

Annual Drinking Water Quality Report for 2021
Village of Palmyra
Spring St. Palmyra NY
(Public Water Supply NY 5801235)

INTRODUCTION

To comply with State regulations, the Village of Palmyra 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. 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 **Brian Bieda, Chief Operator, (315) 597-5050**. 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 meetings are held the 1st and 3rd Monday of each month at 6:30 pm at the Village Offices, 144 East Main Street, Palmyra, NY 14522.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap 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 level 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 obtained from surface water off Canandaigua Lake. During 2021, our system did not experience any restriction of our water source. The raw water is pretreated with chlorine at the intake from May through October as a means to deter the build-up of Zebra Mussels on the intake screens. The water is then filtered, disinfected, fluoride is added to assist in the prevention of dental cavities and gum disease, and orthophosphate is added to prevent Lead and Copper from dissolving into the finished water from consumer plumbing. Storage and pressure of the distribution system is provided by one 1,000,000-gallon steel water tank. The Village of Palmyra can also be served by purchasing treated water from the Wayne County Water and Sewer Authority.

Source Water Assessment Program

This assessment found a moderate susceptibility to contamination for this source of drinking water. The amount of agricultural land in the assessment area results in elevated potential for protozoa, phosphorus, DBP precursors and pesticides 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 are no noteworthy contamination threats associated with other discrete contaminant sources.

FACTS AND FIGURES

Our water system serves 3,500 people through 1,400 metered service connections. The total water produced in 2021 was 121,914,732 gallons. The daily average of water treated and pumped into the distribution system was 334,013 gallons per day. Our highest single day was 543,400 gallons. The amount of water delivered to customers was 108,074,032 gallons. The remaining water was used to flush mains, fight fires and leakage. In 2021, water customers were charged \$40 for the first 500 cubic feet of water used. Additional water usage is billed at \$2.75 per 100 cubic feet. Water bills are mailed quarterly and unpaid balances are subject to a 10% penalty after 30 days. The average annual charge for water for a family of four is \$200.

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, is more than one year old.

It should be noted that all drinking water, including bottled drinking 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791) or the Geneva District Office for the State of New York Department of Health (315-789-3030).

Analytical Testing Results (Water Quality Monitoring)

Parameter	Units	Violation Yes/No	MCLG	MCL	Date of Sample	Level Detected	Likely Source
Barium	ug/L	No	2000	2000	2021	13.1	Erosion of natural deposits.
Sodium (see note 6)	mg/L	No	NS	NS	2021	26.9	Naturally occurring.
Sulfate	mg/L	No	N/A	250	2021	20.2	Naturally occurring.
Manganese	ug/L	No	N/A	300	2021	ND	Naturally occurring.
Fluoride	mg/L	No	N/A	2.2	2021	0.66	Natural and additive which promotes strong teeth.
Total Organic Carbon (see note 7)	ug/L	No	N/A	TT	2018	2500 - 2800	Naturally present in the environment.
Chromium	mg/L	No	0.1	0.1	2021	ND	Discharge from steel and pulp mills; Erosion of natural deposits.
Nitrate - N	mg/L	No	10	MCL = 10	2021	0.288	Erosion of natural deposits.
Total Trihalomethanes Stage 2 (see note 5)	ug/L	No	N/A	MCL = 80	2021	Average 57.28 (35.00-65.20)	By-product of drinking water chlorination.
HAA5 Stage 2 (see note 5)	ug/L	No	N/A	MCL = 60	2021	Average 20.65 (9.10-27.50)	By-product of drinking water chlorination.
UCMR 4 EPA SAMPLING HAA5 (see note 8)	ug/L	No	N/A	MCL = 60	2018	Average 13.73 (0-23.80)	By-product of drinking water chlorination.
UCMR 4 EPA SAMPLING HAA6Br (see note 8)	ug/L	No	N/A	MCL = 60	2018	Average 3.95 (0.33-8.79)	By-product of drinking water chlorination.
UCMR 4 EPA SAMPLING HAA9 (see note 8)	ug/L	No	N/A	MCL = 60	2018	Average 17.81 (0.33-32.59)	By-product of drinking water chlorination.
Iron	mg/L	No	N/A	0.30	2021	< 0.01	Decay of natural deposits.
Chloride	mg/L	No	N/A	250	2021	57.8	Decay of natural deposits and man-made emissions.
Gross Alpha	pCi/L	No	0	15	2021	0.993	Erosion of natural deposits.

