



Annual Drinking Water Quality Report
For the Year 2017
"THE WATER WE DRINK"
WAYNE COUNTY WATER & SEWER AUTHORITY
3377 Daansen Road, Walworth, N.Y. 14568

For water customers in the Wayne County Water and Sewer Authority's *Marion-Arcadia-Sodus Consolidated Service Area* (CSA) (PWS ID #5801231) supplied by the Town of Williamson, located in the towns of Marion and Arcadia, Wayne County, NY.

INTRODUCTION

To comply with State regulations, the Wayne County Water & Sewer Authority 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 our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Mr. Martin J. Aman, Executive Director, Phone: (315) 986-1929, Fax: (315) 986-1687 or email: maman@wcwsa.org. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled board meetings. The meetings are held on the fourth (4th) Tuesday of each month at 4:00 p.m. at the Wayne County Water & Sewer Authority Office, 3377 Daansen Road, Walworth. Or you may visit our website at www.wcwsa.org.

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 Environmental Protection Agency (EPA) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the Food and Drug Administration's (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

For the Marion-Arcadia Consolidated Service Area, the Wayne County Water and Sewer Authority receives water from the Town of Williamson. The treatment plant in the Town of Williamson obtains water through an intake line located within Lake Ontario. Lake Ontario, as a part of the Great Lakes system, provides a tremendous source of treatable fresh water. Overall, the raw water quality is very high, but is subject to seasonal variations in temperature, turbidity (clarity), and levels of aquatic plant life such as algae, etc.

Lake water enters the Williamson plant by gravity through a cast iron pipe. This pipe, known as the intake line, has a screen-covered opening. As water enters the intakes, chlorine is added seasonally to control the growth of Zebra Mussels in the intake line and for disinfecting within the distribution system. The pipe runs along the bottom of the lake to the Treatment Plant, where it enters a well. From the well, pumps called low-lifts push the water through the plant for treatment. At this point, chlorine is added again for disinfectant. Chlorine kills disease-causing

microorganisms. A chemical is also added for coagulation as the water enters a large tank called a clarifier. The chemical causes fine microscopic particles suspended in the water to coagulate into larger particles that settle out and are removed from the tank. Activated carbon is added during the warmer months to help control taste and odor, which becomes prevalent when the lake water temperatures rise promoting the growth of Blue/Green Algae. Following the clarifier, the water goes into the filter beds. The filter beds are made up of 12" of anthracite coal, 12" of mixed sand, 3" of fine gravel and supported by porous plates. The water flows down through the beds removing the remaining fine particles. From that point the finished water is pumped out of the plant to the distribution system. As it leaves the plant, fluoride is added for dental health. The Treatment Plant is not automated so it is manned during the hours of production. It is possible to treat 3.7 million gallons of water a day if needed. During the treatment process the water is monitored and tested continually throughout the whole process.

SOURCE WATER ASSESSMENT PROGRAM

A report was completed under the New York State Department of Health's (NYS DOH) 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. The information contained in assessment reports will assist the State in overseeing public water systems and help local authorities in protecting their source water quality. 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 source water assessment reports are based on reasonably available information, primarily from statewide databases. Although efforts have been made to check each source water assessment report for accuracy, the large scope of this program and the nature of the available data will make the elimination of all errors from these reports nearly impossible. 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). This summary is based on the analysis of the contaminant inventory compiled for the drainage area deemed most likely to impact drinking water quality at this PWS intake.

FACTS AND FIGURES

This water system serves approximately 5,400 people through 1,774 service connections. The total water treated and pumped to W.C.W. & S.A. in 2017 for the Marion-Arcadia Consolidated Service area was approximately 115.2 million gallons. The amount of water delivered to customers was approximately 80.2 million gallons. This unsold water was used for flushing of mains on new construction projects and water used for fire fighting and flushing of mains, as well as lost water through leaks, slowed meters, unauthorized use of water, etc. In 2017, water customers were charged \$4.25 per 1,000 gallons of water, and a \$22.50 basic service charge per quarter. This rate would result in an annual water charge of \$362.00 for a customer using 64,000 gallons per year, an average use for a family of three. ***The basic service charge reflects a ¾" – 1 ½" meter; meters larger than 1 ½" have a basic service charge based on size and type of meter.

