Annual Drinking Water Quality Report for 2022
Pinebrook Water System
Route 9G, Hyde Park, NY 12538
(Public Water Supply ID# 1322156)

INTRODUCTION

To comply with State regulations, Pinebrook 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. In 2022, your tap water met all State drinking water health standards. As you were informed at the time, there was a planned Boil Water Notice implemented on October 24, 2022 as a precautionary measure during an upgrade project that replaced faulty hydrants within the Pinebrook Water System. The required Total Coliform samples were collected on October 27 and 28, 2022 and the Boil Water Notice was lifted following necessary approvals on October 31, 2022. This scheduled service disruption represented a part of our ongoing efforts to provide the Pinebrook Water System with high-quality and reliable water supplies not only for drinking, but for all uses including fire suppression.

We are proud to provide this report as 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.

The Dutchess County Water and Wastewater Authority took ownership of The Pinebrook Water System on September 15, 2015. If you have any questions or concerns about this report, or concerning your drinking water, or want to learn more, please contact **the Dutchess County Water & Wastewater Authority at (845) 486-3601**. We want you to be informed about your drinking water. If you want to learn more about the Dutchess County Water and Wastewater Authority please visit our website at www.DCWWA.org .

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.

The Pinebrook System is now fed through the Hyde Park System. On December 20, 2021 the first water main interconnection between the Hyde Park Regional Water System and the Pinebrook Water System had passed all required tests and has been activated. The second connection was approved for use on November 11, 2022 and brought into service on December 21, 2022. This new water source to the Pinebrook Community is the most cost-effective approach to resolve long-standing water quality and quantity issues, lowering the level of iron, manganese, radionuclides, chlorides, and sodium to below the regulatory requirements. If you want to learn more about the Hyde Park Regional Water System's water quality, a copy of their Annual Drinking Water Report for 2022 can be found attached to this document.

Our water source is the Hudson River. The Hyde Park facility is a conventional filtration plant located at the end of South Drive. The raw water station pumps water from the Hudson River to the treatment facility approximately one-half mile away. At the main treatment facility water received is treated by chemical coagulation, sedimentation,

and filtration for the removal of particulate matter and large microorganisms. Disinfection with chlorine is provided to eliminate pathogens. Sodium Hypochlorite is added to the raw water intake for zebra mussel control. Copper sulfate is added in the treatment process for taste and odor control. Tri-polyphosphate is added to the treated water for corrosion control in the distribution system. In the process of turning raw water into a finished product, the water quality is consistently monitored at each step along the way. Raw and finished water characteristics are checked daily for temperature, turbidity, total dissolved solids, and pH. Treatment is optimized based on these and other process control sampling results made along the treatment path. Finished water is checked for chlorine residual and turbidity by continuous monitoring equipment, and results are verified by grab sampling. The finished water is then pumped out into the distribution system for customer use. The distribution system water is monitored for coliform bacteria, chlorine residual, turbidity, and other regulated parameters. Two elevated storage tanks located in the Hyde Park distribution system float on the system, storing water for peak flow periods and fire protection.

Water enters from the Hyde Park System to the Pinebrook Water System through a meter pit at the end of Holt Road West which supplies water mains traveling into the Pinebrook community via the northern and southern intersections of Pinebrook Drive and Newington Drive. Our water system serves 400 people through 133 service connections.

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 Dutchess County Department of Behavioral and Community Health at (845) 486-3404.

The following table represents data collected from Pinebrook Water System as a consecutive system of the Hyde Park Water System. If a contaminant is not listed, it was not detected through water testing.

