



Annual Drinking Water Quality Report for 2016

**Penn Yan Municipal Utilities Board
111 Elm Street**

Penn Yan, NY 14527
(Public Water Supply ID# NY6101263)

Introduction

To comply with State regulations, the Penn Yan Municipal Utilities Board issues this annual report, which describes the quality of your drinking water. The purpose of this report is to provide you with an understanding of what is in your drinking water, create awareness of the need to protect our drinking water sources, and provide tips on how to conserve water. This report provides an overview of last year's water quality, including what your water contains and how it compares to State standards.

If you have any questions about this report or your drinking water in general, please call Brent Bodine, Director of Public Works, Village of Penn Yan, 111 Elm Street, Penn Yan, NY, 14527, at (315) 536-3374. If you want to learn more, you may attend any of the regularly scheduled Municipal Utilities Board meetings, which are held at 111 Elm Street, Penn Yan, in the 2nd floor MUB meeting room at 8:30 a.m. the Thursday prior to the third Tuesday of each month. For more information, call the Municipal Office at 315-536-3374 weekdays between 7:30 a.m. and 4:30 p.m. For the hearing impaired, the TDD number is 1-800-662-1220.

Where does my 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) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. State Health Department and Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Our sole water source is Keuka Lake. During **2016**, our system did not experience any restriction of its water source. The water is pumped from the lake to the Water Treatment Plant located at 1515 West Lake Road. Tina Galliher is the Chief Operator at the plant. After filtration, disinfection, fluoridation, and corrosion control treatment, the water is pumped to a two-million gallon reservoir on the hill above the plant. The water then enters the distribution system by means of gravity.

Source Water Assessment Report

A report was completed under the New York State Department of Health's Source Water Assessment Program (SWAP). The information contained in the report assists the State in overseeing public water systems and helps local authorities protect the quality of their source water. 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.

Executive Summary - Water Assessment Report

This assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for phosphorus, DBP (disinfection by-products) precursor and pesticide contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to

source water quality based on their density in the assessment area. 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 is also noteworthy contamination susceptibility associated with other discrete contaminant sources and these facility types include CBS (Chemical Bulk Storage) and IHWS (Inactive Hazardous Waste Site).

Facts and Figures

Our water treatment facility is a regional plant, owned by the Village of Penn Yan, which serves all **5,159** residents of Penn Yan through **2,650** service connections. In addition, approximately 3,000 residents of the Town of Jerusalem are served through connections at Indian Pines, West Lake Road, East Bluff Drive, Branchport, Guyanoga, and Keuka Park with a total of 1,181 service connections. Approximately 1,000 residents in the Town of Milo along East Lake Road are served through 365 service connections. There are approximately 700 residents in the Village of Dresden and along NYS Route 54 that are also served by the Water Treatment Plant through 242 service connections. The Town of Benton also draws water from Penn Yan Water Treatment plant; Benton currently distributes water to 999 of its residents through 363 connections. In the Town of Pulteney, 658 residents are being served through 268 service connections. The total amount of water produced in **2016** was **332,091,300** gallons. The amount of water delivered to all customers in **2016** was **306,845,206** gallons of which **193,272,673** gallons were sold to Village of Penn Yan accounts and **113,572,569** gallons to customers in the other municipalities. A total of **12,303,000** is water not available for resale and this leaves an unaccounted total of **12,943,000** gallons, which was used to flush mains, fight fires, main breaks or was lost through leakage. The daily average amount of water produced in **2016** was **906,787** gallons. The highest single day of production in **2016** was **1,536,900** gallons.

The Total User Cost (the annual charge to the customer for water service) is billed monthly and is calculated as follows: The Total User Cost equals the Fixed User Cost (defined as the cost of all indebtedness related to the operation of the water system, divided by the total number of EDUs served across the entire village) multiplied by the total number of EDUs assigned to that account, plus the Variable User Cost (defined as the cost of the annual operating and maintenance costs related to the operation of the water system, divided by the anticipated annual water production for the coming year) multiplied by the number of gallons consumed in that month divided by 1,000. In the **2015-2016 fiscal year**, the **Fixed User Cost was \$8.01** and the **Variable User Cost was \$6.45** per 1,000 gallons of water consumed.

The other villages and townships served by the Village's water treatment facility are charged a flat rate for water based on the cost of production and set their own rates for the water sold to their customers.

Are there contaminants in my drinking water?

As the state regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrates, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The following 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. This is why some of our data – though representative – could be more than one year old. It should be

noted that all drinking water, including bottled drinking water, could be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the drinking 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 New York State Department of Health's Geneva Office (315-789-3030).

