

**Annual Drinking Water Quality Report for 2016**  
**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. All Federal and New York State Drinking Water Standards were met. This report provides an overview of last year's (2016) 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 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 Regional Water Board 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** – Ovaj izvještaj 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. 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'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 373 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. In fact, 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 600 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 customer's 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 19.1 million gallons per day. Our highest single day of production was 22.1 million gallons. The total water produced in 2016 was approximately 6.4 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 3.4 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 annually. Since 2000, over 1400 leaks have been located and repaired. The MVWA also has invested over \$50,000 in electronic leak detection equipment and training for in house personnel. In 2016, residential water customers were charged approximately \$4.33 per 1,000 gallons of water (average family of four).

## **SYSTEM IMPROVEMENTS**

During 2016 the MVWA continued its aggressive program of reinvestment in the Regional System.

### **GENERAL ENGINEERING AND DISTRIBUTION OPERATIONS IN CY 2016 -**

The Engineering and Distribution Department continued to implement major physical and operational improvements to the Transmission and Distribution System and Facilities in 2016. These projects and the continued application of system management tools combine to improve water service reliability throughout the Regional Water System.

These management tools include the system-wide all pipe hydraulic model, real-time remote monitoring of pressure, flow and water quality parameters utilizing the MVWA SCADA System, the GIS/Mapping systems and tracking water accountability.

The Department is also responsible for preparing, bidding and administering routine annual contracts for commodities and services including; Water Main Materials, Sludge Disposal, Leak Detection, Generator Maintenance, Fence Repairs, Tree Removals, Backflow Testing, Asphalt Paving and Concrete repairs and numerous others. There is also an annual Tank Diving contract that permits the cleaning and inspection of the tanks while they remain in service thus eliminating sometimes day long service interruptions.

Additional resources were committed to hydraulic control valve maintenance and replacements in 2016. These valves, many located in underground vaults, automatically regulate system flow and pressure. Failures can cause pressure fluctuations and cause main breaks. Repairs and upgrades to the Vaults to improve access and safe working conditions were also undertaken.

Department staff are also active members of several Professional Associations and their Boards. MVWA staff helped organize and presented at regional and national conferences. Presentations in 2016 were made at the CNY Water Works Conference, the NY Section American Water Works meeting, at the ESRI Annual Conference, the NYS Geo-Con Fall meeting and the inaugural NYS Section meeting of the American Academy of Environmental Engineers and Scientists.

### **PROJECTS AND OPERATIONAL IN FY 2016 INCLUDED:**

#### ***FACILITY IMPROVEMENTS (Oneida Street, Toggletown and Southern Pump Stations) -***

Work to upgrade these three MVWA Pump Stations was completed or is underway. These Stations range in age from 40 to 50 years old and had much of their original equipment still in service.

The projects included installation of new pumping equipment, piping and motor controls. All Station operating parameters were connected into the MVWA remote monitoring system (SCADA). Station doors, walls were painted or replaced and the HVAC systems were replaced.

A new Standby Generator was provided at Toggletown and two existing pumps were rebuilt at the Southern Pump Station.

#### **WATER MAIN REPLACEMENT & EXTENSIONS – TRANSMISSION MAINS, NYSDOT ARTERIAL, UTICA CSO -**

The MVWA continued to support the NYSDOT as they wrap up their Rt. 12 Arterial reconstruction project with water main design and field services for nearly 7,200 feet of new and relocated mains up to 20" in diameter. Similar services are being provided for the City on the CSO projects in East Utica where the sizes of main are typically 6" and 8". MVWA also inspected the Marcy/Deerfield sections of the Transmission Mains and have identified numerous areas where clearing and erosion repairs are needed.

#### **HYDRAULIC CONTROL VALVES MAINTENANCE AND IMPROVEMENTS-**

*Hydraulic control valves include; Pressure Reducing Valves (PRVs), Pump Control Valves and Altitude Valves. The MVWA has over 150 of these types of valves in the system. A full day valve operation and repair training session was held for individuals that may be involved in this type of maintenance work. Approximately 40 PRV stations were inspected/adjusted and significant PRV improvement work was undertaken at several sites. A large, 16" PRV was inspected and identified for replacement and a new unit has been ordered. A spare valve and valve components inventory has been established to improve repair response times.*

#### **SCADA, WATER QUALITY MONITORING AND SECURITY ENHANCEMENTS -**

Installation of a new wireless technology for monitoring remote (PRV) stations and Water Storage Tanks without power has proved very effective and as a result, additional equipment was purchased to extend this capability to a total of 15 sites. New Touchpad entry control systems continue to be installed at existing facilities improving operations as well as site security. The MVWA SCADA system is 100% managed and maintained in house.

