

Annual Drinking Water Quality Report for 2023
Hamilton College Water District
 198 College Hill Road - Clinton, NY 13323
 (Public Water Supply ID# NY3202470)

Supplemental to MVWA Report –
 see MVWA Report for additional
 required reporting information



INTRODUCTION

To comply with State regulations, Hamilton College Water District (HCWD) 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. The system is a purchase water system of the Mohawk Valley Water Authority (MVWA), meaning all water is purchased from the MVWA and distributed through our water mains to customers. Attached is the MVWA Annual Water Quality Report. Last year, your tap water met all State drinking water health standards. This report provides an overview of the water quality for the past year. Included are details about where your water comes from, what it contains, and how it compares to State standards. Additional information may be obtained at www.mvwa.us.

If you have any questions about this report or concerning your drinking water, please contact Daniel Rodriguez, Manager of MEP Systems, 315-859-4500. We want you to be informed about your drinking water.

WHERE DOES OUR WATER COME FROM?

Our water system serves 2181 people through 173 service connections. These people are year-round residents, employees and staff or students. The HCWD purchases 100% of its water from the MVWA. (See the MVWA Report for additional information on where our water comes from.) If needed, sodium hypochlorite (chlorine) is added to the water to ensure continuous disinfection of the water supply. The water is pumped to a 1-million gallon storage tank. From here, the water flows by gravity to all buildings and residences within the water district.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In addition to the MVWA sample results (see attached MVWA Report), the HCWD Water System routinely tests your drinking water for coliform bacteria, disinfection residuals, lead and copper, and disinfection byproducts. The table presented below depicts which compounds were detected in your drinking water.

Table of Detected Contaminants (Hamilton College WD)

Contaminant	Is System in Violation?	Date of Sample	Level Detected Average or Maximum (Range)	Unit Measurement	MCLG / MRDLG	Regulatory Limit (MCL, MRDL, TT or AL)	Sources in Drinking Water
Inorganic Contaminants							
Copper	No	9/9/22	0.02 ⁽¹⁾ (range = 0.0028-0.029)	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead	No	9/9/22	0.002 ⁽²⁾ (range = ND-0.0094)	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits.
Disinfectants							
Chlorine Residual	No	Daily / Monthly	0.55 ⁽³⁾ (range = 0.35 – 0.92)	mg/l	N/A	MRDL = 4 ⁽⁴⁾	Water additive used to control microbes.
Disinfection Byproducts							
Haloacetic Acids (HAA5 - mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid)	No	Quarterly	18 ⁽⁵⁾ (range = 4 – 36)	ug/l	N/A	MCL = 60	By-product of drinking water disinfection needed to kill harmful organisms.
Total Trihalomethanes (TTHMs – chloroform, bromodichloromethane, dibromochloromethane and bromoform)	No	Quarterly	67 ⁽⁵⁾ (range = 18 – 78)	ug/l	N/A	MCL = 80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
See Mohawk Valley Water Authority AWQR for additional sample information - Physical Parameters, Radioactive Contaminants, Inorganic Contaminants, Synthetic Organic Contaminants, Principal Organic Contaminants, Lead and Copper							

Notes:

- 1 - The level presented represents the 90th percentile of the twenty-two (22) 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, twenty-six (26) samples were collected at your water system and the 90th percentile value was the third highest value. The action level for copper was not exceeded at any of the sites tested.
- 2 - The level presented represents the 90th percentile of the twenty-six (26) samples collected. See additional information about lead in the report below.
- 3 - The values presented represent the highest rolling annual average and range of the levels reported on the monthly microbiological sampling reports.
- 4 - 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.
- 5 - The levels represent the Highest Locational Running Annual Quarterly Average (LRAA) and range for all required compliance samples submitted under Stage 2 DBPR sampling requirements.

Definitions:

ACTION LEVEL	AL	The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
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.
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).
NON-DETECTED	ND	Laboratory analysis indicates that the constituent is not present.
TREATMENT TECHNIQUE	TT	A required process intended to reduce the level of a contaminant in drinking.