Table of Detected Contaminants								
Contaminant	Location	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit	Likely Source of Contamination
Disinfection Byproducts								
Total Trihalomethanes	Entry Point	No	8/22/22 11/16/22	59 (35-83)	µg/L	N/A	80 (MCL)	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
	System Wide	No	3/22/22 7/01/22 8/22/22 11/16/22	70 (33-100)				
Haloacetic Acids	Entry Point	No	8/22/22 11/16/22	35.3 (34-36.6)	µg/L	N/A	60 (MCL)	By-product of drinking water disinfection needed to kill harmful organisms.
	System Wide	No	3/22/22 7/01/22 8/22/22 11/16/22	15 (9-22)				
Inorganic Contaminants								
Copper (1)	System Wide	No	5/1 - 5/12/22 11/12 - 11/17/22	0.93 (0.12-1.20) 0.64 (0.18-0.86)	mg/L	1.3	1.3 (MCL)	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Lead (2)	System Wide	No	5/1 - 5/12/22 11/12 - 11/17/22	0.002 (ND - 0.0043) 0.0012 (ND - 0.0023)	mg/L	0	0.015 (MCL)	Corrosion of household plumbing systems; Erosion of natural deposits.
Alkalinity to pH 4.5 as mg/L CaCO3	System Wide	No	1/20/22	58	mg/L	N/A	N/A	N/A
Turbidity (3)	Entry Point	No	Daily	0.28 (0.08-0.88)	NTU	N/A	1.0	Soil runoff
	System Wide	No	5 per week	0.36 (0.08-2.17)			5.0	

The following table represents historical data collected from Pinebrook Water System prior to interconnection with the Hyde Park Water System. This information is important to long-term users of Pinebrook's water.

Table of Detected Contaminants								
Contaminant	Location	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit	Likely Source of Contamination
Radioactive Contaminants								
Combined Uranium	Entry Point	No	9/17/19	0.00109	mg/L	0	30	Erosion of natural deposits
Gross Alpha	Entry Point	No	9/3/2019	3	pCi/L	0	15	Erosion of natural deposits
Inorganic Contaminants								
Nitrate	Entry Point	No	4/12/21	3.4	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Chloride	Entry Point	Yes	2/19/21 3/24/21 5/19/21 6/23/21 8/16/21 11/22/21	370 (250-690)	mg/L	N/A	250	Naturally occurring; Road salt; Water softeners; Animal waste
Sodium (4)	Entry Point	No	2/19/21 5/19/21 8/16/21 11/22/21	280 180 180 160	mg/L	N/A	See footnote (4)	Naturally occurring; Road salt; Water softeners; Animal waste
Barium	Entry Point	No	5/3/2019	0.110	mg/L	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nickel	Entry Point	No	5/3/19	0.0035	mg/L	N/A	N/A	Erosion of natural deposits
Fluoride	Entry Point	No	5/3/19	0.0315	mg/L	N/A	2.2	Erosion of natural deposits
Iron	Entry Point	No	2/19/21 5/19/21 9/7/21 11/22/21	0.15 (<0.06-0.43)	mg/L	N/A	0.3	Naturally occurring
	Well #1	Yes	10/28/19	1.3				
	Well #3	Yes	10/28/19	4.4				
Manganese	Entry Point	No	2/19/21 5/19/21 9/7/21 11/22/22	0.08 (0.022 - 0.23)	mg/L	N/A	0.3	Naturally occurring; indicative of landfill contamination
	Well #1	No	10/28/19	0.25				
	Well #3	Yes	10/28/19	0.76				

Table of Detected Contaminants								
Contaminant	Location	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit	Likely Source of Contamination
Inorganic Contaminants (continued)								
Hardness	Well #1	No	10/28/19	349	mg/L	N/A	N/A	Naturally occurring
	Well #3	No	10/28/19	516				
Calcium	Entry Point	No	6/21/21	140	mg/L	N/A	N/A	Erosion of natural deposits
	System Wide	No	6/21/21 12/17/21	140 120				
	Well #2	No	5/7/20	180				
	Well #3	No	5/7/20	170				
Synthetic Organic Contaminants								
Perfluorooctanoic acid (PFOA) (5)	Well #1	No	2/9/21 5/25/21 9/21/21	2.74 (2.17-3.37)	ng/L	10	N/A	Released into the environment from widespread use in commercial and industrial applications.
Perfluorooctane sulfonic acid (PFOS) (6)	Well #1	No	2/9/21 5/25/21 9/21/21	1.99 (1.84-2.23)				
Perfluorooctanoic acid (PFOA) (5)	Well #2	No	2/9/21 5/25/21 9/21/21	0.83 (0.80-0.88)				
Perfluorooctane sulfonic acid (PFOS) (6)	Well #3	No	2/9/21 5/25/21 9/21/21	0.28 (ND-0.84)				
Measures of Water Quality Properties								
Alkalinity to pH 4.5 as mg/L $CaCO_3$	Entry Point	No	6/21/21	270	mg/L	N/A	N/A	N/A
	System Wide	No	6/21/21 12/17/21	280 310				
	Well #2	No	5/7/20	320				
	Well #3	No	5/7/20	320				
Conductivity	System Wide	No	6/21/21 12/17/21	280 310	umhos/ cm	N/A	N/A	N/A
	Well #2	No	5/7/20	320				
	Well #3	No	5/7/20	320				
	Well #3	No	5/7/20	1200				

