

**Annual Drinking Water Quality Report for 2016**  
**Athens Village Water System**  
**2 First Street, Athens, NY 12015**  
**(Public Water Supply ID# 1900024)**

**INTRODUCTION**

To comply with State regulations, Village of Athens Water, 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 VRI Environmental Services at (845) 677-3839. We want you to be informed about your drinking water.

**WHERE DOES OUR WATER COME FROM?**

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

Source of our water is Hollister Lake located on Schoharie Turnpike in the Town of Athens. During 2016, our system did not experience any restriction of our water source. Water is pumped to the treatment plant and the water treatment consists of the following processes which begin in the clarifier: 1) coagulation using an alum based product which causes large and small particles to stick together forming what is termed a "floc" these particles are then trapped and removed from the clarifier; 2) filtration then occurs as the water travels through layers of media beds of sand and charcoal; 3) new ultraviolet light technology along with chlorination is used to kill harmful bacteria and other organisms 4) water is then polished in carbon filter tanks and sent to a storage tank where a corrosion inhibitor is added to protect the distribution system piping and household plumbing fixtures from corrosion. The storage capacity at the treatment plant is 100,000 gallons of treated water and a 750,000 gallon storage tank in the Village gives us a combined total storage capacity of 850,000 gallons of water to meet consumer demand and to provide adequate fire protection.

The NYS DOH has completed a source water assessment for this system, based on available information. Possible and actual threats to the drinking water sources were evaluated. The state 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 drinking water sources.

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. See section "Are there contaminants in our Drinking Water?" for a list of the contaminants that have been detected.

As mentioned before, our water is derived from a reservoir. The source water assessment found no noteworthy risks to drinking water quality. While some potential contaminant sources were found, they are associated with the drinking water treatment plant and are therefore unlikely sources of contamination. It should be noted that reservoirs in general are highly sensitive to phosphorus and microbial contaminants. While the source water assessment rates our reservoir as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination. A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted below.

### **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, synthetic organic compounds, and radiologicals. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Greene County Health Department at (518)357-2045.

### **FACTS AND FIGURES**

The Village provides water through 795 service connections to a population of approximately 1700 people. Our average daily demand is approximately 130,000 gallons per day.

**Table of Detected Contaminants**

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Lead **	No	9/11/2014 9/19/2014	0.001  (Range = ND – 0.002)	mg/L	0	0.015	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper *	No	9/11/2014 9/19/2014	0.357  (Range = 0.006 – 0.420)	mg/L	1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives;
Chloride	No	8/26/2016 10/28/2016	31 38	mg/L	n/a	250	Naturally occurring or indicative of road salt contamination
Barium	No	8/26/2016 10/28/2016	0.0173 0.0161	mg/L	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Manganese	No	8/26/2016 10/28/2016	0.118 0.02	mg/L	n/a	0.3	Naturally occurring; Indicative of landfill contamination
Sodium	No	8/26/2016 10/28/2016	22 24	mg/L	n/a	See Health Effects ***	Naturally occurring; Road salt; Water softener; Animal waste
Sulfate	No	8/26/2016 10/28/2016	6 6	mg/L	n/a	250	Naturally occurring;
Odor	No	8/26/2016 10/28/2016	8.0 2.0	T.O.N.	n/a	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources;
Fluoride	No	8/26/2016 10/28/2016	0.33 0.42	mg/L	n/a	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories;
Haloacetic Acids	No	Quarterly 1/21/2016 4/21/2016 7/21/2016 10/20/2016  Quarterly Average	18 23 57.9 53.8  38.18	ug/L	n/a	60	By-product of drinking water disinfection needed to kill harmful organisms.

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Total Trihalomethanes	No	Quarterly 1/21/2016 4/21/2016 7/21/2016 10/20/2016  <i>Quarterly Average</i>	36.1 40.9 54.3 81.2  <b>53.13</b>	ug/L	n/a	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Total Trihalomethanes Post Carbon Filter	No	9/3/2013	10.0	ug/L	n/a	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Total Trihalomethanes Pre Carbon Filter	No	9/3/2013	13.7	ug/L	n/a	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
2,4-D 2,4 Dichloro-phenoxyacetic ***	No	6/23/2015	0.13	ug/L	n/a	50	Release to environment by its application as a pesticide used to control broad leaf weeds in agriculture and for control of woody plants along roadsides, railways, and utility right-of-ways.
Nitrate	No	2/11/2016	0.04	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nickel	No	8/26/2016 10/28/2016	0.0009 0.001	mg/L	n/a	n/a	
Zinc	No	8/26/2016 10/28/2016	0.0122 0.0106	mg/L	n/a	5	Naturally occurring; Mining waste.
Chromium	No	8/26/2016	2.3	ug/L	100	100	Discharge from steel and pulp mills. Erosion of natural deposits.

#### Footnotes:

\* The level presented represents the 90<sup>th</sup> percentile of the 10 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 90<sup>th</sup> percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 10 samples were collected at your water system and the 90<sup>th</sup> percentile value (0.357) is the reported value. The action level for copper was not exceeded at any of the sites tested.

\*\* The level presented represents the 90<sup>th</sup> percentile of the 10 sites tested. In this case, 10 samples were collected at your water system and the 90<sup>th</sup> percentile value (0.001) is the reported value. The action level for lead was not exceeded at any of the sites tested.

\*\* 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 should not be used for drinking by people on moderately restricted sodium diets.

\*\*\* The laboratory noted that 2,4-D was detected in the method blank and these results were in doubt. Additionally sampling was analyzed for 2,4-D in September and were not detected.

#### Definitions:

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

**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).

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

**Maximum Contaminant Level (MCL)** - The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's 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. MCLG's 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

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

#### 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 the level allowed by the State. We are required to present the following information on lead in drinking water.

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 higher than at other homes in the community as a result of materials used in your home's plumbing. Athens Village Water is responsible for providing high quality drinking water, but can not 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 the water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

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

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2016, we did not test for all Total Coliform Bacteria samples in the month of June, and therefore cannot be sure of the quality of your drinking water during that time.

## **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, Village of Athens monitor fluoride levels on a daily basis to make sure fluoride is maintained at the target level. In late May of 2015, the Village received notice from NYSDOH that the recommended optimal concentration was lowered to 0.7 mg/l. No operating range was suggested. During 2016, the Village was within 0.1 mg/l of the 0.7 mg/l target 53% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

## **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).

## **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 in your home 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 your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

## **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. The Village of Athens continues to make improvements on the existing water system. During the past year, a study was commissioned to develop an improved handling system for the by-products of the water filtration process. The planning process on that issue will continue into 2016. Upgrades of the electronic systems at the filtration plant are underway and in some cases completed. These upgrades will increase security at the plant and improve efficiency. During 2016 we also increased the flushing frequency in order to remove more of the mineral deposits that come to line the water distribution lines over time. Release of these deposits often occurs during sudden surges in water flow that are brought about by events such as extended use of the hydrants and breaks in the water distribution mains. Additional flushing is just one step that the Village is taking to reduce the intensity and frequency of these events. Please call our office if you have any questions.