WHAT DOES THIS INFORMATION MEAN?

We have learned through our testing that some contaminants have been detected; however, most of these contaminants were detected below the level allowed by the State.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

Last year, our system was in general compliance with applicable State drinking water operating, monitoring and reporting requirements.

Information about Lead.

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. Hamilton College WD 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>.

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. Please call our office if you have questions.

See Attached MWWA Report for additional required reporting, sampling, treatment and water source information.

ANNUAL DRINKING WATER QUALITY REPORT FOR 2023
Upper Mohawk Valley Regional Water Board
(Mohawk Valley Water Authority)
1 Kennedy Plaza
Utica, New York 13502
(Public Water Supply ID# NY3202411)

**MVWA Report – Use
with Supplemental
System reports for
required reporting
information.**



INTRODUCTION

To comply with State and Federal regulations, the Mohawk Valley Water Authority (MVWA) 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. MVWA had a violation of the Stage 2 Disinfection Byproducts Rule in 2023 at one site near the former county airport in Oriskany in May 2023. This report provides an overview of last year's (2023) water quality. Included are details about where your water comes from, what it contains, and how it compares to State and Federal standards.

If you have any questions about this report or concerning your drinking water, please contact Philip Tangorra, Director of Water Quality, at (315) 792-0301. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Water Board meetings. The meetings are held on the third Monday of each month at the Mohawk Valley Water Authority Conference Room, third floor, Utica City Hall at 5 P.M.

For non-English speaking / reading population:

"This report contains important information about your drinking water. Translate it or speak with someone who understands it."

Bosnian – Ovak izveštaj sadrži važne informacije o vodi za piće. Prevesti, ili razgovarati s neko ko razumije.

Russian - Этот отчет содержит важную информацию о вашей питьевой воды. Перевести его, или поговорить с кем-то, кто понимает его.

Somali – Warbixintani waxay ku qoran macluumaad muhiim ah oo ku saabsan biyo aad u cabbo. Fasiri karaa ama ula hadasho qof fasiri karaa adiga.

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

Vietnamese - Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Dịch nó, hoặc nói chuyện với một ai đó hiểu nó.

Simplified Chinese - 该报告包含有关饮用水的重要信息。翻译它，或者与别人谁了解它说话。

Traditional Chinese - 該報告包含有關飲用水的重要信息。翻譯它，或者與別人誰了解它說話。

WHERE DOES YOUR 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 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. To ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the level of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The water we drink gathers in the streams and creeks of a remote 374 square mile Adirondack Mountain watershed, far from settled areas and farmland. These tributaries drain into the West Canada Creek, which carries our water to the New York State-owned Hinckley Reservoir, the source of our water supply.

SOURCE WATER ASSESSMENT INFORMATION

A Source Water Assessment has been completed for our water system. Possible and actual threats to drinking water source(s) were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the source(s). The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is or will become contaminated. The Source Water Assessment Program

(SWAP) is designed to compile, organize, and evaluate information to make better decisions regarding protecting sources of public drinking water. The report does not address the safety or quality of treated finished potable tap water. The source water assessment report is based on reasonably available information. Although efforts have been made to check the source water assessment report for accuracy, the large scope of this program and the nature of the available data make the elimination of all errors from these reports nearly impossible. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted above.

During 2005 a source water assessment was completed under the NYS Department of Health's Source Water Assessment Program (SWAP). This assessment found a low to moderate susceptibility to contamination of our source water. Land cover and its associated activities within the assessment area did not increase the potential for contamination. Permitted discharges from facilities in the watershed do not represent an important threat to source water quality, based on their density in the assessment area. There are no likely contamination threats associated with other discrete contaminant sources, even though some facilities were found in low densities. Additional sources of potential contamination include the roadways in the watershed. In conclusion, it was noted that hydrologic characteristics (basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

See section "*Are there contaminants in our drinking water?*" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

Based upon the SWAP Report determinations, good judgment should be used, and caution should be exercised when determining land use near the source. We work hard to ensure that the source of water for our system is protected from contamination. MVWA has an established inspection & monitoring program within the Hinckley watershed. In addition, the MVWA has existing Watershed Rules and Regulations (10NYCRR Chapter III Part 130.2) that regulate the land use and potential contamination sources around the water source. This is accomplished through a combination of land ownership and policing of the watershed area.