Table of Detected Contaminants								
Contaminant	Location	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit of Measure	MCLG	Regulatory Limit	Likely Source of Contamination
Measures of Water Quality Properties (continued)								
pH	Entry Point	No	6/21/21	7.12	pH units	N/A	N/A	N/A
	System Wide	No	6/21/21 12/17/21	6.84 7.14				
	Well #2	No	5/7/20	6.84				
Temperature at time of pH measurement	System Wide	No	6/21/21 12/17/21	21.7 22	Celsius	N/A	N/A	N/A
	Well #2	No	5/7/20	17.1				

Footnotes:

(1) The level presented represents the 90th percentile of the 10 samples taken in the first half and 10 samples taken in the second half of the year. 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, 20 samples were collected within your water system and the 90th percentile value is the reported value.

(2) The level presented represents the 90th percentile of the 10 samples taken in the first half and 10 samples taken in the second half of the year. The action level for lead was not exceeded.

(3) 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.

(4) 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.

(5) PFOA 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 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 as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOA in animals.

(6) 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 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 PFOS as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOS in animals.

Definitions:

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

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

Nanograms per liter (ng/L) - One part of liquid in one trillion parts of liquid (parts per trillion – ppt).

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements 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. MCLGs allow for a margin of safety.

WHAT DOES THIS INFORMATION MEAN?

The table shows that our system had no violations in 2022. Although we have learned through testing that some contaminants are present in our water, all of the regulated contaminants are present at concentrations lower than the levels allowed by the State. In previous years, prior to the interconnection to the Hyde Park Water System, Pinebrook's water exceeded the State standards for concentrations of chloride, iron, and manganese.

Although testing did not reveal hazardous levels of lead in our system, 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 because of materials used in your home's plumbing. Pinebrook Estates 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 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?

During 2022 our system was compliant with all applicable State drinking water operating, monitoring, and reporting 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).

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 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 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. To maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all our customers. The costs of these improvements may be reflected in the rate structure. 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 any questions.

Annual Drinking Water Quality Report for 2022
D.C.W.W.A. Hyde Park System (Including Zones A, B, C, and L)
48 South Drive
Hyde Park, NY 12538
(Public Water Supply ID# 1302796)

INTRODUCTION

To comply with State regulations, DCWWA-Hyde Park System, 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 the Hyde Park Water Plant at 845-229-2524 and ask for Alain Petit, Jr.. We want you to be informed about your drinking water. If you want to learn more about the Dutchess County Water and Wastewater Authority, please visit our website at WWW.DCWWA.Org. You can also reach us at (845)486-3601.

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.

Our water source is the Hudson River. The Hyde Park facility is a conventional filtration plant that consists of a raw water pumping station, and the main treatment plant. The raw water station pumps water from the Hudson River to the treatment facility approximately one-half mile away. At the main treatment facility water received is treated by chemical coagulation, sedimentation, and filtration for the removal of particulate matter and large organisms. Disinfection with chlorine gas is provided to eliminate pathogens. Sodium Hypochlorite is added at the Raw intake for zebra mussel control. Copper Sulfate is added in the treatment process for taste and odor control. Tri-polyphosphate is added to the treated water for corrosion control in the distribution system. In the process of turning raw water in to a finished product, the water quality is consistently monitored every step of the way. Raw and finished water characteristics are checked daily for temperature, turbidity, total dissolved solids, and pH. Treatment is optimized based on these results, and other process control sampling results made

along the treatment path. Finished water is checked for chlorine residual and turbidity by continuous monitoring equipment, and verified by grab sampling. The finished water is then pumped out in to the distribution system for customer use. The distribution system is monitored for coliform bacteria, chlorine residual, turbidity, and other regulated parameters. Two elevated storage tanks located in the distribution system float on the system storing water for peak flow periods, and fire protection.

