Annual Drinking Water Quality Report for 2023
Town of Yates Water District #2
8 South Main Street, Lyndonville, NY 14098
Public Water Supply ID# NY3600604

INTRODUCTION

To comply with State regulations, the Town of Yates, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that in 2023 our system did not violate a maximum contaminant level. 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 Roger W. Wolfe at (585)765-9716. 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 meetings are held on the second Thursday of the month at 7:00pm at the Yates Town Hall, 8 South Main Street, Lyndonville, New York 14098, where you are welcome to discuss any issues.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is located in the west branch of the Niagara River. The treatment plant uses pre-chlorination, coagulation, rapid mix, flocculation, sedimentation, and filtration processes to ensure the quality of the water. The NCWD also uses chlorination for disinfection. The water treatment plant has been approved as a direct filtration plant; however, water is treated using conventional filtration including all of the processes described above. In addition, fluoride and a corrosion inhibitor are added to the potable water prior to distribution.

The New York State Department of Health recently completed a draft Source Water Assessment of the **raw water source** under the State's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the **potential** for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels – intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage area deemed most likely to impact drinking water quality at this public water supply raw water intake. 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 protozoa and pesticides contamination. There is also a

high density of sanitary wastewater discharges, which results in elevated susceptibility for numerous contaminant categories. Non-sanitary wastewater could also impact source water quality. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: Mines and Resources Conservation and Recovery Act (RCRA) facilities. If you have any questions about the States Source Water Assessment Program, please contact Daniel Ziehm, Assistant Public Health Engineer, Niagara County Department of Health at (716) 439-7455.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: microbiological contaminants, radioactive contaminants, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, synthetic organic compounds, trihalomethanes, haloacetic acids, and disinfection by-products. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one-year-old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Niagara County Health Department at (716) 439-7430.

Table 1: Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg. / Max.) (Range)	Unit of Measure-ment	MCLG	Regulatory Limit	Likely Source of Contamination	Health Effects
Inorganic Contaminants								
Barium	No	2/23	0.0218	mg/L	2.00	MCL=2.00	Discharge of drilling wastes and from metal refineries; Erosion of natural deposits.	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Copper[1] (in distribution system)	No	6/23-9/23	0.145 (0.141-0.252)	mg/L	1.3	AL=1.3	Corrosion of galvanized pipes; Erosion of natural deposits.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Fluoride	No	1/23 – 12/23	0.68 (0.67-0.70)	mg/L	N/A	MCL=2.2	Erosion of natural deposits; Water additive that promotes strong teeth	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.
Lead[1] (in distribution system)	No	6/23-9/23	5.8 (5.75-11.6)	ug/L	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Table 1: Table of Detected Contaminants								
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg. / Max.) (Range)**	**Unit of Measure -ment**	**MCLG**	**Regulatory Limit**	**Likely Source of Contamination**	**Health Effects**
Total Organic Carbon (TOC) Source	No	1/23-12/23	2.2 (2.07 –2.51)	mg/L	NA	NA	Naturally occurring organic materials from decaying leaves and plants.	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Total Organic Carbon (TOC) Treated	No	1/23-12/23	1.7 (1.63-1.89)	mg/L	TT	TT	Source same as above, treated samples measure the effectiveness of our water treatment process.	
Sodium	No	2/23	10.20	mg/L	N/A	AL=20	Erosion of natural deposits. Use of road salt, discharges from water softeners.	Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
Entry Point Chlorine Residual	No	1/23 - 12/23	1.15 (1.07– 1.22)	mg/L	MRDL 4.0	MRDLG 4.0	Added for disinfection.	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Entry Point[2] Turbidity	No	1/23 - 12/23	0.02 (0.01 – 0.05)	NTU	N/A	0.3 NTU	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Please pay special attention to the additional statement in this document regarding Cryptosporidium.
Entry Point[2] Turbidity	No	1/23 - 12/23	100% of samples less than 0.3 NTU	NTU	N/A	TT = 95% of samples < 0.3 NTU	Soil runoff	
Synthetic Organic Contaminants								
Perfluoroocta-noic Acid (PFOA)[4]	No	2/23-8/23	3.43	ng/L	N/A	MCL=10	Released into the environment from widespread use in commercial and industrial applications	PFOA/PFOS caused a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOA/PFOS in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOA/PFOS as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOA/PFOS in animals.
Perfluoroocta-nesulfonic Acid (PFOS)[3]	No	2/23-8/23	1.3	ng/L	N/A	MCL=10		

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Radioactive Contaminants								
Gross Alpha Particles	No	2/20	0.579	pCi/L	N/A	MCL=15	Erosion of natural deposits of certain radioactive minerals	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Radium 226 and 228 combined	No	2/20	0.343	pCi/L	N/A	MCL=5	Decay of natural and man-made deposits of certain radioactive minerals.	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium	No	3/14	0.036	µg/L	N/A	MCL=30	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer.