HOW IS YOUR WATER TREATED?

In 1990, after four years of careful testing, planning and design, construction of a water treatment and filtration plant began at a site near the village of Prospect. The facility became operational in 1992. The treatment plant includes a double filtration system designed to remove most of the organic matter and contaminants.

After our water has been filtered it is chlorinated. Chlorine is a disinfecting agent and kills bacteria present in the water. Chlorine levels are continuously monitored throughout our 650 miles of pipe that brings the water to your home.

Fluoride is added to your water in concentrations of 0.7 mg/l. Fluoride has been shown to reduce tooth decay and cavities.

Our water is treated to control corrosion of household plumbing that may contain metals such as lead. Calcium hydroxide (lime) and sodium carbonate (soda ash) are used in small amounts to buffer the water so that it is rendered non-corrosive to your home's plumbing. Lime and soda ash are naturally occurring substances, which pose no threat to human health. Lead levels measured in our customers' homes are in compliance with the Federal Lead Monitoring Program action levels.

FACTS AND FIGURES

Our water system presently serves approximately 126,250 people through over 38,900 service connections. The daily average amount of water treated was 18.1 million gallons per day. Our highest single day of production was 19.8 million gallons. The total water produced in 2023 was approximately 6.6 billion gallons. Some of the water was used for flushing water mains, filter backwashing, plant processes, equipment and hydrant testing, fighting fires, training firefighters, street cleaning and water main breaks and leakage. Approximately 3.3 billion gallons were sold to our customers. MVWA has an ongoing Leak Detection and Repair Program. All distribution mains within the MVWA system are surveyed by professional Leak Detection Contractors on a recurring basis. In the past 5 years, 2.0 to 2.5 MGD of non-revenue water demand has been eliminated through this program.

In 2023, residential water customers were charged approximately \$5.48 per 1,000 gallons of water (average family of four).

SYSTEM IMPROVEMENTS - During 2023 the MVWA continued its aggressive program of reinvestment in the Regional System.

WATER SYSTEM MAINTENANCE AND CAPITAL IMPROVEMENT SUMMARY

The Engineering, Distribution and Maintenance Departments continued to implement major physical and operational improvements throughout the Regional Transmission and Distribution System and Facilities in 2023. Nearly \$8,100,000 in improvements were completed with another \$17,900,000 in various stages of design or construction. The Departments were able to accomplish these projects while managing inflationary pressures such as escalating materials prices, labor costs, and delayed deliveries related to supply chain disruptions.

MVWA utilizes system management tools to improve water service reliability and ensure sustainability throughout the Regional Water System. In 2022 and 2023, MVWA enlisted a consultant engineer firm to upgrade and modernized the systemwide all pipe hydraulic model. The model can also be utilized for water quality modeling. Real-time remote monitoring of pressure, flow and water quality parameters is accomplished utilizing the MVWA SCADA System. A systemwide replacement program of the SCADA system (electronic remote monitoring) was completed at the Water Treatment Plant in 2021 and the remainder of the distribution system assets were upgraded this year. GIS/Mapping system and annual Leak Detection Survey allows the tracking and reporting of water accountability for reducing unaccounted-for water.

The Departments are also responsible for preparing, bidding, and administering routine annual contracts for commodities and services including: Water Main Materials, Leak Detection, Generator Maintenance, Fence Repairs, Tree Removals, Backflow Testing, Asphalt Paving and Concrete repairs and numerous other System needs. There is also an annual Tank Diving contract that permits the cleaning and inspection of the tanks while they remain in service thus eliminating lengthy service interruptions.