During 2022, our system did not experience any restriction of our water source. There were no spills on the Hudson River that placed the Hudson River as our source in jeopardy of meeting our demands. The local health department is in contact with plant operators whenever there is a spill event of any size or type in the Hudson River so that we are not caught by any surprise events that could jeopardize our water treatment.

FACTS AND FIGURES

Our water system serves approximately 6,928 persons through 1,255 service connections. In addition, the Hyde Park System serves as the source of water for the Staatsburgh, Zone-D & L, and Pinebrook water systems. The total water produced in 2022 was 395,071,000 gallons. The daily average of water treated and pumped into the distribution system was 1,082,386 gallons per day. Our highest single day was 1,363,000 gallons in July of 2022. For information regarding the amount of water delivered to customers please call our billing department at 845-486-3601. In 2022, there were 12 water main breaks, and 13 service line leaks repaired by the Authority and/ or customers. In 2022, water customers were charged $7.06 per 1,000 gallons of water with a monthly service charge of $11.50 per month for a residential service connection.

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, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. If you wish to have a copy of all test results for all non-detected contaminates please contact the D.C.W.W.A., and we will be happy to provide them to you. Please note that water from the Hyde Park Plant is not fluoridated. 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 at 800-426-4791, or the Dutchess County Department of Behavioral and Community Health at 845-486-3404.

A Summary of the Regulated Contaminants Detected in Our Treated Water

Microbiological Contaminants							
Contaminants	**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**
Turbidity (1)	No	12/29/22	(Max) 0.29	NTU	N/A	0.30	Soil Runoff
Turbidity (2)	No	Every 4 Hours	100% $\leq$ 0.3	NTU	N/A	TT = 95% of samples $\leq$ 0.3 NTU	
Distribution Turbidity (3)	No	05/2022	(Max Avg.) 0.17	NTU	N/A	MCL > 5 NTU	
Entry Point Total Organic Carbon	No	1/mo	(Avg.) 2.1 (Range) 1.5 – 2.7	mg/L	N/A	TT	Naturally present in the environment

Organic Contaminants							
Contaminants	**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**
2, 4-D	No	12/18/20	(Max) 0.00015	mg/L	0.05	0.05	Runoff from herbicide used on row crops

Inorganic Contaminants

Contaminants	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
Antimony	No	6/22/21	(Max) 0.001	mg/L	0.006	0.006	Naturally occurring; By-product of some manufacturing processes
Barium	No	6/24/22	(Max) 0.022	mg/L	2	2	Erosion of natural deposits; Discharge of drilling wastes; Discharge of metal refineries
Chloride	No	10/21/20	(Max) 49.9	mg/L	N/A	250	Naturally occurring or indicative of road salt contamination
Chromium	No	6/22/21	(Max) 0.007	mg/L	0.10	0.10	Main additive in stainless steel products
Copper (4)	No	8/11/20 - 9/20/20	0.633 mg/L (Range) 0.046 - 1.56	mg/L	N/A	AL = 1.3	Erosion of natural deposits; Corrosion of household plumbing systems; Leaching from wood preservatives
Lead (5)	No	8/11/20 - 9/20/20	< 1 (Range) < 1	ug/L	0	AL = 15	Erosion of natural deposits; Corrosion of household plumbing systems
Nickel	No	6/24/22	(Max) 2.0	ug/L	N/A	100	Naturally occurring; By-product of some manufacturing processes
Nitrate	No	4/15/22	(Max) 0.40	mg/L	10	10	Erosion of natural deposits; Run off from fertilizer use; Leaching from septic tanks; Sewage
Sodium (6)	No	10/21/20	(Max) 28	mg/L	N/A	*No MCL. See foot note 6 for health effects	Naturally occurring; road salt; Water softeners; Animal waste

