Annual Drinking Water Quality Report for 2023
Seneca County Water District #1

Public Water Supply ID# (NY4912215)

INTRODUCTION

To comply with State regulations, Seneca County water district, 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. In 2023, 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 Ron Schalck Water Superintendent, 315 515 1409 or by email waterandsewer@co.seneca.ny.us We want you to be informed about your drinking water. If you want to learn more, please contact Jim Bromka, Village of Waterloo NYS Grade 1A & D certified water treatment plant operator and NYS & NELAP certified environmental lab director, by calling (315) 585-9811. Or you may visit us on the internet at www.co.seneca.ny.us

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water including tap water and bottled water come from 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 and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Seneca County Water District purchases water from the Village of Waterloo, they take the water from Seneca Lake and treat's its 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. Waterloo uses chlorine dioxide to disinfect and help oxidize organics and deter Zebra Mussels. Additionally, Waterloo adds 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 re-disinfected with chloramines before it leaves the water plant in order to maintain the distribution system's residual integrity. A Source Water Assessment of Waterloo's water supply is available upon request at the Seneca County Health Department, 2465 Bonadent Drive, Waterloo 13165, (315) 539-1945.

Improvements and Changes in Disinfection & Operations:

The Village of Waterloo Water System uses chloramines (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 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.

The 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.

If you have any questions, please contact your physician, pet store, or call us at the Water Plant Office 315 585-9811.

In 2023, **the Village of Waterloo added but 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.

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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).

The Village of Waterloo 2023 Monitoring Results for Contaminants in Drinking Water

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	NA	1	Soil Runoff
Distribution Turbidity[1]	NO	2/28/2023	1.18	NTU	NA	5	Soil Runoff
Inorganic Contaminates							
Nitrate	NO	10/12/2023	0.261	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sew age; Erosion of natural dep.
Nitrite	No	10/12/2023	<0.0250	mg/L	1.0	1.0	Runoff from fertilizer use; Leaching from septic tanks, sew¬ age; Erosion of natural dep.
Arsenic	NO	10/12/2023	<0.0010	ug/L	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics

							production wastes
Antimony	NO	10/12/2023	<0.0004	ug/L	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Barium	NO	10/12/2023	0.0250	mg/L	2	2	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Sodium[2]	NO	10/12/2023	70.9	mg/L	NA	250	Naturally occurring
Copper[3]	NO	6/27/2023-8/1/2023	0.881 (90th percentile) 0.0206– 1.45 (range)	mg/L	1.3	1.3=AL	Corrosion of plumbing systems; erosion of natural deposits.
Lead[4]	NO	6/27/2023-8/1/2023	8.9 (90th percentile) ND – <1-24.8 (range)	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	NA	NA	Naturally occuring
Other							
Chlorine Dioxide	NO	8/6/2023	620	ug/L	MRDLG=800	MRDL=800	Water additive used to control microbes. (Primary Disinfection).
Chlorite	NO	10/23/2023	610	ug/L	1000	1000	Byproduct of drinking water disinfection
Chloramines	NO	7/4/2023	3.99	mg/L	NA	4.00	Water additive used to control microbes. (Primary Disinfection).
TOC (Total Organic Carbon)	NO	4/21/2023	3.86	mg/l	NA	NA	Naturally Occurring
Trihalomethanes	NO	8/8/2023	22.1	ug/L	0	80	Byproduct of drinking water disinfection MCL is 80
Haloacetic Acids (HAA5)	NO	8/8/2023	8.2	ug/L	NA	60	Byproduct of drinking water disinfection MCL is 60
Other							
Asbestos	NO	8/8/2022	Non detect 2020	ug/l		0.69	
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] Perfluorohexane sulfonic 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.

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.

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 not exceeded at any 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, thirty 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 ~~not~~ 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.

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.
Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
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 to one trillion parts of liquid (parts per trillion - ppt).
Picograms per liter (pg/l): Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).
Picocuries per liter (pCi/L): A measure of the radioactivity in water.
Millirems per year (mrem/yr): A measure of radiation absorbed by the body.
Million Fibers per Liter (MFL): A measure of the presence of asbestos fibers that are longer than 10 micrometers

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 the level allowed by the state.
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 Seneca County Water District 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 Ron Schalck of the Seneca County Water District at 315 515 1409.

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*.

IS OUR WATER SYSTEM MEETING RULES THAT GOVERN OPERATIONS?

During 2023, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

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).**

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.
- Use clothes washers with full loads
- Turn off the tap when brushing your teeth.
- Keep a cold pitcher of water in your refrigerator instead of running until its cold for drinking
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it 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.
- Consider upgrading older water using fixtures this could save 1,000s of gallons of water per year.
- Turn outside faucets off when not in use, don't rely on a spray nozzle to stop water use.

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. We ask that all our customers help us protect our water sources, which are the heart of our community. Please email any questions to waterandsewer@co.seneca.ny.us

This report was prepared by Ron Schalck with the assistance of the Village of Waterloo and the Seneca County Health Department.