In 2022, a rollout of remote pressure monitoring devices (42 total) in PRV chambers was progressed throughout the year. These remote pressure monitoring devices give MVWA additional “eyes-and-ears” throughout the system to help respond quickly to system problems. All remote pressure monitoring devices are compatible with and able to be viewed in the new SCADA system. Repairs and upgrades to the chambers to improve access and safe working conditions also continue.

In 2022 and 2023, the MVWA owned Water Treatment Plant was upgraded to convert the disinfection process, from a chlorine gas fed system to liquid sodium hypochlorite fed treatment system. These improvements helped reduce the hazards associated within the transportation, storage and use of chlorine gas and provided a more efficient means for the treatment of raw water into potable water.

Department staff are active members of several professional associations and their governing Boards. MVWA staff remained engaged and continue to serve as leaders in the drinking water sector.

PROJECTS AND OPERATIONS IN FY 2023 INCLUDED:

FACILITIES – PUMPSTATIONS AND WATER STORAGE TANKS

A major project in 2022 and 2023 was the conversion from gaseous chlorine to liquid sodium hypochlorite as the primary disinfection system at the WTP. This >\$2-million-dollar project eliminates the risks associated with storage and use of chlorine gas at our facility. The switch from gas to a temporary hypochlorite system was seamless while building and process improvements were made to the permanent system. Final completion is scheduled for Spring 2024.

The Gilbert Tank Demolition Project involved the removal of an existing water tower located adjacent to Gilbert Road and Sanger Avenue in the Village of New Hartford. This tank was disconnected from the distribution system and determined to be hydraulically obsolete back in 2004, following the construction of the Sanger Avenue water storage tank. The work involved demolition of the old steel water tower and restoration of grounds following its removal at a cost around \$300,000.

WATER MAIN REPLACEMENTS

In conjunction with the New York State Department of Transportation’s roadway rehabilitation projects, the MVWA funded the replacement of existing water main along Champlin Avenue in the City of Utica and Genesee Street in the Village of New Hartford. The Champlin Avenue work consisted of approximately 1,300 feet of undersized main replacement between Whitesboro Street and

Campbell Avenue including the replacement of fire hydrants and connection to existing service lines. The Genesee Street work consisted of approximately 3,400 feet of undersized main replacement between Jordan Road and State Route 8, along with 1,100 feet of main replacements within adjacent side streets including Oxford Road, Paris Road, and Mill Street. The project also involved the replacement of fire hydrants and connection to existing service lines. These improvements provided increased fire protection and increased reliability of service for the area. Collectively the construction cost for the Champlin Avenue and Genesee Street main replacement work was approximately \$2.7 million.

RAW WATER MAINS & NORTH AND SOUTH PIPE BRIDGES

The work associated with the Raw Water Main Phase 1 Pipe Bridge and Transmission Main Improvement Project, located in Prospect, NY and adjacent to the MVWA Water Treatment Plant commenced during April of 2023. Substantial completion of the contracted work occurred by December 2023, which included erection of the new southerly pipe bridge, demolition of the old intermediate pipe bridge, installation of raw water main, and installation of cross-connections between new and old piping. Final completion involving site restoration is expected to be achieved by May of 2024. Collectively the construction cost for these improvements was approximately \$5.4 million.

FEMA REPAIRs for “HALLOWEEN 2019 STORM” DAMAGE

Repairs for four locations around Southern Reservoir was completed in 2022, including erosion repairs with new riprap at the bypass channel, placement of a new concrete overflow spillway and stone abutment repair at the spillway bridge, reservoir bank failure repairs, stone drainage channel lining, and general site restoration. In November of 2023, a contract was awarded for the repair of transmission mains and restoration of grounds at nine sites within the Town of Marcy. Work associated with this \$2.6 million project commenced in December of 2023 and is expected to be completed by the fall of 2024. Two other repairs at the water treatment plant decant lagoon and the prospect dam, related to the FEMA storm damages, are currently in design and should go to construction during the spring of 2024, at an approximate construction cost of \$1.1 million.

