



**Annual Drinking Water Quality Report  
for the Year 2016  
"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 **Arcadia-Lyons Consolidated Service Area** (CSA) (PWS ID #NY5821130) supplied by the Village of Newark, located in the towns of Arcadia and Lyons, Wayne County, New York. This report also includes the former Village of Lyons (PWS ID #NY5801229) and the Town of Lyons Grist Mill / Westphall WD (PWS ID # NY5817537).

## **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 has never violated a maximum contaminant level or any other water quality standard.

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](mailto: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 (4<sup>th</sup>) Tuesday of each month at 4:00 p.m. at the Wayne County Water & Sewer Authority building, 3377 Daansen Road, Walworth. Or you may visit our website at [www.wcwsa.org](http://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 its Arcadia Lyons consolidated service area in 2016, the Wayne County Water & Sewer Authority received water from the Village of Newark, which uses Canandaigua Lake as its source of water. This lake is approximately 16.4 square miles in surface area and has a watershed area of about 174 square miles. The Village is permitted to draw 4.0 million gallons of water per day to be used as a source of supply for its water treatment plant located at 1708 Freshour Road, Shortsville, New York. Water, as it enters the intake line in Canandaigua Lake, has chlorine added to control the growth of Zebra Mussels. These mussels have been proven to clog pipe lines by their rapid growth. The water flows by gravity through a 24" line to the Filter Plant. At the treatment plant, all water is filtered by either "Slow Sand Filtration", "Diatomaceous Earth Pressure Filtration" and/or "Diatomaceous Earth Vacuum Filtration." There are four Slow Sand filters and three D.E. filters with an overall capacity of 3.4 million gallons per day. After filtration, chlorine is added at a rate of approximately 1.8 parts per million for disinfection. Fluoride is also added to the water at a rate of 1 part per million. These are recommended levels set by the New York State Department of Health. From the Filter Plant, the water flows through a 20" pipeline to a point near the intersection of Rt. 96 and County Rd 7 where the line divides into two 16" pipelines. One 16" line carries water north, approximately 7 miles, to the 4 million-gallon capacity Allerton Hill Reservoir. This flow is entirely by gravity. The other 16" line carries water east, approximately 4.25 miles, where it connects to a 14" transmission line. This line, which was originally used to carry water from Newark Lake, goes north, into the Village and the 1 million gallon capacity South Hill Standpipe. During 2016, the Village of Newark water system did not experience any restriction of their water source.

## SOURCE WATER ASSESSMENT PROGRAM

The NYS DOH has recently completed a source water assessment (SWAP) of the lake. For the Village of Newark, the source water assessment has found a moderate susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for protozoa, phosphorous, disinfection by-product (DBP) precursors, and pesticides contamination. There is also a moderate density of sanitary wastewater discharges, but the ratings for the individual discharges do not result in elevated susceptibility ratings. However, it appears that the total amount of wastewater discharged to surface water in this assessment area is high enough to further raise the potential for contamination, (particularly for protozoa). There are no noteworthy contamination threats associated with other discrete contaminant sources.

## FACTS AND FIGURES

This water system serves approximately 5,680 people through 1893 service connections. The total water purchased by W.C.W. & S.A. in 2016 for the Arcadia Lyons Consolidated Service Area was approximately 150.9 million gallons. The amount of water delivered to customers was approximately 115 million gallons. This leaves an unsold total of approximately 35.9 million gallons, water used for fire fighting and flushing of mains, as well as lost water through leaks, slowed meters, unauthorized use of water, etc. In 2016, WCW&SA water customers outside of the former Village of Lyons service areas were charged \$4.25 per 1,000 gallons of water, and a \$20.00 basic service charge per quarter. This rate would result in an annual water charge of \$352.00 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. The former Village of Lyons customers were charged \$5.50 per thousand gallons, \$20.00 basic service charge and \$15.00 for the Town Capital and O&M charge. This new rate would result in an annual water charge of \$492.00 for a customer using 64,000 gallons per year, an average use for a family of three.

## 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, lead and copper, volatile organic compounds, total trihalomethanes, 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. It should be noted that all drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800) 426-4791, or log on to EPA's Drinking Water Website [www.epa.gov/safewater/](http://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.

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- The Wayne County Water & Sewer Authority is required to collect and analyze at least two (2) total coliform samples from various points within the Authority's Arcadia-Lyons Consolidated Service Area distribution system per month. No samples exceeded New York State Health Department or EPA drinking water standards. We continue to strive to provide the best quality of water to our customers.

The accompanying table shows the **detected results only** of monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2016, based upon information as provided by the Village of Newark.

