seneca Lake. In 2023 we produced 456.2 million gallons, of which only about 10% remains unaccounted for. 375,000 gallons were used by the Waterloo Volunteer Fire Department. Last year, your tap water met all State drinking water health standards.

We serve 15,000 people in and around the Village of Waterloo. Village residents pay $5.70 per 1,000 gallons, which is equivalent to about 5 cents for a 5 gal. container. Wholesale rates outside the village vary but have remained virtually flat over the last few years. A Source Water Assessment is available upon request at the Seneca County Health Department, 2465 Bonadent Dr., Waterloo, NY 13165.

The Village of Waterloo treats your water using state-of-the-art disinfection and filtration to remove or reduce harmful contaminants that may come from the source water, which includes cryptosporidium. We use chlorine dioxide to disinfect and help oxidize organics and deter Zebra Mussels. Additionally, we add powdered activated carbon to adsorb organic contaminants in the raw water which help make the water taste better and provide an additional barrier of protection for the public water supply. The finished product is then disinfected with chloramines before it leaves the water plant to maintain the distribution system's disinfectant residual integrity. Our water system also has two emergency interconnections with the Seneca Falls water system. These vital emergency interconnections have been utilized by both municipalities.

Where Can I Get More Information?

For more information about your drinking water and for opportunities to get more involved, please contact Jim Bromka, NYS Grade IA & Grade D Certified Water Treatment Plant Operator and NYS & NELAP Certified Environmental Lab Director, or Jordan Telvock at the water plant by calling (315) 585-9811 or by visiting or writing to this address: 41 W. Main St, Waterloo, NY 13165. Also, you are welcomed and encouraged to attend regular board meetings on the second Monday of each month, 7:00 pm at 41 W. Main Street. Or you may visit us on the World Wide Web at: www.waterloony.com.

Improvements and Changes in Disinfection & Operations:

Walt Bennett, Waterloo Village Mayor, is proud of the service provided to the public by our water treatment plant. In 2000, we changed our disinfection practices, doubled our filtration capacity, added backup electric generation in case of power outages, and radio communication to better monitor overall distribution system storage status. That upgrade not only helps us to serve you better but minimizes production of harmful Total Trihalomethanes & Haloacetic Acids, by-products of chlorination disinfection. In 2023, our monitoring results showed levels of Disinfection By-Products within permitted parameters, resulting in very low levels of DBP's: Total Trihalomethanes and Haloacetic Acids.

In 2007, we completed an upgrade at the water plant. We replaced our existing BIF filters master control panel with a new, state-of-the-art Programmable Logic Controller or PLC. Also, the main computer, operating system software, and SCADA system were brought to today's standards. Additionally, in 2017, SCADA system hardware upgrades were completed, increasing water system reliability and security. This will benefit not only the village, but all customers to the north in Junius and Tyre, and to the south in Romulus and Varick. We are now better able to monitor and operate tank levels & pump status for real-time daily operations, which will also increase system efficiency and security. Older model radios have been replaced with more efficient and reliable RTU's with secure high-speed internet. At Burgess Road and Sessler Drive, fully automated, SCADA controlled and monitored booster pump stations were added distributing water demands to portions of the towns of Waterloo, Junius, Tyre, Phelps and Geneva.

In 2023, **we added and are not yet using** Horizontal Pressure Filters to remove particles, algae, etc. from the lake water, prior to the four new GAC (Granular Activated Carbon) contactors for removal of harmful PFAS and contaminants from harmful algae blooms. All the tools are now in place to provide the safest, best tasting water. A new 1 million gals water storage tower has been erected on the north side of the village.

The Village of Waterloo Water System uses monochloramine (small but exact amounts of chlorine and ammonia which are added) instead of chlorine (free chlorine) to provide residual disinfection in your potable water supply distribution system. Chloramines are increasingly being applied by many utilities nationwide as a more effective disinfectant in the distribution system, as they persist in remote areas of the system, produce lower levels of disinfection by-products, and have the ability to minimize chlorinous or other objectionable tastes and odors.