Synthetic Organic Contaminants							
Contaminants	**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**
Perfluorooctanoic Acid (PFOA)	No	Qrtrly	(Avg.) 2.2 (Range) 2.0 – 2.60	ng/L	N/A	10	Released in to the environment from widespread use in commercial and industrial applications
Perfluorooctane Sulfonic Acid (PFOS)	No	Qrtrly	(Avg.) 1 (Range) ND – 1.61	ng/L	N/A	10	Released in to the environment from widespread use in commercial and industrial applications
Perfluoro-butanesulfonic Acid (PFBS)	No	Qrtrly	(Avg.) 1 (Range) ND – 0.927	ng/L	N/A	50,000	Released in to the environment from widespread use in commercial and industrial applications
Perfluorohexanoic Acid (PFHxA)	No	Qrtrly	(Avg.) 1 (Range) ND – 2.19	ng/L	N/A	50,000	Released in to the environment from widespread use in commercial and industrial applications
Perfluoroheptanoic Acid (PFHpA)	No	Qrtrly	(Avg.) 0 (Range) ND – 0.766	ng/L	N/A	50,000	Released in to the environment from widespread use in commercial and industrial applications
Perfluoro-hexanesulfonic (PFHxS)	No	Qrtrly	(Avg.) 0 (Range) ND – 0.667	ng/L	N/A	50,000	Released in to the environment from widespread use in commercial and industrial applications
1,4 - Dioxane	No	Qrtrly	(Avg.) 0 (Range) ND – 0.03	ug/L	N/A	1	Released in to the environment from widespread use in commercial and industrial applications

Radioactive Contaminants

Contaminants	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 Alpha	No	11/18/20	(Max) 0.488	pCi/L	0	15	Erosion of natural deposits
Gross Beta (7)	No	11/18/20	(Max) 1.27	pCi/L	0	50	Decay of natural deposits and man-made emissions
Combined 226 and 228 Radium	No	11/18/20	(Max) 0.978	pCi/L	0	5	Erosion of natural deposits
Uranium	No	11/18/20	Max) 0.009	ug/L	0	30	Erosion of natural deposits

Disinfection Byproducts

Contaminants	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
Haloacetic Acids (HAA5) (8)	No	Qrtrly	(Avg.) 38 (Range) 19.1 - 54.3	ug/L	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Total Trihalomethanes (TTHMs) (8)	No	Qrtrly	(Avg.) 45 (Range) 21.0 – 69.0	ug/L	N/A	80	By-product of drinking water disinfection needed to kill harmful organisms TTHMs are formed when source water contains large amounts of organic matter

Disinfection

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measure-ment	MCLG MRDLG	Regulatory Limit MCL,TT,AL MRDL	Likely Source of Contamination
Entry Point Chlorine Residual (9) & (10)	No	Cont.	(Avg.) 1.10 (Range) 0.81 – 1.40	mg/L	N/A	4.0	Water additive used to control microbes

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. Our highest single combined filter effluent turbidity measurement of the year occurred on 12/29/22, and was 0.29 NTU.

2--State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. 100% of our measurements for the year were below this level. We monitor continually, and record the readings every 4 hours.

3 -- 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. Our highest monthly distribution turbidity average during the year was 0.17 NTU, and occurred in May 2022. This value is below the State's maximum contaminant level, 5 NTU.

4 – The level presented represents the 90th percentile of the 20 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, 20 samples were collected at 20 different sites from your water system. The 90^{th} percentile value was 0.633 mg/L, which is below the Action Level of 1.3 mg/L.

5 – The level presented represents the 90th percentile of the 20 sites that were tested. A percentile is a value on a scale of 100 that indicates the percent distribution that is equal to, or below it. The 90^{th} percentile is equal to, or greater than, 90% of the lead values detected at your water system. In this case, 20 samples were collected from 20 different sites at your water system. The 90^{th} percentile was <1.0 ug/L, which is below the Action Level of 15 ug/L.

6—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.

7 – The State considers 50 pCi/L to be the level of concern for Beta particles.

8 – This level represents the highest running annual average, and range, calculated from data collected.

9 – The value reported represents the Maximum Residual Disinfectant Level (MRDL), which is a level of disinfectant added for water treatment that may not be exceeded at the consumers tap without an unacceptable possibility of adverse health effects. MRDLs are currently not regulated, but in the future they will be enforceable in the same manner as MCLs.

10 – Chlorine residuals are monitored continuously on water treatment plant effluent.

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

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 D.C.W.W.A. 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?

During 2022, our system was in compliance with applicable State drinking water operating, monitoring, and reporting 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).

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 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.
- 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

A preliminary capital plan for the replacement, and rehabilitation, of some of the aging water main in the system was begun in 2011, and continued to be updated in 2022. Our capital plan has also been updated to include various projects to replace aging equipment at the water treatment plant on South Drive.

CLOSING

In closing, the Board members and staff of the Dutchess County Water & Wastewater Authority wish to 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, and our way of life. Please call our office if you have questions.