Annual Drinking Water Quality Report for 2020
Hopewell Glen Water System
Governors Blvd, Hopewell Junction, NY 12533
(Public Water Supply ID# 1330699)
Poughkeepsie Townwide Water District (PWS#1302812)
Central Dutchess Water Transmission Line (PWS# 1330640)
Hopewell Hamlet Water System (PWS #1330288)

INTRODUCTION

To comply with State regulations, Hopewell Glen 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, our tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contamination level or any other water quality 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 VRI Environmental Services at (845) 677-3839. 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. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the quantity of certain contaminants in water provided by public water systems. The State Health Department and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our primary water source originates at the Poughkeepsie Water Treatment Facility (PWTF) (PWS # 1302774). The Sole source of water for the PWTF is the Hudson River (surface water). The plant is located along the Hudson River within the Marist College Campus on Rt. 9. The raw river water is drawn from the Hudson River adjacent to the PWTF, approximately 1000 feet from the shore at a depth of 48 feet below the mean river level. After the water has been treated, it is delivered to the Poughkeepsie Town wide Water District. (PWS # NY1302812), and then delivered to the Central Dutchess Water Transmission Line (CDWTL) customers. Hopewell Glen purchases their water from the Dutchess County Water/Wastewater Authority CDWTL. A constant pressure is provided by a series of booster pumps. The levels of chlorine and turbidity are continuously monitored at the Pump Station, located at 21 Page Park Drive, in Poughkeepsie. Chlorine is added at the Pump Station as needed to adjust the chlorine residuals to the required concentrations. Daily sampling and analysis for these parameters are also performed at the entry points to the Hopewell Glen Development. The Hopewell Glen Water District also has an alternate water source, Hopewell Hamlet Water District. There is an interconnection on Fishkill Road that allows water from Hopewell Hamlet Water District to feed Hopewell Glen Water District if a drop in pressure is observed from the Central Dutchess Water Transmission Line. The Hopewell Hamlet Water District's sources are four groundwater wells (Hamlet wells) located in Hopewell Recreation Park and two gravel wells (Cannon Wells) located across the street from Town Hall, which draw water from an aquifer located along the Fishkill/Sprout Creek drainage basin. Water pumped from the Hamlet wells is disinfected with sodium hypochlorite prior to the 149,000 gallon and 370,000 gallon storage tanks located adjacent to the water treatment facility. Water from the Cannon Wells gets dosed with sodium hypochlorite and pumped through 3 green sand filters for iron and manganese removal, then passes through cartridge filtration prior to the 149,000 gallon and 370,000 gallon storage tanks. Water in storage is blended. Water from the storage tanks is pumped to the distribution system with variable frequency pumps. The Hopewell Glen Water District Facilities produced 30,172,000 gallons of water for distribution to a population of 300 via 73

service connections throughout the year with an average daily production of approximately 82,663 gallons. A copy of the Poughkeepsie Water Treatment Facility Annual Water Quality Report and a copy of the Hopewell Hamlet Water District Annual Water Quality Report are included in this mailing.

The New York State Department of Health completed a source water assessment of the water supply in 2003. The source water assessment has rated our water source as having a potential susceptibility to microbial and nitrate contamination. These ratings are due primarily to the reported proximity of the wells to permitted discharge facilities (facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and the residential land use and related activities in the assessment area. The full results of this report are available from the Town of East Fishkill or the Dutchess County Department Behavioral and Community Health. For questions regarding this report, please contact the Dutchess County Department of Behavioral and Community Health at 845-486-3404.

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, lead and copper, total trihalomethanes, and haloacetic acids. 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 Department of Behavioral and Community Health at (845) 486-3404.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, AL or TT)	Likely Source of Contamination
Copper *	No	September 2020	0.013 (Range = ND – 0.013	mg/L	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Total Trihalomethanes Entry Point **	No	Quarterly 2020	27.25 (Range = 15.3 – 52.2)	ug/L	n/a	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acids Entry Point	No	Quarterly 2020	10.68 (Range = 8.21 – 13.62)	ug/L	n/a	60	By-product of drinking water disinfection needed to kill harmful organisms.