#### **WATER TREATMENT PLANT (WTP) NORTH AND SOUTH PIPE BRIDGES -**

Installation of a new pipe across the North Pipe Bridge was begun in 2015 but delayed due to the poor condition of several valves and connecting mains. The North Pipe Bridge is designated for renovations and coating in the next several years. In 2016, six (6) new 24" valves and water main were installed using temporary valve closure methods. The new 20" conduit across the Bridge was also installed at that time. Some minor structural repairs were also completed and a soils and foundations evaluation will be undertaken in 2017. Since maintenance of flow to the WTP is critical, design of a new Pipe Bridge was authorized. Once the new Bridge is constructed, the older South Bridge to be taken out of service.

**WTP FLUORIDE SYSTEM AND BULK CHEMICAL STORAGE IMPROVEMNTS –**

Installation of a new Fluoride Feed System and Bulk Chemical Unloading Station were completed to maintain compliance with regulations and improve operational efficiency. Improvements were also made to the secondary storage areas for the Alum and Polymer Tanks as well as employee access to the chemical mixing areas. Design and Bidding for a new Emergency Standby Generator was completed and the unit will be installed in 2017.

**ENVIRONMENTAL PERMITTING FOR SYSTEM UPGRADES – MARCY AND West Canada Creek (WCC) –**

The MVWA filed for NYSDEC Stream and Dam Safety Permits to complete maintenance projects at the Marcy Reservoir, along the Banks of the WCC in Hinckley and at numerous locations along the Transmission Mains.

**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.

MVWA reports that in 2016 we had one treatment technique violation on September 10, 2016. This was a result of high combined filter turbidity. Although this is a violation the water entering the distribution system was in compliance with regulations.

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
<b>Microbiological Contaminants– over 100 Coliform Samples Monthly (3,228 collected in 2016)</b>							
Total Coliform	No	7/13, 8/10, 8/18, 8/30, 11/10/2016 (2)	6 positive samples <sup>(1)</sup> 0.4 % of samples in July, 0.9% in August, 0.9% in November	N/A	0 N/A <sup>(2)</sup>	Any positive sample <sup>(3)</sup>	Naturally present in the environment.
<b>Physical Parameters</b>							
Turbidity (EP) <sup>(4)</sup>	No	12/22/2016	2.7 (highest single measurement) <sup>(4)</sup>	NTU	N/A	TT = <1.0 NTU	Soil Runoff
Turbidity <sup>(4)</sup>		All months ≤ 0.3	100% ≤ 0.3 (lowest monthly percentage of samples meeting specified limits)			TT = 95% of samples <0.3 NTU	
Turbidity (Distribution)		Daily	0.57 <sup>(5)</sup> (range = 0.14 – 9.43)			TT = <5 NTU	
Total Organic Carbon (Raw Water)	No	Monthly	4.7 <sup>(6)</sup> (range = 3.7 – 6.0)	mg/l	N/A	TT (relative to removal rates)	Naturally present in the environment.
Total Organic Carbon (Finished Water)			1.1 <sup>(6)</sup> (range = 0.5 – 1.4)				

