

The E.P Forrestel Water Treatment
Facility

-And-

The Akron Water System

Present the:

Annual Water Quality Report

For the Year of 2017

*Annual Drinking Water Quality Report for 2017
Village of Akron Water System
21 Main St, Akron, NY 14001
Public Water Supply ID# NY1400397*

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INTRODUCTION

To comply with State regulations, the Village of Akron will be issuing a report annually 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, we conducted tests for over 100 contaminants. We detected 10 of those contaminants, and only found four of those contaminants at a level higher than the State allows. As we told you at that time our water temporarily exceeded a drinking water standard. We are working to rectify the problem by improving our treatment processes. 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 **The E.P. Forrestel Treatment Plant at 585-547-9410**. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings. The meeting schedule is available from the Village Clerk's Office, located at 21 Main St, Akron, NY 14001, or by calling 716-542-9636.

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 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 Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is the Murder Creek Reservoir, which is located in the Town of Bennington, NY. The E.P Forrestel Water Treatment Plant is located adjacent to the reservoir, in the Town of Darien. Water entering the treatment plant is chlorinated and filtered using the coagulation, flocculation, sedimentation, and filtration processes. During 2017, our water system did not experience any restrictions.

The New York State Department of Health (NYSDOH) has completed a source water assessment for the Village of Akron water system, based on available information. Possible and actual threats to this drinking water source 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 over the land to the reservoir and whether they remain in the reservoir or dissipate. 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. The amount of pasture in the assessment area results in an elevated potential for pesticide, DBP precursor, phosphorus and microbial contamination. No permitted discharges are found in the assessment area. There are no noteworthy contamination threats associated with other discreet contaminant sources. Finally it should be noted that hydrological characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorous and microbial contamination.

While the source water assessment rates our reservoir as being susceptible to microbial contamination, 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 can be obtained at the Village office.

FACTS AND FIGURES

Our water system serves roughly 3085 people in the village through 1168 service connections. In 2016 we served 13 industrial accounts, 1120 Residential, and 37 easement customers living along the transmission line between the Water Plant and the village. The total water produced in 2017 was 131.8 million gallons, of which 130.3 million gallons were consumed by the village. The average amount of water treated each day was 361,516 gallons. Our highest daily production was 548,600 gallons on May 14, 2017.

Residential charges are as follows:

Base charge \$16.75 for 2000 or less gallons; then \$7.75 per thousand.

Residential low user charges:

Base charge \$13.75 for 2000 or less, then 1,000 gallons at \$16.40 per thousand; additional thousands at \$7.75/thousand.

Industrial Rates:

Base charge of \$264.75 for 34,000 gallons or less, then \$7.75/thousand.

Easement customers

Base charge of \$20.87 for 2000 or less, then \$9.69/thousand.

Outside Village Water Customers

Base charge \$24.75 for 2000 or less, then \$11.63/thousand.

The average Akron residential cost per year was \$387.00. The national yearly average is approximately \$435. Please note, our entire water system is funded by the metered rate, we do not have water districts. In some larger systems, you pay the metered rate, plus a tax for the water district you are in.

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

It should be noted that all drinking water, including bottled drinking water, might be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Erie County Health Department at 716-961-6800.

Table of Detected Contaminants							
Contaminant	MCL Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Turbidity (1)	No	Daily	High:0.185 Avg: 0.050 Range: 0.021-0.185	NTU	N/A (5)	TT= 0.30	Soil Runoff
Distribution Turbidity (2)	No	Daily	High: 0.280 Avg:0.138 Range: 0.07-0.280			MCL >5NTU	Soil Runoff
Nitrate	No	12/28/17	0.096	Mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Copper	No	9/23/14	0.59 (3) Range: 0.01 to 0.86	mg/l	1.3	AL = 1.3	Corrosion of household plumbing; erosion of natural deposits.
Barium	No	2/5/17	0.024	mg/l	2	2	Discharge of drilling wastes; Erosion of natural deposits.
Total Trihalomethanes	Yes	2/27/17, 5/31/17, 8/11/17, and 11/7/17	85.0 (4) Range: 32.0 – 138.0	ug/l	N/A	MCL 80.0	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Total Haloacetic Acids	No	11/30/16	47.0 avg. (4) Range: 24.0– 76.0	ug/l	N/A	MCL= 60.0	By-product of drinking water disinfection needed to kill harmful organisms.
Chlorine	No	Constant	1.28 avg Range: 0.69-2.11	mg/l	N/A	MRDL = 4	Water additive used to control microbes.
Gross alpha	No	12/16/13	0.35	pCi/l	0	MCL = 15	Erosion of natural deposits.
Combined radium-226 and radium-228	No	12/16/13	0.84	pCi/l	0	MCL = 5	Erosion of natural deposits.

Notes:

1 – 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. State regulations require that measurements be < 0.3 NTU for at least 95% of monthly samples.

2 - Distribution Turbidity is a measure of the cloudiness of the water found in the distribution system. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

3 – The level presented represents the 90th 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 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, ten samples were collected at your water system and the 90th percentile value was the second highest value (0.59 mg/l). The action level for copper was not exceeded at any of the sites tested

4 – This level represents the highest locational running annual average calculated from data collected

5 – (N/A)-Not Applicable

Definitions:

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). Compare to 1 minute in two years.

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb). Compare to 1 second in 32 years.

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

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had TTHM (total trihalomethanes) MCL violations in 2017. We learned through our quarterly testing that our running annual average of Trihalomethanes exceeded the limit by 0.005 ug/l. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may have an increased risk of getting cancer. This is in part to the high amount of organics we experienced, and an unusually warm summer. We continue to address this issue by optimizing plant coagulants and minimal disinfectant dosage.

Although we did not exceed the Lead Action Level, 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 be higher than at other homes in the community as a result of materials used in your home's plumbing. The Akron 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

In 2017, we took our Lead and Copper outside of the recommended sampling window that ended on 10/1/17, so they did not count for regulatory purposes and we received a monitoring violation. We also received maximum contaminant level violations for all four quarters in 2017 for the disinfection byproduct group of trihalomethanes. The total trihalomethanes results, measured as a running annual average, continued to exceed the maximum level the State allows.

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. Immune-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;
- ◆ 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 firefighting 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 9-15 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.
- ◆ 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.

SYSTEM IMPROVEMENTS

At the treatment plant:

In 2017, a new remote monitoring system was completed at our Crittenden Rd tank facility. This allows remote monitor of flows, chlorine levels, and much more. We switched from our long time used coagulant of conventional alum, to a Polyaluminum Chloride. This is a blended coagulant which allows us to use lower doses of the product, and in turn, lower doses of other treatment chemicals to make the treated water. We continue to work towards reducing the THM levels in the water, and 2018 samples have shown progress in this.

In the distribution system:

We have continued to track water usage and consumption on a monthly basis. We flushed dead end lines on a quarterly basis, and a new tracking method was developed to better keep track of the water used for flushing. In 2018, we will continue with improvements and water line replacements. A new leak detection system was purchased and put into use by the distribution department. ***Thank you for allowing us to serve you with water. Please call 585-547-9410 with any questions on your water system.***