1,4-dioxane	ug/L	No	N/A	1	2021	0.0246	Released into the environment by its application as a pesticide. Used to control broadleaf weeds in agriculture and for control of woody plants along roadsides, railways and utility rights of way.
Radium - 226	pCi/L	No	0	5	2021	0.070	Erosion of natural deposits.
Radium - 228	pCi/L	No	0	5	2021	0.177	Erosion of natural deposits.
Uranium	ug/L	No	0	30	2012	0.514	Erosion of natural deposits.
Gross Beta (see note 4)	pc/L	No	N/A	50	2021	0.981	Decay of natural deposits and man-made emissions.
Nickel	ug/L	N/A	N/A	N/A	2021	ND	N/A
Turbidity (see note1)	NTU	No	N/A	TT=<5 NTU	2021	0.88	Soil runoff.
Turbidity (see note1)	NTU	No	N/A	TT=95% of samples <1 NTU	2021	100%	Soil runoff.
Copper (see note 2)	mg/L	No	1.3	AL=1.3	2021	0.77 (0.17 - 0.88)	Corrosion of household plumbing systems; erosion of natural deposit leaching from wood preservatives.
Lead (see note 3)	ug/L	No	15	AL=15	2021	3.1 (ND - 5.9)	Corrosion of household plumbing systems, 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.
- 2- The level presented represents the 90th percentile of the 20 sites tested. The 90th percentile is equal to or greater than 90% of the copper values detected in your water system. In this case, 20 samples were collected from your water system and the 90th percentile value was the third highest value 0.77 mg/L.
- 3- The level presented represents the 90th percentile of the 20 samples collected.
- 4- The State considers 50 pc/l to be the level of concern for beta particles.
- 5- This level represents the highest locational running annual average calculated quarterly from the data collected.
- 6- Water containing more than 20mg/L of sodium should not be used for drinking by people who are on a severely restricted sodium diet. Water containing more than 270 mg/L of sodium should not be used for drinking by people who are on a moderately restricted sodium diet.
- 7- Total Organic Carbon was sampled on the raw lake water prior to treatment as part of the E.P.A. UCMR4 sampling requirements.
- 8- We were required to collect and analyze drinking water samples for these unregulated contaminants.

DEFINITIONS:

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

MCLG – Maximum Contaminant Level Goal. 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.

MRDL - Maximum Residual Disinfectant Level. 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.

MRDLG - Maximum Residual Disinfectant Level Goal. 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.

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

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

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

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

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

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

pCi/L – Picocuries per liter. A measure of the radioactivity in water.

NA - Not Applicable NS - Not Sampled

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

Palmyra Village 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. Coliform are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. When this occurs, we are required to conduct an assessment on our water system to identify and correct any problems that were found. Palmyra Village did not have a positive coliform bacteria sample within the distribution system during 2021.

WHAT DOES THIS INFORMATION MEAN?

Our water system was previously in violation for high copper levels in 2014. Although this is not an emergency, as our customers you have a right to know what happened, what you should do, and what we are doing to correct the situation. The tests taken in 2014 showed copper levels in the water above the limit or “action level”. We were then required by the N.Y.S. Department of Health to evaluate our water system to determine what corrective actions would be needed. This evaluation included increased monitoring of customers household taps, testing of copper in our source water, and testing of certain water quality parameters in our distribution system. We completed this evaluation and submitted a report to the N.Y.S. Department of Health in May of 2016. It was determined that the optimal corrosion control method would be the addition of an orthophosphate sequestering agent to our finished water at the water treatment facility. This addition of orthophosphate began May 1st, 2019. Copper is an essential nutrient, but some people who drink water containing copper in the excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilsons Disease should consult their personal doctor. We have learned through our testing that some additional contaminants have been detected; however, these contaminants were detected below New York State 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

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 at preventing cavities when present in drinking water at an optimal dosage of 0.7 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. During 2021, monitoring showed fluoride levels in your water were within 0.1 mg/L of the target level 67% 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.
- 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. 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 you are 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 of water a 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 or more from one of these otherwise invisible toilet leaks. Fix it and you can save 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. Then check the meter after 15 minutes; if it has moved, you have a leak.

CLOSING

Thank you for allowing The Village of Palmyra 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. Please call our office if you have questions.