EMERGENCY AND STAND-BY POWER

Select emergency and stand-by power improvement initiatives were undertaken in 2023. For the MVWA Valley View Pump Station, a back-up generator replacement design and contract award were completed. Work for this project commenced in the late fall of 2023 that involved the removal of the existing generator and replacement with a new generator at a construction cost of approximately \$120,000. The final work for this project is expected to be completed by July of 2024. In addition, a purchase order for the acquisition of a portable generator was let at the end of 2023 with a delivery date expected in March of 2024 and cost approximately \$160,000. To accommodate the use of this portable generator, a 2024 contract will be let to complete pump station electrical upgrades to allow quick connection of the portable unit into existing electrical systems during emergency events.

DISTRIBUTION SYSTEM SCADA AND SECURITY UPGRADES

In November of 2023, the MVWA purchased 34 new data transmitters for use with existing pressure regulator and pump stations, to replace existing transmitters. The use of the new Signalfire transmitters will allow for instantaneous pressure and flow data relay to water distribution system maintainers, which will provide enhanced trouble shooting and diagnostic capabilities. Security upgrades including fire/smoke alarms, building entry alarms, cameras, etc. continued in 2023. MVWA continues to aggressively work to protect its assets and proved a secure system for its customers.

ARE THERE CONTAMINANTS IN YOUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, disinfection byproducts, and synthetic organic compounds. 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, might 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 at 800-426-4791 or the Oneida County Health Department at 315-798-5064.

Table of Detected Contaminants

Contaminant	Is System in Violation?	Date of Sample	Level Detected Average / Maximum (Range)	Unit Measurement	MCLG / MRDLG	Regulatory Limit (MCL, MRDL, TT or AL)	Likely Source of Contamination
Microbiological Contaminants– over 100 Coliform Samples Monthly (2,462 collected in 2023)							
Total Coliform	No	N/A	N/A ⁽¹⁾	N/A	0 N/A	Any positive sample ⁽²⁾	Naturally present in the environment.
Physical Parameters							
Turbidity (Filtered Water) ^(3a)	No	07/20/2023	0.12 (highest single measurement) ^(3a)	NTU	N/A	TT = <1.0 NTU	Soil Runoff
Turbidity (Filtered Water) ^(3b)		All months ≤ 0.3	99.9% ≤ 0.3 (lowest monthly percentage of samples meeting specified limits)			TT = 95% of samples <0.3 NTU	
Turbidity (Distribution)		Daily	0.28 ⁽⁴⁾ (range = 0.09 – 4.06)			TT = <5 NTU (Monthly Average)	
Total Organic Carbon (Raw Water)	No	Monthly	5.3 ⁽⁵⁾ (range = 3.1 – 7.6)	mg/l	N/A	TT (relative to removal rates)	Naturally present in the environment.
Total Organic Carbon (Filtered Water)			1.2 ⁽⁵⁾ (range = 0.2 – 2.0)				
Inorganic Contaminants							
Barium	No	8/23/2023	0.006	mg/l	2	MCL = 2	Erosion of natural deposits.
Chloride	No	8/23/2023	4.2	mg/l	N/A	MCL = 250	Naturally occurring.
Copper	No	2023	0.014 ⁽⁶⁾ (range = ND – 0.035)	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead	No	2023	12.5 ⁽⁷⁾ (range = ND – 192)	µg/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits.
Fluoride (System Entry Point)	No	Daily	0.7 ⁽⁸⁾ (range = 0.5 – 0.9)	mg/l	N/A	MCL = 2.2	Erosion of natural deposits; Water additive that promotes strong teeth (<i>The MWWA water system adds Fluoride to the water</i>).
Fluoride (Distribution System)	No	Monthly	0.7 ⁽⁹⁾ (range = 0.5 – 0.9)				