Chloraminated water is safe for drinking, cooking, bathing, watering plants, and all the uses we have for water every day. However, there are two groups of people who need to take special care with chloraminated water: kidney dialysis patients and fish owners. Chloramines must be removed from water used in the kidney dialysis process and from water that is used in fish tanks or ponds, because chloramines are harmful when they go directly into the bloodstream. This includes fish/turtle/reptile aquarium water, lobster tanks at grocery stores and restaurants, as well as fish containers at bait shops.

Kidney dialysis patients should check with their physician who will recommend the best pretreatment to be used. Fish tank owners should consult with their local pet store for the best dechloramination agent or filter to use. Chloramines can be reduced by using a high quality granular activated carbon filter but will not be reduced by a reverse osmosis unit or by letting water sit for a few days.

Our commitment to your water quality does not end when water leaves the treatment plant. Water samples from homes and businesses throughout the water system are tested daily. We work closely with the Seneca County Health Department to test the water using approved NYSDOH &

USEPA procedures. We go a step farther. In addition to government-mandated testing for nearly 100 regulated compounds, our own laboratory technicians regularly sample your water to make sure that the treatment process at the plant is working correctly. Having our own NYS & USEPA Certified Lab helps us with allowing us the benefit of "real time" water quality test results at our fingertips.

If you have any questions, please contact your physician, pet store, or call us at the Water Dept. at 315-539-9131 or Water Plant Office 315-585-9811 or Seneca County Health Dept. 315-539-1919/1945.

The Village of Waterloo 2023 Monitoring Results for Contaminants in 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Microbiological Contaminants							
Contaminant	**Violation (Yes/No)**	**Date of Sample**	**Level Detected**	**Unit**	**MCLG Health Goal**	**Regulatory Limit (MCL, TT or ACL)**	**Potential Source of Contamination**
Turbidity[1]	NO	11/5/2023	0.401	NTU	N/A	1.00	Soil runoff, algae
Distribution Turbidity[1]	NO	2/28/2023	1.18	NTU	N/A	5.00	
Inorganic Contaminants							
Nitrate	NO	10/12/2023	0.261	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural dep.
Nitrite	NO	10/12/2023	<0.0250	mg/L	1	1	Runoff from fertilizer use; Leaching from septic tanks, sew¬ age; Erosion of natural dep.
Antimony	NO	10/12/2023	<0.0004	mg/L	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Sodium[2]	NO	10/12/2023	70.9 (single sample)	mg/L	N/A	250	Naturally occurring
Barium	NO	10/12/2023	0.0250	mg/L	2	2	Erosion of natural deposits
Arsenic	NO	10/12/2023	<0.0010	mg/l	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Copper[3]	NO	6/27/2023-8/1/2023	0.881 (90th percentile) 0.0206-1.45	mg/L	1.3	1.3=AL	Corrosion of plumbing systems; erosion of natural deposits.
Lead[4]	NO	6/27/2023-8/1/2023	8.3 (90th percentile) <1-24.8	ug/L	0	15=AL	Corrosion of plumbing systems; erosion of natural deposits.
Fluoride[5a,5b]	NO	10/12/2023	<0.200	mg/L	0.8 - 2.2	2.2	Erosion of natural deposits
Nickel	NO	10/12/2023	0.0006	mg/L	N/A	N/A	Naturally Occurring