Table of Detected Contaminants							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg/Max) (Range)**	**Unit Measure -ment**	**MCLG**	**Regulatory Limit (MCL, AL or TT)**	**Likely Source of Contamination**
Total Trihalomethanes 64 Marcy 82 East Van Buren 57 East Tilden 62 Marcy 57 East Tilden 62 Marcy 57 East Tilden 62 Marcy	No	 3/18/2020 3/18/2020 6/16/2020 6/16/2020 9/17/2020 9/17/2020 12/15/2020 12/16/2020 LRAA	 31.0 25.0 34.5 36.1 77.1 48.7 32.0 61.3 43.21 (Range = 25.0 – 77.1)	ug/L	n/a	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acids 64 Marcy 82 East Tilden 57 East Tilden 62 Marcy 57 East Tilden 62 Marcy 57 East Tilden 62 Marcy	No	 3/18/2020 3/18/2020 6/16/2020 6/16/2020 9/17/2020 9/17/2020 12/15/2020 12/16/2020 LRAA	 17.40 13.01 7.56 12.82 16.08 9.23 14.70 25.95 14.60 (Range = 7.56 – 25.95)	ug/L	n/a	60	By-product of drinking water disinfection needed to kill harmful organisms.
Chlorine Residual Entry Point	No	Yearly Average	1.55 (Range = 1.3 – 1.8)	mg/L	n/a	4.0	Chemical additive to control microbes
Turbidity Entry Point	No	Yearly Average	0.21 (Range = 0.17 – 0.25)	NTU	n/a	5.0	Soil Runoff
Sodium Construction Trailer	No	11/19/2020	34.1	mg/L	n/a	See Health Effects ***	Naturally occurring; Road salt; Water softeners; Animal waste.
Chloride Construction Trailer	No	11/19/2020	54.5	mg/L	n/a	250	Naturally occurring or indicative of road salt contamination.

Nickel Entry Point	No	11/18/2020	0.00140	mg/L	n/a	n/a	
Barium Entry Point	No	11/18/2020	0.0200	mg/L	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nitrate Entry Point	No	11/18/2020	0.709	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Gross Alpha	No	12/8/2020	0.612	pCi/L	0	15	Erosion of natural deposits.
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg/Max) (Range)**	**Unit Measure-ment**	**MCLG**	**Regulatory Limit (MCL, AL or TT)**	**Likely Source of Contamination**
Gross Beta	No	12/8/2020	1.43	pCi/L	0	50 ****	Decay of natural deposits and man-made emissions.
Combined Radium 226, 228	No	12/8/2020	0.4311	pCi/L	0	5	Erosion of natural deposits.

Footnotes:

* The level presented represents the 90th percentile of the 5 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, 5 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.

** TTHM: Although TTHM samples are higher the MCL at times, compliance is based on an annual running average (4 quarters).

*** Water containing more than 20 mg/L of sodium should not 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.

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

Definitions:

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).

Action Level (AL) - The concentrations of a contaminant, which, if exceeded, triggers treatment, or other requirements, which 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. MCLG's 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.

Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
Picocuries per liter (pCi/L) – A measure of the radioactivity in water.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had 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. 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 as a result of materials used in your home's plumbing. Hopewell Glen Water is responsible for providing high quality drinking water, but can not 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 2020, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

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).

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 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 up and you can save almost 6,000 gallons per year.

- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

CLOSING

Thank you for allowing us to provide your family with drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. 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 2020
Central Dutchess Water Transmission Line
21 Page Park Dr.
Poughkeepsie, NY 12603
(Public Water Supply ID#1330640)

INTRODUCTION

To comply with State regulations, the Central Dutchess Water Transmission Line (CDWTL), 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 all required regulated contaminants. Of those contaminants, one was detected at a level above the respective MCL. The site where the exceedance occurred was notified and they replaced the sinks and plumbing at those locations. Further monitoring by DCWWA-CDW will be done. 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 Dutchess County Water and Wastewater Authority at (845) 486- 3601. We want you to be informed about your drinking water. If you want to learn more, please visit the Dutchess County Water and Wastewater Authority 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. 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 system serves approximately 4500 people through six service connections and three consecutive systems (GlobalFoundries, Hopewell Glen and the Dutchess County Airport). Our water source originates at the Poughkeepsie Water Treatment Facility (PWS # 1302774). A copy of their AWQR is attached for reference. The sole source of water for the Poughkeepsie Water Treatment Facility (PWTF) is the Hudson River (surface water) The plant is located along the Hudson River within the Marist College Campus on Route 9. The raw river water is drawn from the Hudson River adjacent to the PWTF, approximately 1000 feet from the shore at a depth of 48 feet below the mean river elevation. The PWTF utilizes a conventional filtration process. After filtration is completed, the water is aerated to improve taste. It is then disinfected using ultraviolet light and a carefully monitored chlorination process. Orthophosphate and Sodium Hydroxide are added to the water to reduce corrosion of customer piping and fixtures. After the water has been treated, it is delivered to the Poughkeepsie Town wide Water District (PWS # NY1302812), and then delivered to the CDWTL

customers via the CDWTL. A constant pressure is provided by a series of booster pumps. The levels of chlorine and turbidity are continuously monitored at the Pump Station, located at 21 Page Park Drive, in Poughkeepsie. Chlorine is added at the Pump Station as needed to adjust the chlorine residuals to the required concentrations. Daily sampling and analysis for these parameters are also performed at the entry point to the Global Foundries site, Dutchess county airport water line and the Hopewell Glen development.

