

Annual Drinking Water Quality Report for 2021 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 2021, 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 585-9811.

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 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.

The Village of Waterloo 2021 Monitoring Results for Contaminants in Drinking Water <small>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).</small>							
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	8/29/2021	0.338	NTU	1	1	Soil Runoff
Distribution Turbidity	NO	8/2/2021	0.470	NTU	NA	5	Soil Runoff
Inorganic Contaminates							
Nitrate	NO	8/16/2021	0.361	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sew- age; Erosion of natural dep.
Nitrite	No	8/16/2021	<0.0100	mg/L	1.0	1.0	Runoff from fertilizer use; Leaching from septic tanks, sew- age; Erosion of natural dep.
Arsenic	NO	8/16/2021	<0.00102	ug/L	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Antimony	NO	8/16/2021	<0.000408	ug/L	6	6	Discharge from petroleum refineries; fire

Barium	NO	8/16/2021	0.0290	mg/L	2	2	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Sodium ₂	NO	8/16/2021	73.8	mg/L	NA	250	Naturally occurring
Copper ₃	NO	6/18-24/19	0.754 (90th percentile) 0.025– 0.775 (range)	mg/L	1.3	1.3=AL	Corrosion of plumbing systems; erosion of natural deposits.
Lead ₃	NO	6/18-24/19	0.0048 (90th percentile) ND – 0.0087 (range)	mg/L	0	.015=AL	Corrosion of plumbing systems; erosion of natural deposits.
Fluoride _{4b}	NO	8/16/2021	<0.200	mg/L	0.8-2.2	2.2	Erosion of natural deposits
Nickel	NO	7/23/19	0.0009	mg/l	NA	NA	Naturally occurring
Other							
Chlorine Dioxide	NO	11/30/21	590	ug/L	MRDLG=800	MRDL=800	Water additive used to control microbes. (Primary Disinfection).
Chlorite	NO	8/10/21	460	ug/L	1000	1000	Byproduct of drinking water disinfection
Chloramines	NO	1/6/21	3.86	mg/L	NA	4.00	Water additive used to control microbes. (Primary Disinfection).
TOC (Total Organic Carbon)	NO	8/16/21	2.99	mg/l	NA	NA	Naturally Occurring
Trihalomethanes	NO	8/10/21	18.4 site 1 20.2 site 2	ug/L	0	80	Byproduct of drinking water disinfection MCL is 80
Haloacetic Acids (HAA5)	NO	8/10/21	10.20 site 1 8.79 site 2	ug/L	NA	60	Byproduct of drinking water disinfection MCL is 60
Disinfection By-Products	NO	8/18/21	16.1 THM 8.8 HAA	ug/L	0	80 60	Byproduct of drinking water disinfection
Other							
PFOA	NO	6/16/2021	1.72	ug/L			

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 2021 was 0.338 NTU. State regulations require that turbidity samples collected have measurements below 5.00 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 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. The level presented represents the 90th percentile of the sites tested. The action level for lead was exceeded at two of the 42 sites tested in 2019.
4. 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.

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.

Level 1 Assessment: A Level 1 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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.

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 as a result of materials used in your home's plumbing. Seneca County is responsible for providing 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 water, you may wish to have your water tested. Information on lead in 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 RULES THAT GOVERN OPERATIONS?

During 2021, 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 cloths wasters 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.