Other

Chlorine Dioxide	NO	8/6/2023	620	ug/L	MRDLG=800	MRDL=800	Water additive used to control microbes. (Primary Disinfection).
Chlorite	NO	10/23/23	610	ug/L	1000	1000	Byproduct of drinking water disinfection
Chloramines	NO	7/4/2023	3.99	mg/L	N/A	4.00	Water additive used to control microbes. (Primary Disinfection).
Trihalomethanes 1/year	NO	8/4/2023	10.5 site 1 12.0 site 2	ug/L	0	80	Byproduct of drinking water disinfection MCL is 80
Haloacetic Acids (HAA5) 1/yr	NO	8/4/2023	9.57 site 1 9.94 site 2	ug/L	N/A	60	Byproduct of drinking water disinfection MCL is 60
TOC (Total Organic Carbon)	NO	4/21/2023	3.86	mg/L	N/A	N/A	Naturally Occurs
PFAS:							
PFOA Perfluorooctanoic acid	NO	1/13/23 4/25/23 10/16/23	4.24, 1.7 1.61, 1.46 1.47	ng/L	N/A	10	Released into the environment from widespread use in commercial and industrial applications.
PFBA[6,7] Perfluorobutanoic acid	NO	1/13/23 4/25/23 10/16/23	1.8 1.83 1.37	ng/L	N/A	50,000	Released into the environment from widespread use in commercial and industrial applications.
FSA[6,7] Fluorotelomer sulfonic acid	NO	4/25/23	1.02	ng/L	N/A	50,000	Released into the environment from widespread use in commercial and industrial applications.
PFHxA[6,7] Perfluorohexanoic acid	NO	1/13/23 4/25/23	2.93, 0.95 0.964	ng/L	N/A	50,000	Released into the environment from widespread use in commercial and industrial applications.
PFHpA[6,7] Perfluoroheptanoic acid	NO	1/13/23	0.64	ng/L	N/A	50,000	Released into the environment from widespread use in commercial and industrial applications.
PFHxS[6,7] Perfluorohexanesulfonic acid	NO	1/13/23	0.71	ng/L	N/A	50,000	Released into the environment from widespread use in commercial and industrial applications.
PFOS Perfluorooctane sulfonate	NO	1/13/23	0.84	ng/L	N/A	10	Released into the environment from widespread use in commercial and industrial applications.
PFPeA[6,7] Perfluoropentanoic acid	NO	1/13/23 4/25/23	1.0 0.953	ng/L	N/A	50,000	Released into the environment from widespread use in commercial and industrial applications.

All of our Water Operators are New York State Department of Health certified, or a trainee in order to operate the water plant and/or water distribution system.

Are there Contaminants in our Drinking Water?

According to State regulations, the Village of Waterloo routinely monitors your drinking water for various contaminants. Your water is tested for radiological contaminants, inorganic contaminants, nitrate, lead and copper, volatile organic contaminants, synthetic organic contaminants and trihalomethanes. Additionally, your water is tested for E. coli, coliform, and other bacteria. Only the contaminants detected in your drinking water are included in the Table of Detected Contaminants.

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).

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 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 USEPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The New York State Health Department and the FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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.

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 using the best available treatment technology.

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.

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

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

90th Percentile: 90% of samples are equal to or less than the number in the chart.

NTU (or Nephelometric Turbidity Units): A measure of clarity.

NA: Not applicable.

ppt: (or parts per trillion): Corresponds to one part of liquid to one trillion parts of liquid. (nanograms per liter (ng/l).)

ppb: (or parts per billion): Corresponds to one part of liquid to one billion parts of liquid. (micrograms per liter (ug/l).

ppm: (or parts per million): Corresponds to one part of liquid to one million parts of liquid. (milligrams per liter (mg/l).

pCi/L (or picocuries per liter): a measure of radioactivity in water.

MRDL: Maximum Residual Disinfectant Level. 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.

MRDLG: Maximum Residual Disinfectant Level Goal. 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.

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 2023 was 0.401 NTU. State regulations require that turbidity samples collected have measurements below 1.00 NTU. All levels recorded were within the acceptable range allowed and did not constitute a treatment technique. No distribution system turbidity exceeded the NYS allowance.

2 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 on moderately restricted sodium diets.

3 – The level presented represents the 90th percentile of the 30 sites tested. The action level for copper was exceeded at one of the sites tested.

4 – 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 lead values detected at your water system. In this case, twenty-seven samples were collected at your water system and

the 90th percentile value was the third highest value (8.3 ug/l). The action level for lead was exceeded at one of the sites tested.

5a The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one-year-old.

5b Water additive that promotes strong teeth; discharge from fertilizer and aluminum factories. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

Note: The Village of Waterloo *does not* add any fluoride to its drinking water.

6 USEPA Health Advisory Levels identify the concentration of a contaminant in drinking water at which adverse health effects and/or aesthetic effects are not anticipated to occur over specific exposure durations. Health Advisory Levels are not to be construed as legally enforceable federal standards and are subject to change as new information becomes available.

7 All perfluoroalkyl substances, besides PFOA and PFOS, are considered Unspecified Organic Contaminants (UOC) which have an MCL = 0.05 mg/L = 50,000 ng/L.