**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).

**Nanograms per liter (ng/l):** Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

**Picograms per liter (pg/l):** Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).

**Picocuries per liter (pCi/L):** A measure of the radioactivity in water.

**Millirems per year (mrem/yr):** A measure of radiation absorbed by the body.

**Million Fibers per Liter (MFL):** A measure of the presence of asbestos fibers that are longer than 10 micrometers.

Contaminant	Units	Violation Yes/No	MCLG	MCL	Date of Sample	Village of Newark Results	WCWSA	Likely Source
Barium	ppm	No	2	2	2016	.026	NS	Discharge of drilling wastes, or metal refineries; Erosion of natural deposits
Nickel	ppm	No	N/A	.050	2016	NA	NS	Nickel occurs naturally in soils, ground water and surface waters
Nitrate	ppm	No	10	10	2016	<0.0010	NS	Erosion of natural deposits
Chromium	ppm	No	.1 (EPA)	.1 (EPA)	2016	<0.0010	NS	Discharge from steel and pulp mills; Erosion of natural deposits
Gross Alpha	pCi/l	No	N/A	15	2007	-0.584	NS	Erosion of natural deposits
Gross Beta	pCi/l	No	N/A	50	2007	2.33	NS	Decay of natural deposits and manmade emissions
Radium – 226 *footnote 3	pCi/l	No	5	5	2008	-0.0625	NS	Erosion of natural deposits
Radium – 228 *footnote 3	pCi/l	No	5	5	2008	-0.0697	NS	Erosion of natural deposits

Contaminant	Units	Violation Yes/No	MCLG	MCL	Date of Sample	Village of Newark Results	WCWSA	Likely Source
Fluoride	mg/l	No	N/A	2.2	2016	0.2	NS	Water additive that promotes strong teeth.
Turbidity *footnote 4	NTU	No	N/A	TT=<5 NTU	2016	.16	N/A	Soil runoff
Turbidity *footnote 4	NTU	No	N/A	TT=95% of samples <1.0 NTU	2016	99.9%	N/A	Soil runoff
Total Trihalomethanes Stage 2 DBP Results	ug/l	No	N/A	80	2016	70 (44-92)	67 (38-94)	Disinfection Byproducts
HAA5 Stage 2 DBP Results	ug/l	No	N/A	60	2016	28 (19-39)	35 (27-38)	By-Product of drinking water chlorination
Copper *footnote 1	ug/l	No	1300	1300	2016	70 (99-830)	70 (99-830)	Corrosion of household plumbing systems; erosion of natural deposit leaching from wood preservatives
Lead *footnote 2	ug/l	No	0	15	2016	4.0 (ND-110)	4.0 (ND-110)	Corrosion of household plumbing systems; erosion of natural deposits

\*\*\*Please Note: The Village of Newark has been required by NYS Department of Health to use an additive as a corrective action due to the copper levels being above the "action level" in 2011. It was determined that they use an addition of Orthophosphate sequestering agent to their finished water to reach the best levels. This addition was started in September of 2013. The results in 2016 showed that copper levels are reduced and are under EPA/NYS action limits. They will continue to monitor customers' house taps to test for copper levels.

\***footnote 1** - These levels represent the 90<sup>th</sup> percentile of the 60 sites tested. No sites exceeded the Action Levels in 2016 for the allowable level for Copper.

\***footnote 2** - These levels represent the 90<sup>th</sup> percentile of the 60 sites tested. 3.33% of the homes exceeded the Action Levels in 2016 for Lead.

\***footnote 3** - The State considers 50 pCi/L to be the level of concern for beta particles.

\***footnote 4** - This level represents the highest Locational running annual average calculated quarterly from data collected.

\* Turbidity is a measure of the cloudiness of the water. This is monitored because it is a good indicator of the effectiveness of the filtration system.

**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](http://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 testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

## **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2016, 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 the many New York water utilities providing drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the U.S. Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 mg/l (parts per million) through June of 2016. This recommendation changed in July of 2016 to 0.7 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the above mentioned systems monitor fluoride levels on a daily basis. During 2016 monitoring showed fluoride levels in your water were in the optimal range 87% of the time thru June and 99% of the time from July to the end of 2016. 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.
- 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 and 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.
- Take showers instead of baths.
  
- 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 watermains, maintenance and painting of fire hydrants, monitoring the cross connection back flow prevention program with three certified backflow testers, exercising of main line and gate valves throughout the system, and continuation of the residential water meter replacement program within the Authority's service area. An automatic flushing program was also continued to enhance water quality in some areas of the system.

## **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.