## 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
<b>Inorganic Contaminants</b>							
Barium	No	10/16	0.0069	mg/l	2	MCL = 2	Erosion of natural deposits.
Chloride	No	10/16	4.3	mg/l	N/A	MCL = 250	Naturally occurring.
Copper	No	6/15	ND <sup>(7)</sup> (range = ND - 031)	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits.
Fluoride (System Entry Point)	No	Daily	0.75 <sup>(8)</sup> (range = 0.52 – 1.02)	mg/l	N/A	MCL = 2.2	Erosion of natural deposits; Water additive that promotes strong teeth ( <i>The MVWA water system adds Fluoride to the water</i> ).
Fluoride (Distribution System)	No	Monthly	0.7 <sup>(9)</sup> (range = 0.6 – 0.8)				
Lead	No	6/15	6.8 <sup>(10)</sup> (range = ND – 14)	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits.
Manganese	No	10/15	16	ug/l	N/A	MCL = 300	Naturally occurring.
Nitrate	No	2/16	0.18	mg/l	N/A	MCL=10	Run off from fertilizer use, leaching of septic tanks, erosion of natural deposits.
Sodium	No	10/16	23.3 <sup>(11)</sup>	mg/l	N/A	See Note 11 below	Naturally occurring; part of pH adjustment additive.
Sulfate	No	10/16	14.2	mg/l	N/A	MCL = 250	Naturally occurring.
<b>Disinfectants / Disinfection By-Products</b>							
Chlorine Residual	No	Daily/ Monthly	0.9 <sup>(12)</sup> (range = 0.2 – 1.4)	mg/l	N/A	MRDL = 4 <sup>(13)</sup>	Water additive used to control microbes.
Haloacetic Acids (mono-, di- and trichloroacetic acid, and, mono- and dibromoacetic acid)	No	Quarterly	19.9 <sup>(14)</sup> (range = 13.8 – 25.4)	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	52.8 <sup>(15)</sup> (range = 17 – 81)	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.
<b>Unregulated Contaminants</b>							
Chlorate	No	Quarterly 2014-15	113 <sup>(16)</sup> (range = 100 - 130)	ug/l	N/A	N/A	Naturally-occurring element.
Hexavalent Chromium	No	Quarterly 2014-15	0.026 <sup>(17)</sup> (range = ND – 0.042)	ug/l	N/A	N/A	Naturally-occurring element.
Strontium	No	Quarterly 2014-15	17.3 <sup>(18)</sup> (range = 9.8 – 24)	ug/l	N/A	N/A	Naturally-occurring element.
Vanadium	No	Quarterly 2014-15	0.13 <sup>(19)</sup> (range = ND – 0.38)	ug/l	N/A	N/A	Naturally-occurring elemental metal.

**Notes:**

- 1 - We averaged 269 Total Coliform samples per month in 2016. Six samples out of 3228 total routine samples collected in 2016 were found to contain Total Coliform. (Samples collected in July, August, and November). 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 were subsequently collected after each positive sample and total coliforms were not detected in those samples. 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 - Prior to April 1, 2016, an MCL violation occurs 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.
- 3 - After March 31, 2016, the MCL for total coliforms is replaced by a treatment technique trigger. 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. Prior to April 1, 2016, an MCL violation occurs 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.
- 4 - 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. Our highest single entry point (pre-distribution system) turbidity measurement (2.7 NTU) for the year occurred on December 22, 2016. State regulations require that turbidity must always be below 5 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. All levels recorded during 2016 were within the acceptable range allowed.
- 5 - Turbidity is measured on a daily basis in the distribution system. The monthly average of the results in the months with highest turbidity levels were all below 5 NTU. December 2016 had the highest monthly average of Distribution Turbidity measurements (0.73 NTU).
- 6 - This level represents the average and range of values calculated from monthly sample submission results.
- 7 - The level presented represents the 90<sup>th</sup> percentile of the 50 sites tested in 2015. 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 90<sup>th</sup> percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, fifty samples were collected at your water system and the 90<sup>th</sup> percentile value was the 6<sup>th</sup> highest value. The action level for copper was not exceeded at any of the sites tested. The next scheduled round of copper sampling is 2018.
- 8 - This level represents the average and range calculated from daily measurements.
- 9 - This level represents the average and range calculated from sample submission results.
- 10 - The level presented represents the 90<sup>th</sup> percentile of the fifty samples collected in 2015. The action level for lead was not exceeded at any of the sites tested. The next scheduled lead sampling is 2018.
- 11 - 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.
- 12 - This level represents the average and range calculated from sample submission results.
- 13 - 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.
- 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.
- 15 - 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. Our system was found to have 1 of the 32 samples collected in 2016 above the MCL; however, the averages for each sample location were below the MCL. Therefore, we were not in violation.
- 16,17,18,19 - This level represents the annual average and range of values calculated from 2014-15 quarterly sample submission results for the Federal Unregulated Contaminant Monitoring Rule (UCMR3) sampling.