WHAT DOES THIS INFORMATION MEAN?

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. The Village of Waterloo is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Jim Bromka at (315) 585-9811. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at *http://www.epa.gov/safewater/lead*.

Water Conservation Tips

Water conservation measures not only save the supply of our water source but can also cut the cost of water treatment. They can cut the energy costs at the treatment facility associated with pumping, and chemical costs for processing of the water. There are several measures you as the water consumer can do to conserve on water usage.

Conservation measures you can use inside your home include:

1. Fixing leaking faucets, pipes, toilets, etc.
2. Installation of water-saving devices in faucets, toilets and appliances. Low flow fixtures are now the only kind produced since 1994. Simply replacing old fixtures with new will reduce water consumption by nearly one-half.
3. Wash only full loads of laundry.
4. Don't use the toilet for trash disposal.
5. Take shorter showers. Do not let the water run while shaving, washing, brushing teeth, or cleaning fruits and vegetables.
6. Soak dishes before washing. Run the dishwasher only when full.

You can conserve outdoors as well:

1. Water the lawn and garden as little as possible. If you must water, do so in the early morning or evening.
2. Use mulch around plants and shrubs or choose plants that don't need much water.
3. Repair leaks in faucets and hoses. Use water-saving nozzles.
4. Use water from a bucket to wash your car and save the hose for rinsing.
5. Sweep clippings and leaves from walks and driveways rather than using the hose.
6. Obey any and all water bans or regulations.

Freeze Precautions:

1. Eliminate drafts: keep basement and garage doors and windows tightly closed, close off crawl space vents and doors, and seal cracks in basement walls or crawl spaces Insulate pipes in any unheated part of the home (exterior walls, crawl spaces, basements, cabinets) or spaces where air cannot circulate. Check for damp insulation; water-soaked insulation can cause freeze-ups.
2. Protect water meter: Be sure the meter box cover is not broken, missing, or out of place. Report broken or missing covers to the Water & Sewer Services.
3. Protect outside faucets. Drain outside faucets and sprinkler systems if a separate shut-off is available. Disconnect and drain garden hoses. Check with a plumber about frost-proof faucets. Caulk any space between the

faucet and an outside wall.

4. Open cabinet doors below sinks. If a sink is located against an outside wall, open cabinet doors to allow warm air to reach water pipes.

5. Drain pipes before extended vacations.

Consumer Tips: Appearance:

*If your cold tap water appears brown or red it is probably mineral deposits in your water caused by:

1. A water main break
2. Water Dept. workers flushing a hydrant
3. Vibrations caused by construction.

To alleviate this problem, call the water department if the cause is not obvious. Once the reason has been identified and the disruption of the water main has ceased, run your cold water tap until it clears.

*If your water appears cloudy in winter and early spring it is most likely trapped air. Cold water has a much greater capacity to hold gas than warm water and if this tendency is combined with a faucet aerator, your water may appear cloudy due to bubbles. If the water is allowed to sit a short while, the bubbles will eventually rise to the surface and dissipate.

Taste & Odor:

If at any time your water tastes different than normal, please do not hesitate to call the Water Treatment Plant at 315-585-9811. We will do our best to help you find the cause of the anomaly. With the exception of the annual late summer earthy/musty season due to increased blue-green algae in Seneca Lake, there should not be any reason for your water to taste like anything but plain water.

What Does This Information Mean?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements.

Summary of the SWAP (Source Water Assessment Program):

The NYS DOH has evaluated this PWS's (Public Water System's) susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph(s) 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 PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards. This assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for phosphorus, DBP precursors, and pesticide contamination. While there is not a great density of permitted discharges in assessment area, the total amount of wastewater discharged from these facilities is high enough to raise the potential for contamination (particularly for protozoa). There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: CBS and landfills.

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. In 2023 our system was in compliance with applicable standards.

2023 WATERLOO VILLAGE BOARD
Mayor: Walt Bennett; **Trustees** :A.J Trahms, Gina Sufferdini, Patty Bartran & John Butlak

Village Administrator: Don Northrup Jr.
Superintendent of Public Works: Mike Forde
Water Distribution: Garrett Gaydosh & John Thomas