ARE THERE CONTAMINANTS IN OUR 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, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The Wayne County Water & Sewer Authority and its suppliers send their samples to independent New York State certified water

quality testing laboratories. The accompanying table 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 log on to EPA's Drinking Water Website: www.epa.gov/safewater/. If you have questions or concerns about the quality of your water, please feel free to contact the Water Authority or the local office of the NYSDOH.

Mr. Martin J. Aman
Wayne County Water & Sewer Authority
 3377 Daansen Road
 Walworth, NY 14568
 (315) 986-1929
www.wcwsa.org

Ms. Sheryl Robbins
NYS Department of Health
 624 Pre-emption Road
 Geneva, NY 14456
 (315) 789-3030
www.health.state.ny.us

The Wayne County Water and Sewer Authority is required to collect and analyze at least five (5) total coliform samples from various points within the Authority's Marion-Arcadia distribution system per month. The table below shows we had two (2) positive samples for total coliform and one positive for E.coli taken during the 2017 year. All repeat samples proved to be negative so no violation occurred.

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Unit	Likely Source of Contamination
Total Coliform	No	1/23/2017	1 positive sample	N/A	0	MCL-2 or more positive samples in 1 month	Naturally present in the environment
Total Coliform	No	9/26/2017	1 positive sample	N/A	0	MCL-2 or more positive samples in 1 month	Naturally present in the environment
E. Coli	No	9/26/2017	1 positive sample	N/A	0	MCL-2 or more positive samples in 1 month	Naturally present in the environment

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

The accompanying table shows the **detected results only** of monitoring for the period of January 1 to December 31, 2017, based upon information as provided by our suppliers.

DEFINITIONS OF TERMS IN TABLE

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

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.

Contaminant	Units	Violation Yes/No	MCLG	MCL	Date of Sample	Town of Williamson	WCWSA	Likely Source
Microbiological Contaminants								
Turbidity-Distribution	NTU	No	N/A	NTU=5	Daily	100% <0.5	NS	Soil runoff
Turbidity-Plant (see footnote 2)	NTU	No	N/A	TT=95% of samples <0.3	Continuous	0.021 to 0.181	NS	Soil runoff
Total Coliform	Positive/Negative	No	Neg.	MCL=2 or more positive per month	Monthly	None	None	Naturally present in the environment
Inorganic Contaminants								
Copper (see footnote 3)	ug/l	No	1300	AL=1300	9/21/2017	90%=97 4.1-260	97 4.1-260	Corrosion of plumbing-erosion of natural deposits
Lead (see footnote 3)	ug/l	No	0	AL=15	9/21/2017	90%=1.85 ND-2.2	1.85 ND-2.2 2017	Corrosion of plumbing-erosion of natural deposits
Barium	mg/l	No	2	2	4/13/2017	0.026	NS	Discharge of drilling wastes, or metal refineries; Erosion of natural deposits
Nitrate	mg/l	No	5	10	5/25/2017	0.33	NS	Erosion of natural deposits
Fluoride	mg/l	No	n/a	2.2	Daily	0.62-1.02	NS	Water additive that promotes strong teeth.
Chromium	mg/l	No	2	2	5/25/2017	<0.0010	NS	Discharge from steel and pulp mills; Erosion of natural deposits
Asbestos	MFL	No	7	7	5/26/2017	0.197	ND	Decay or asbestos cement water mains, erosion of natural deposits
Nickel	mg/l	No	n/a	50	4/13/2017	0.0020	NS	Nickel occurs naturally in soils, ground water and surface waters
Antimony	mg/l	No	0.006	0.006	4/13/2017	0.00058	NS	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Thallium	mg/l	No	0.002	0.002	4/13/2017	0.00050	NS	Leaching from ore processing sites; discharge from electronics, glass, and drug factories
Alkalinity	mg/l	No	n/a	n/a	Monthly	86-94	n/a	Naturally present in the environment
Organic Contaminants								
Organic Carbon	mg/l	No	n/a	n/a	Monthly	1.9-1.4	n/a	Naturally present in the environment