Table of Detected Contaminants

Contaminant	Is System in Violation?	Date of Sample	Level Detected Average / Maximum (Range)	Unit Measurement	MCLG / MRDLG	Regulatory Limit (MCL, MRDL, TT or AL)	Likely Source of Contamination
Nitrate	No	2/8/2023	0.19	mg/l	N/A	MCL = 10	Run off from fertilizer use, leaching of septic tanks, erosion of natural deposits.
Sodium	No	8/23/2023	23.0 ⁽¹⁰⁾	mg/l	N/A	See Note 11 below	Naturally occurring; part of pH adjustment additive.
Sulfate	No	8/23/2023	12.6	mg/l	N/A	MCL = 250	Naturally occurring.
Disinfectants / Disinfection Byproducts							
Chlorine Residual	No	Daily/ Monthly	0.9 ⁽¹¹⁾ (range = 0.2 – 2.0)	mg/l	N/A	MRDL = 4 ⁽¹²⁾	Water additive used to control microbes.
Haloacetic Acids (mono-, di- and trichloroacetic acid, and mono- and dibromoacetic acid)	No	Quarterly at 8 sites	20.1 ⁽¹³⁾ (range = 5.4 – 37.6)	µg/l	N/A	MCL = 60	By product of drinking water disinfection needed to kill harmful organisms.
Total Trihalomethanes (TTHMs – chloroform, bromodichloromethane, dibromochloromethane and bromoform)	Yes*	Quarterly at 8 sites	56.6 ⁽¹⁴⁾ (range = 13.1 – 95.2)	µg/l	N/A	MCL = 80	Byproduct of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Unregulated Contaminants (UCMR4 Data)							
Bromochloroacetic Acid	No	June, September, & December 2019; March 2020	ND – 0.61 ⁽¹⁵⁾	µg/l	N/A	N/A	By product of drinking water disinfection needed to kill harmful organisms.
Dichloroacetic Acid	No		ND – 17.6 ⁽¹⁵⁾	µg/l	N/A	N/A	
Trichloroacetic Acid	No		3.2 – 19.3 ⁽¹⁵⁾	µg/l	N/A	N/A	
Total Organic Carbon	No		3550 – 5240 ⁽¹⁶⁾	µg/l	N/A	N/A	Naturally occurring.
Manganese	No		4.4 – 10.5 ⁽¹⁷⁾	µg/l	N/A	N/A	Naturally occurring.

*MWWA exceeded the 80 µg/L MCL for Trihalomethanes (TTHM) at one site near the former county airport in Oriskany in May 2023. Mitigation efforts included operational changes for decreasing water age in the area by flushing and enhanced management of disinfectant residuals in the area to bring the system back into compliance again based on the running annual average (calculated quarterly) in August 2023. Additional changes to the storage tanks in that portion of the system are scheduled for 2024 to reduce TTHM levels in that area.

Trihalomethanes are a group of chemicals that includes chloroform, bromoform, bromodichloromethane, and chlorodibromomethane. Trihalomethanes are formed in drinking water during treatment by chlorine, which reacts with certain acids that are in naturally occurring organic material (e.g., decomposing vegetation such as tree leaves, algae, or other aquatic plants) in surface water sources such as rivers and lakes. The amount of trihalomethanes in drinking water can change from day to day, depending on the temperature, the amount of organic material in the water, the amount of chlorine added, and a variety of other factors. Drinking water is disinfected by public water suppliers to kill bacteria and viruses that could cause serious illnesses. Chlorine is the most commonly used disinfectant in New York State. For this reason, disinfection of drinking water by chlorination is beneficial to public health.

