

Annual Drinking Water Quality Report for 2023
Pawling Water District #2 Water System
Mountainview Drive, Pawling, NY (Public Water Supply ID# 1314504)

INTRODUCTION

To comply with State regulations, Pawling Water District #2 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, we conducted tests for over 10 common contaminants, including Synthetic Organic Contaminants. We detected 8 of those contaminants, and only found 1 of those contaminants (iron) at a level higher than the State allows. As we told you at that time, our water temporarily exceeded the drinking water standard, and we rectified the problem by adjusting the chemical addition by which this system removes this contaminant. Additionally, we failed to monitor Well 5 Radiological, IOC's, Nitrate, and Q4 Iron and Manganese as required by NYS drinking water code Part 5. 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 H2O Innovations at 845 486-1030. 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. To ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the number 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 system serves 243 people through 58 service connections. The water source is two drilled bedrock wells. One well is located on Mountainview Drive and the other well is in the recreation area by Willow Lake. All wells are located within our property boundary. In 2013, both wells were rehabilitated. The water obtained from our wells is disinfected with sodium hypochlorite and treated to reduce iron, manganese, and radon prior to distribution.

In May of 2003 a Source Water Assessment was conducted on our water system. This assessment estimates the potential for contamination of sources of drinking water, not finished water. This assessment contains information on Wells 1, 2, 3 and 4. This report in its entirety can be obtained via Dutchess County Department of Behavioral and Community Health at 845-486-3404 or from our H₂O Innovation Poughkeepsie office at 845-486-1030.

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, nitrate, iron and manganese, lead and copper, primary inorganic compounds, principal organic compounds, synthetic organic compounds, disinfection byproducts, turbidity, synthetic organic contaminants and radiological. 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 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 Dutchess County Department of Behavioral and Community Health at (845) 486-3404.

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Gross Beta	No	12/27/2022	6.75	pCi/L	0	50 ¹	Decay of natural deposits and man- made emissions.
Nickel	No	11/17/2020	1.5	ug/L	N/A	N/A	Naturally Occurring
Iron	Yes	7/6/2023	330	ug/L	300	300	Naturally Occurring
Sodium	No	3/31/2023 6/30/2023	86.5	mg/L	NA	250 ² see health effects below	Naturally occurring; Road salt; Water softeners; Animal waste.
Chloride	No	3/31/2023 6/30/2023	38	mg/L	N/A	250 ³ see health effects below	Naturally occurring or indicative of road salt contamination.
Copper ⁴	No	6/29/2023	170 (Range 81-180)	ug/L	AL	AL=1300 ug/L	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Copper ⁴	No	12/14/23, 12/15/23, 12/19/23, 12/21/23	600 (Range 110-930)	ug/L	AL	AL=1300 ug/L	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Lead ⁵	No	6/29/2023	1.9 (Range ND-14)	ug/L	0	AL=15 ug/L	Corrosion of household plumbing systems; Erosion of natural deposits.

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 ⁵	No	12/14/23, 12/15/23, 12/19/23, 12/21/23	4.8 ND-46	ug/L Measure- ment	AL	AL=15 ug/L	Corrosion of household plumbing systems; erosion of natural deposits.
Perfluorooctanoic Acid (PFOA)	No	1/12/23 6/29/2023 9/30/2023 12/20/2023	2.09 ND ND 3.47	ng/l	10	10	Released into the environment from commercial and industrial applications
Perfluorooctanesulfonic Acid (PFOS)	No	1/12/23 6/29/2023 9/30/2023 12/20/2023	0.902 1.18 ND 1.53	ng/l	10	10	Released into the environment from commercial and industrial applications

Table of Unregulated Contaminants

Contaminant	Date of sample	Level Detected	Unit Measurement	Likely Source of Contamination
Synthetic Organic contaminants Well #2				
Perfluorobutanoic Acid (PFBA), ng/L	3/15/22	1.06	ng/L	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites
Perfluorobutanesulfonic Acid (PFBS), ng/L	3/15/22 9/20/22	1.14 1.06	ng/L	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Synthetic Organic contaminants Well #4				
Perfluorobutanoic Acid (PFBA)	1/12/23 6/29/2023 9/30/2023 12/20/2023	1.23 2.35 ND 2.58	ng/L	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.

Perfluoropentanoic Acid (PFPeA)	1/12/23 6/29/2023 9/30/2023 12/20/2023	1.08 1.2 ND 1.24	ng/L	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Perfluorobutanesulfonic Acid (PFBS)	1/12/23 6/29/2023 9/30/2023 12/20/2023	2.13 1.91 ND 12.6	ng/L	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Perfluorohexanoic Acid (PFHxA)	1/12/23 6/29/2023 9/30/2023 12/20/2023	1.19 0.955 ND 1.08	ng/L	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Perfluorohexanesulfonic Acid (PFHpA)	1/12/23 6/29/2023 9/30/2023 12/20/2023	ND 0.962 ND 1.10	ng/L	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites
Perfluorooctanesulfonic acid (6:2FTS)	1/12/23 6/29/2023 9/30/2023	1.08 0.984 ND	ng/l	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites

Footnotes:

¹ The State considers 50 pCi/L to be the level of concern for beta particles.