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg.)	Unit Msmnt	MCLG	Reg. Limit (MCL, TT, or AL)	Likely Source of Contamination
Inorganic Contaminants							
Fluoride	No	7/6/16	1.43	ppm	n/a	2.2	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer
Barium	No	7/6/16	ND	ppm	2	2	Discharge from drilling waste; discharge from metal refineries; erosion of natural deposits
Nitrate	No	6/1/16	0.11	ppm	--	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Copper (2)	No	8/2014	.0896 (range) 0.0030-0.123 (90 th Percentile)	ppb	--	1.3	Erosion of natural deposits; leaching; corrosion of household plumbing system; wood preservatives
Lead (3)	No	8/2014	0.9 (range) Non-Detectable – 1.5 (90 th Percentile)	ppb	--	15	Erosion of natural deposits; corrosion of household plumbing systems
Arsenic	No	7/6/16	ND	ppm	--	0.01	Natural erosion; agriculture and manufacturing operation discharge; mostly from wood preservative chemicals
Nickel	No	7/6/16	ND	ppm	--	0.1	The source is electroplated metal coatings; alkaline batteries; alloys like metal welding rods and solder
Sodium	No	7/6/16	22	ppm	n/a	See Health Effects	Naturally occurring; road salt; water softeners; animal waste

(2) The level presented represents the 90th percentile of the 30 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. The action level for copper was not exceeded at any of the sites tested.

(3) The level presented represents the 90th percentile of the 30 samples collected. The action level for lead was not exceeded at any of the sites tested.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg.)	Unit Msmnt	MCLG	Reg. Limit (MCL, TT, or AL)	Likely Source of Contamination
Microbiological Contaminants							
Turbidity Filters highest Monthly Avg.	No	7/2016	0.10	NTU	--	TT=95% of samples <0.3 NTU: this number is not to exceed 1 NTU	Soil runoff
Turbidity Filters Single Highest Reading	No	7/8/16	0.13	NTU	--	TT=95% of samples <0.3 NTU: this number is not to exceed 1 NTU	Soil runoff
Turbidity Distribution system highest monthly avg.	No	12/2016	0.17	NTU		TT=<5 NTU	Distribution System

Note: 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 turbidity in the distribution system must always be below 5 NTU.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg.)	Unit Msmnt	MCLG	Reg. Limit (MCL, TT, or AL)	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform	No	Six samples per month: 8/16/16*	--	--	--	MCL=2 or more positive samples in one month	Naturally present in the environment

*Note: we collect 6 water samples monthly from various stations throughout the distribution system. The dates listed above were positive but the re-sampling was negative, therefore, no violation.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg.)	Unit Msmnt	MCLG	Reg. Limit (MCL, TT, or AL)	Likely Source of Contamination
Disinfection By-Products Stage 2							
TTHM (Total Trihalomethanes)	No	2/2016 5/2016 9/2016 11/2016	45.78 (29.8-65.5)	ppm	--	80	By-product of drinking water chlorination needed to kill harmful organisms. THMs are formed when source water contains large amounts of organic matter.
HAA5s (Halo Acetic Acids)	No	2/2016 5/2016 9/2016 11/2016	19.65 (15.3-26.00)	ppm	--	60	By-product of drinking water disinfection needed to kill harmful organisms

Note: This level represents the highest locational running annual average calculated from data collected.

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.

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

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

ppb – parts per billion and ppm – parts per million

What does this information mean?

We have learned through our testing procedures that, while some contaminants have been detected, they were below the level allowed by State regulations.

Is the Water System Meeting Other Rules That Govern Operations?

The Village of Penn Yan is 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.

Information of Sodium

Water containing more than 20mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

Information on Fluoride Addition

Our System is one of the many water distribution 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 an optimal range from 0.8 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 we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 1.0 mg/l. During **2016**, monitoring showed fluoride levels in your water were within 0.2 mg/l of the target level, **96** percent of the time. None of the monitoring results showed fluoride at levels that approached the maximum limit of 2.2 mg/l MCL for fluoride.

Lead in Drinking Water

As you can see by the table, our system had no lead violations, but 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. Penn Yan Municipal Utilities is responsible for providing high quality drinking water but cannot control the materials used in plumbing components. If your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for thirty seconds to two minutes before using the water to drink or cook. 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 the web site www.epa.gov/safewater/lead.

Do I Need to Take any Special Precautions?

Although your drinking water meets or exceeds state and federal regulations, some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Persons with compromised immune systems, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS, those with other immune system disorders, some elderly, and some infants can be at risk of infections. These people should seek advice from their health care provider(s) about their drinking water. EPA and CDC guidelines on ways to lessen the risk of infection from Cryptosporidium, Giardia or other microbial pathogens are available from the Safe Drinking Water Hotline (1-800-426-4791).

System Improvements

In **2016**, we did not have the need for any major upgrades at the Water Treatment Plant.

Why Conserve Water?

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; this helps avoid severe water use restrictions and ensures that water is available for essential firefighting needs.

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 water whenever you can.

Conservation tips include:

- ◆ Load your dishwasher to capacity; automatic dishwashers use 15 gallons for every cycle regardless of how many dishes are loaded.
- ◆ Turn off the tap while brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons of water a day. Fix the leak and you'll save almost 6,000 gallons of water per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank or a leak detection tablet (which can be obtained from the Municipal Office). 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 a minor toilet water leak, so fixing this problem can save you more than 30,000 gallons of water a year.
- ◆ Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances; check the meter after 15 minutes. If it moved, you have a leak.

In Conclusion

Thank you for allowing us to continue to provide you and your family with quality drinking water. We ask that all of our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.

(Prepared March 2017)