Some studies suggest that people who drink chlorinated water (which contains trihalomethanes) or water containing elevated levels of trihalomethanes for long periods of time may have an increased risk for certain health effects. For example, some studies of people who drank chlorinated drinking water for 20 to 30 years show that long term exposure to disinfection by-products (including trihalomethanes) is associated with an increased risk for certain types of cancer. A few studies of women who drank water containing trihalomethanes during pregnancy show an association between exposure to elevated levels of trihalomethanes and small increased risks for low birth weights, miscarriages, and birth defects. However, in each of the studies, how long and how frequently people actually drank the water, as well as how much trihalomethanes the water contained is not known for certain. Therefore, we do not know for sure if the observed increases in risk for cancer and other health effects are due to trihalomethanes or some other factor. The individual trihalomethanes chloroform, bromodichloromethane and dibromochloromethane cause cancer in laboratory animals exposed to high levels over their lifetimes. Chloroform, bromodichloromethane and dibromochloromethane are also known to cause effects in laboratory animals after high levels of exposure, primarily on the liver, kidney, nervous system and on their ability to bear healthy offspring. Chemicals that cause adverse health effects in laboratory animals after high levels of exposure may pose a risk for adverse health effects in humans exposed to lower levels over long periods of time.

Additional Detected Water Quality Parameters Collected (MVWA)

Contaminant	Level Detected - Average or Maximum (Range)	Unit Measurement	Importance of Parameter Measurement for Treatment
pH	9.42 (range = 7.14 – 9.75)	units	pH is a measure of the acidity or basicity of water. Solutions with a pH less than 7 are said to be acidic and solutions with a pH greater than 7 are basic or alkaline. The pH of our water has an effect on our water treatment and the efficiency of chemical treatment (e.g., coagulants, chlorine).

Notes:

- 1 - We averaged 205 Total Coliform samples per month in 2023. One sample out of 2,462 total routine samples collected in 2023 was found to contain Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Additional samples would be subsequently collected after each positive sample for total coliforms. Since total coliforms were detected in <5% of the samples collected during each month when detected, the system did not have an MCL violation. It should be noted that E. coli, associated with human and animal fecal waste, was not found in any of the samples collected.
- 2 - A Level 1 assessment is triggered at systems collecting 40 or more samples per month when more than 5% of the total coliform samples are positive or at systems collecting less than 40 samples per month when two or more samples are total coliform positive. A Level 1 assessment can also be triggered if the system fails to take every required repeat sample after any single total coliform-positive sample.
- 3a - This value represents the highest daily average number reported.
- 3b - Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. 100% of the samples recorded during 2023 were within the acceptable range allowed.
- 4 - Turbidity is measured daily in the distribution system. State regulations require that the monthly turbidity average must always be below 5 NTU. The monthly average of the results in the months with highest turbidity levels were all below 5 NTU. June 2023 had the highest monthly average of Distribution Turbidity measurements (0.37 NTU).
- 5 - This level represents the average and range of values calculated from monthly sample submission results.
- 6 - The level presented represents the 90th percentile of the 100 sites tested in 2023. 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, 100 samples were collected at your water system and the 90th percentile value was the 10th highest value. The action level for copper was not exceeded at any of the sites tested. The next scheduled round of copper sampling is 2024.
- 7 - The level presented represents the 90th percentile of the 100 samples collected in 2023. In this case, 100 samples were collected at your water system and the 90th percentile value was the 10th highest value. Seven samples exceeded the action level of 15ppb for lead. The next scheduled lead sampling is 2024.
- 8 - This level represents the average and range calculated from daily measurements.
- 9 - This level represents the average and range calculated from nearly 700 sample submission results.
- 10 - 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.
- 11 - This level represents the average and range calculated from sample submission results.
- 12 - 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.
- 13 - This level represents the highest Locational Running Annual Average along with the range of results for samples collected in compliance with the Stage 2 DBP Rule. Compliance with the MCL (60 ug/l) for HAAs is determined by the Locational Running Annual Average.
- 14 - This level represents the highest Locational Running Annual Average along with the range of results for samples collected in compliance with the Stage 2 DBP Rule. Compliance with the MCL (80 ug/l) for TTHMs is determined by the Locational Running Annual Average.
- 15 - These levels represent the range of all samples collected in compliance with the Unregulated Contaminates Monitoring Rule 4 (UCMR4)
- 16 - These levels represent the range of all samples collected in compliance with the Unregulated Contaminates Monitoring Rule 4 (UCMR4)
- 17 - These levels represent the range of all samples collected in compliance with the Unregulated Contaminates Monitoring Rule 4 (UCMR4)

Definitions:

ACTION LEVEL	AL	The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
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.
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).