**Additional Detected Water Quality Parameters Collected Monthly (MVWA)**

Contaminant	Level Detected - Average or Maximum (Range)	Unit Measurement	Importance of Parameter Measurement for Treatment
pH	9.6 (range = 8.7 – 10)	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).

**Definitions:**

<b>ACTION LEVEL</b>	<b>AL</b>	The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
<b>MAXIMUM CONTAMINANT LEVEL</b>	<b>MCL</b>	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
<b>MAXIMUM CONTAMINANT LEVEL GOAL</b>	<b>MCLG</b>	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.
<b>MAXIMUM RESIDUAL DISINFECTANT LEVEL</b>	<b>MRDL</b>	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.
<b>MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL</b>	<b>MRDLG</b>	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.
<b>MILLIGRAMS PER LITER</b>	<b>mg/l</b>	Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

<b>Definitions:</b>		
<b>MICROGRAMS PER LITER</b>	<b>ug/l</b>	Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).
<b>NEPHELOMETRIC TURBIDITY UNIT</b>	<b>NTU</b>	A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
<b>NON-DETECTED</b>	<b>ND</b>	Laboratory analysis indicates that the constituent is not present.
<b>TREATMENT TECHNIQUE</b>	<b>TT</b>	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 had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements.

**UNREGULATED CONTAMINANT INFORMATION**

In 2014-2015, we were required to collect and analyze drinking water samples for the following unregulated contaminants: 17-alpha-ethynylestradiol, 17-beta-estradiol, 4-androstene-3,17-dione, equilin, estriol, estrone, testosterone 1,4-dioxane, chlorate, chromium, chromium-6, cobalt, molybdenum, strontium, vanadium, 1,1-dichloroethane, 1,2,3-trichloropropane, 1,3-butadiene, bromomethane, chloromethane, bromochloromethane (Halon 1011), chlorodifluoromethane (HCFC-22), perfluorobutanesulfonic acid (PFBS), perfluoroheptanoic acid (PFHpA), perfluorohexanesulfonic acid (PFHxS), perfluorononanoic acid (PFNA), perfluorooctanoic acid (PFOA), and perfluorooctanesulfonic acid (PFOS). We collected samples on November 3, 2014, February 4, May 13, and August 11, 2015 from the Entry Point and the Furthest Point in the Distribution System. Detections are noted in the Table of Detected Contaminants. *You may obtain the monitoring results by calling Phil 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](http://www.mvwa.us). We'll be happy to answer any questions about the MVWA and our Water Quality Department

**INFORMATION ON CRYPTOSPORIDIUM**

Cryptosporidium is a microbiological pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. During 2016, as part of our routine sampling, 24 samples of Hinckley Reservoir raw source water and 13 samples of our filtered water were collected and analyzed for Cryptosporidium oocysts. Two sample (1-4-2016 and 8-1-2016) taken from the raw water was positive for the presence of Cryptosporidium. No Cryptosporidium was detected in our filtered drinking water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. During 2016, as part of our routine sampling, 24 samples from the Hinckley Reservoir raw source water and 13 samples of our filtered water were collected and analyzed for Giardia cysts. Of these samples, from the Hinckley Reservoir raw source water 5 tests were positive for Giardia. Therefore, our testing indicates Giardia may be present in our raw source water. However, no Giardia was detected in our filtered drinking water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where hand washing practices are poor.

**INFORMATION ON GIARDIA**

Giardia is a microbial pathogen present in varying concentrations in many surface waters and

**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.

## **CLOSING**

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. Rate adjustments may be necessary in order 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 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 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. Our water system 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>.

### **BIOFILM VARIANCE**

Our system has been operating under a Biofilm Variance (or Variance from Total Coliform Maximum Contaminant Level Requirements) since 1994. This variance recognizes the potential presence of Total Coliform bacteria in biofilms within our distribution system. Issued by the New York State Department of Health following a public hearing, this variance allows total coliform presence at levels higher than the Maximum Contaminant Level within our distribution system. The variance issued includes specific sampling and reporting requirements. This variance does not limit our responsibility to notify our customers if a risk to the public health exists. Pursuant to the 2006 renewal of the variance, we are required to provide this information annually in this report. The current variance is effective through May 2016. The Revised Total Coliform Rule, (effective date: April 1, 2016) essentially eliminated the need for the variance so in effect, it ended on April 1, 2016.

### **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/>.