² 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 of sodium should not be used for drinking by people on moderately restricted sodium diets.

³ Chloride is essential for maintaining good health. Research has not conclusively demonstrated that human exposure to chloride itself causes adverse health effects, although exposure to high levels of certain chloride salts has been associated with adverse health effects in humans. For example, high dietary intake of sodium chloride can be a contributing factor to high blood pressure, but this has been attributed mainly to the presence of sodium. The New York State standard for chloride is 250 milligrams per liter and is based on chloride's effects on the taste and odor of the water.

⁴ 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, 10 samples were collected at your water system and the 90th percentile value is the reported value. The action level for copper was not exceeded at any of the sites tested.

⁵ 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 lead values detected at your water system. In this case, 5 samples were collected at your water system and the 90th percentile value is the reported value. The action level for lead was exceeded at one of the sites tested.

	12/20/2023	15.8		
Synthetic Organic contaminants Well #5				
Perfluorooctanesulfonic acid (6:2FTS)	6/29/2023	0.987	ng/l	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites
	9/30/2023	ND		
	12/20/2023	6.01		

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.

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.

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: Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion - ppt).

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had a violation for Iron. We remove Iron using sodium hypochlorite in order to get the Iron to precipitate out. We increased this dosage and continued to monitor. 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 be higher than at other homes in the community because of materials used in your home's plumbing. Moorgate Water 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 (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 your drinking water meets health standards. During 2023, we did not complete all monitoring or testing for Nitrate¹, Inorganic compounds², Iron³, Manganese⁴ and Synthetic Organic Contaminants⁵ for Quarter 4. We also do not have results for Radiologicals⁶ for well 5 in 2023. Therefore, we cannot be sure of the quality of your drinking water during that time. Please see the health effects of these contaminants below under "Do I need to take Special precautions".

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. 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).

DO I NEED TO TAKE SPECIAL PRECAUTIONS? (cont)

¹Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

² Listed inorganic compounds are the following:

Antimony: Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.

Arsenic: Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.

Barium: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Beryllium: Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

Cadmium: Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

Chromium: Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

Cyanide: Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.

Mercury: Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.

Nickel: Listed contaminant, no Health Effects

Selenium: Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

Thallium: Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Fluoride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

Bromate: Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

Chlorite: Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

DO I NEED TO TAKE SPECIAL PRECAUTIONS? (cont)

³Iron is essential for maintaining good health. However, too much iron can cause adverse health effects. Drinking water with very large amounts of iron can cause nausea, vomiting, diarrhea, constipation, and stomach pain. These effects usually diminish once the elevated iron exposure is stopped. A small number of people have a condition called hemochromatosis, in which the body absorbs and stores too much iron. People with hemochromatosis may be at greater risk for health effects resulting from too much iron in the body (sometimes called "iron overload") and should be aware of their overall iron intake. The New York State standard for iron in drinking water is 0.3 milligrams per liter, and is based on iron's effects on the taste, odor and color of the water.

⁴Manganese is a common element in rocks, soil, water, plants, and animals. Manganese occurs naturally in water after dissolving from rocks and soil. Contamination of drinking water may occur if manganese gets into surface or groundwater after dissolving from rocks and soil. It may also occur if manganese gets into surface or groundwater after improper waste disposal in landfills or by facilities using manganese in the production of steel or other products.

Manganese is an essential nutrient that is necessary to maintain good health. However, exposure to too much manganese can cause adverse health effects. There is some evidence from human studies that long-term exposure to manganese in drinking water is associated with nervous system effects in adults (e.g., weakness, stiff muscles and trembling of the hands) and children (learning and behavior). The results of these studies only suggest an effect because the possible influences of other factors were not adequately assessed. There is supporting evidence that manganese causes nervous system effects in humans from occupational studies of workers exposed to high levels of manganese in air, but the relevance of these studies to long term drinking water exposure is less clear because the exposures were quite elevated and by inhalation, not by ingestion.

⁵PFOA/PFOS caused a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOA/PFOS in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOA/PFOS as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOA/PFOS in animals.

⁶Radiological Contaminants: Certain materials are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing alpha, beta, Uranium, and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

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 several reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both 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 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 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 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

While we have work to do, we want to thank you for allowing us to continue to provide your family with quality drinking water. We ask that all our customers help us protect our water sources. If you have any questions regarding the information presented in this report, please do not hesitate to contact H₂O Innovation at 845-486-1030. We are the operators of your water system and are here to answer any of your questions.