Definitions:

NEPHELOMETRIC TURBIDITY UNIT	NTU	A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
NON-DETECTED	ND	Laboratory analysis indicates that the constituent is not present.
TREATMENT TECHNIQUE	TT	A required process intended to reduce the level of a contaminant in drinking.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system only had the TTHM violation near the former county airport in Oriskany in May 2023. We have learned through our testing that other contaminants have been detected; however, these contaminants were detected below New York State requirements.

UNREGULATED CONTAMINANT INFORMATION

From 2018-2020, we are required to collect and analyze drinking water samples for the following unregulated contaminants: Cyanotoxins (Total microcystins, Anatoxin, Cylindrospermopsin), germanium, manganese, alpha-hexachlorocyclohexane, profenofos, chlorpyrifos, tebuconazole, dimethipin, total permethrin (cis & trans-), ethoprop, tribufos, oxyfluoren, HAA5, HAA6Br, HAA9, 1-butanol, 2-propen-1-ol, 2-methoxyethanol, butylated hydroxyanisole, o-toluidine, quinoline. We collected samples semi-monthly from August 1, 2018, through November 30, 2018, for cyanotoxins (8 total samples) from the entry point to the distribution system. The rest of the contaminants were sampled quarterly in June, September, & December 2019 and again in March 2020 per the EPA mandated schedule from either the source water, entry point, or pre-determined sites in the Distribution System. Detections are noted in the Table of Detected Contaminants. *You may obtain the monitoring results by calling Philip Tangorra, Director of Water Quality, at 315-792-0301.*

ADDITIONAL TESTING

In addition to the testing, we are required to perform; our water system voluntarily tests hundreds of additional substances and microscopic organisms to make certain our water is safe and of high quality. If you are interested in a more detailed report, contact the Water Quality Department at 315-792-0338; visit us on the web at www.mvwa.us. We'll be happy to answer any questions about MVWA and its Water Quality Department.

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).

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

Last year, our system was in general compliance with State drinking water operating, monitoring, and reporting requirements, except for the trihalomethane MCL violation at one site in May 2023.

CLOSING

To maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary to address these improvements.

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 and our way of life. Please call our office if you have questions.

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 several 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 fire-fighting 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 for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6,000 gallons per year.
- Check 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 Heat Tape to protect your pipes from freezing. This will save water AND protect septic systems from overuse.
- 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.

DO I NEED TO 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 (800-426-4791).

LEAD INFORMATION

If present, elevated levels of 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. MVWA 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 or at <http://www.epa.gov/safewater/lead>. Or please visit our website for additional information about lead in drinking water.

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 (the CDC's "interim" target level). During the last year monitoring showed that fluoride levels in your water were within 0.1 mg/l of the target level for 99% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride. Our fluoride addition facility is designed and operated to provide drinking water with this beneficial fluoride treatment. Additional reliable information regarding fluoridation in public water systems can be found online at: <http://www.cdc.gov/FLUORIDATION/> and <http://www.health.state.ny.us/prevention/dental/fluoridation/>.

WATER TREATMENT PLANT OPERATIONS

In August of 2017, MVWA began a partnership with Veolia (formerly SUEZ) for the daily operation and maintenance of the Water Treatment Plant and related facilities. In 2022, we renewed this contract for an additional 10 years. This provides MVWA with long term on-site leadership and technical support. Further, Veolia continues to enhance employee health & safety for those staffing the WTP and provides additional perspectives to remain in compliance with regulations. This unique relationship has MVWA well positioned for the future.