[1]During 2023 the Niagara County Water District collected and analyzed 50 samples for lead and copper. The level presented represents the 90th percentile of the 50 sites tested. The 90th percentile is equal to or greater than 90% of the lead or copper values detected at your water system. The analysis showed concentrations below action levels for all 50 copper samples and 50 of 50 lead samples.

[2]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. NCWD's highest single turbidity measurement for the year was 0.05 NTU and the lowest was 0.01 NTU. State regulations require that turbidity must always be less than or equal to 1.0 NTU leaving the Water Plant and 5 NTU in the distribution system. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. All samples collected in 2023 were below the treatment technique level and do not constitute a violation.

[3]The values were below Lab Reporting Limit (RL) but were above the (MDL) minimum detection level and all PFOS and PFOA results were below MCL (Maximum Contaminant Level) of 10.0 ng/L.

[4]There was a lab detection on the triple blank of 4.87 ng/L which should be ND.

TOWN OF SOMERSET

Town of Somerset has not exceeded the MCL for total coliform during the 2023 reporting period.

Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg.) (Range)**	**Unit of Measure -ment**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**	**Health Effects**
Microbiological Contaminants[1]								
Turbidity	No	1/23 - 12/23	0.11 (0.01 – 0.41)	NTU	N/A	TT= <5NTU	Soil Runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Please pay special attention to the additional statement in this document regarding Cryptosporidium.

Total Coliform	No	1/23 - 12/23	0 positive samples	N/A	0	MCL= 2 or more positive samples	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution.
Chlorine Residual	No	1/23 - 12/23	0.65 (0.08 – 1.04)	mg/l	MRDL 4.0	MRDLG 4.0	Added for disinfection.	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Disinfection Byproducts[2]								
Total Trihalomethanes	No	2/23 - 11/23	44 (34 – 57)	µg/l	N/A	MCL=80	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Total Haloacetic Acids	No	2/23 - 11/23	29 (13 – 40)	µg/l	N/A	MCL=60	By-product of drinking water chlorination	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

[1]Turbidity is a measure of the cloudiness of the water. We test is because it is a good indicator of the effectiveness of our filtration system. State regulations require that average monthly turbidity must always be below 1 NTU leaving the Water Plant and 5 NTU in the distribution system.

[2]Results for Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5s) are reported as the highest locational running annual average. The range of detection is shown below the average.

Town of Yates Water District 2

Town of Somerset has not exceeded the MCL for total coliform during the 2023 reporting period.

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg.) (Range)	Unit of Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination	Health Effects
Microbiological Contaminants[1]								
Turbidity	No	1/23 - 12/23	0.10 (0.02 – 0.20)	NTU	N/A	TT= <5NTU	Soil Runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Please pay special attention to the additional statement in this document regarding Cryptosporidium.
Total	No	1/23 -	0 positive	N/A	0	MCL= 2 or	Naturally present in the	Coliforms are bacteria that are naturally present in the

Coliform		12/23	samples			more positive samples	environment	environment and are used as an indicator that other, potentially harmful waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution.
Chlorine Residual	No	1/23 - 12/23	0.60 (0.03 – 1.04)	mg/l	MRDL 4.0	MRDLG 4.0	Added for disinfection.	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Disinfection Byproducts[2]								
Total Trihalomethanes	No	8/23	61	µg/l	N/A	MCL=80	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Total Haloacetic Acids	No	8/23	33	µg/l	N/A	MCL=60	By-product of drinking water chlorination	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

[1]Turbidity is a measure of the cloudiness of the water. We test is because it is a good indicator of the effectiveness of our filtration system. State regulations require that average monthly turbidity must always be below 1 NTU leaving the Water Plant and 5 NTU in the distribution system.

[2]Results for Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5s) are reported as the highest locational running annual average. The range of detection is shown below the average.

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).

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?

We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by New York State. It should be noted that the action level for lead was not exceeded in the 50 samples collected in 2020. However, we provide the following information on lead in drinking water for those concerned:

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. The Niagara County Water District 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 OTHER 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).

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 0.7 mg/l. During 2023 monitoring showed that fluoride levels in your water were less than or equal to the target level for 100% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS

Spanish

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it 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.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes. If it moved, you have a leak.

SYSTEM IMPROVEMENTS

In 2023, the NCWD finalized improvements at the Williams Road Pump Station which progressed performance as part of the District's asset renewal program as well as completing residual removal from the South Lagoon, VFD upgrades to the Robinson Road Pump Station, section of the treatment plant roof replacement, and surge protection at NCWD facilities throughout Niagara County. A washtank bypass was constructed at the treatment plant in anticipation of the wash tank being replaced in the future.

NCWD has also started construction upgrades to the Raw Water Pumping Station and meter pits throughout Niagara County. These improvements facilitate continuing efforts to maintain a safe and dependable water supply.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.