Disinfection Byproducts								
Total Trihalomethanes (TTHM) (see footnote 4)	ug/l	No	n/a	80	Quarterly 2017	Stage II 43 (33-71)	65.75 (42.92) 2017	Byproduct of drinking water disinfection needed to kill harmful organisms. TTHMs are formed when source water contains organics
Haloacetic Acids (HAA5) (see footnote 4)	ug/l	No	n/a	60	Quarterly 2017	Stage II 26 (18-41)	31.25 (3.5-52) 2017	Byproduct of drinking water disinfection
Radioactive Particles								
Radium – 226 (see footnote 1)	pCi/l	No	5	5	2/28/2012	0.16	NS	Erosion of natural deposits
Radium – 228 (see footnote 1)	pCi/l	No	5	5	2/27/2012	0.08	NS	Erosion of natural deposits

Table Footnotes:

1. The State considers 50 pCi/L to be the level of concern for beta particles.
2. Turbidity is a measure of the cloudiness of the water. It is tested because it is a good indicator of the effectiveness of a filtration system. The highest single turbidity measurement (0.181 NTU) for the year occurred during April 13, 2017 with an average for the year at .049 NTU. State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. The levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.
3. These levels represent the 90th percentile of the 31 sites tested. No sites exceeded the Action Levels.
4. This represents the highest locational running annual average calculated from data collected quarterly. Samples for Stage II were collected 2/15/2017, 5/11/2017, 8/9/2017, 11/17/2017 on Arbor Road and at the Williamson High School which were selected during Stage I evaluations of the water system within the Williamson Water District. The range of the samples are in parenthesis. For the Water Authority sampling was done 4 times during 2017 at two locations.

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced. Please visit our website, www.wcwsa.org for more information on lead.

Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short period of time could experience gastrointestinal distress. Some people who drink water containing 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.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the above table, our system had no violations. We have learned through our monitoring and testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State. We work hard so that your drinking water meets or exceeds all Federal and State requirements. The EPA has determined that your water IS SAFE at these levels.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2017 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

This system is one of many water systems in New York State that provides drinking water with controlled, low level 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, fluoride levels are monitored on a daily basis to make sure fluoride is maintained at a target level of 1.0 mg/l. During 2015 monitoring showed fluoride levels in your water were within 0.2 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.

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 transmission mains, 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. 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 water off while shaving and/or brushing your teeth. Take showers instead of baths.
- 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 can 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.
- Replace older fixtures with water-saving devices.
- When washing your car, use a bucket for washing and turn on the hose only for rinsing.
- Curb lawn watering – water your lawn only when necessary, and water between the hours of 8:00 p.m. - 10:00 a.m.
- Put a layer of mulch around trees and plants to hold water for your plants.
- If you have a swimming pool, fill it during the night when demands on power and water production systems are less.

SYSTEM IMPROVEMENTS:

The Authority continued to work on the distribution system maintenance program. This included flushing of dead end water mains, maintenance and painting of fire hydrants, exercising of main line and gate valves throughout the system and continuation of the residential water meter

replacement program throughout the overall service area, also monitoring the cross connection back flow prevention program with three certified backflow testers.

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 and systems, which are the heart of our community. In addition to helping us with the conservation measures as outlined in this report, we also ask for your co-operation in reporting any unusual or suspicious activity around any of our water facilities, including tanks, hydrants, pump stations, etc. We encourage you to notify us immediately at (315) 986-1929 if you observe any suspicious activities, or if you notice any new or unusual wet spots or other signs that may indicate a leak in the water system. As always, please feel free to call at any time if you have any questions or concerns about your water supply or our operation in general.