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, lead and copper, volatile organic compounds, total trihalomethanes, and halo acetic acids. 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.

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

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Turbidity							
Pump Station Influent (1)	No	Daily	0.16 (0.07 -0.41)	NTU	0	< 5.0	Soil runoff and Hydrant flushing
Global Foundries Entry Point (1)	No	Daily	0.22 (0.09- 2.89)	NTU	0	< 5.0	Soil runoff and Hydrant flushing
DCAWL Entry Point (1)	No	Daily	0..26 (0.09- 1.28)	NTU	0	<5.0	Soil runoff and Hydrant flushing
Free Chlorine							
Pump Station Influent	No	Daily	1.55 (0.54 – 2.35)	mg/l	N/A	< 4.0	Added for disinfection
Global Foundries Entry Point	No	Daily	1.24 (0.34-1.81)	mg/l	N/A	< 4.0	Added for disinfection
DCAWL Entry Point	No	Daily	1.11 (0.09- 1.28)	mg/l	N/A	<4.0	Added for disinfection

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (AL)	Likely source of Contamination
Disinfection Byproducts							
Halo acetic acids HAA5 (4)							
Griffith Way Entry Point	No	Quarterly	14.2 (12.3-15.3)	ug/l	0	60	Byproduct of disinfection
Globalfoundries Entry point	No	Quarterly	17.2 (9.7-23.5)	ug/l	0	60	Byproduct of disinfection
Globalfoundries Internals	No	Quarterly	19.6 (14.1-22.0)	ug/l	0	60	Byproduct of disinfection
Total Trihalomethanes (TTHM) (4)							
Griffith Way Entry Point	No	Quarterly	44.4 (16.0-76.3)	ug/l	0	80	Byproduct of disinfection
Globalfoundries Entry Point	No	Quarterly	44.4 (18.3-78.9)	ug/l	0	80	Byproduct of disinfection
Globalfoundries Internals	No	Quarterly	46.9 (20.0-84.4)	ug/l	0	80	Byproduct of disinfection
Contaminant	Violation Yes/No	Date of Sample	(90th) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (AL)	Likely source of Contamination
Lead (3)	Yes	May 2020	.204 (.0001-.232)	ug/l	0	0.15	Erosion of natural deposits and corrosion of plumbing systems
Lead (3)	Yes	July 2020	.0962 (0.001 – .264)	ug/l	0	0.15	Erosion of natural deposits and corrosion of plumbing systems
Copper (2)	No	May 2020	.458 (0.01-2.15)	ug/l	0	1.3	Erosion of natural deposits and corrosion of plumbing systems.
Copper (2)	No	July 2020	.619 (.0125-3.21)	ug/l	0	1.3	Erosion of natural deposits and corrosion of plumbing systems.

1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of the filtration system. State regulations require that turbidity must always be below 5 NTU.

2 – The level presented represents the 90th percentile of the 10 samples taken. 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 in May and the 90th percentile value was 0.458 mg/l. The 10 samples that were collected in July the 90th percentile was 0.619 mg/l. The action level for copper was exceeded in two of the twenty samples taken.

3 – The level presented represents the 90th percentile of the 10 samples collected. In this case 10 samples were collected at your water system in May and the 90th percentile value was 0.204 mg/l. The 10 samples that were

collected in July the 90th percentile was 0.0962 mg/l. The action level for lead was exceeded in 5 of the twenty samples taken.

4 – This level represents the annual quarterly 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.
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).

WHAT DOES THIS INFORMATION MEAN?

Lead levels exceeded the action level in 5 of the 20 samples taken from the water 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. . *Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Infants and young children are typically more vulnerable to lead in drinking water than the general population.* It is possible that lead levels where you work may be higher than at other workplaces in the community as a result of materials used in your workplace plumbing. Dutchess County Water and Wastewater Authority 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 2020 the CDWTL was in compliance 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 most 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 fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water you are using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Check every faucet in your office 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.

Thank you for allowing us to continue to provide you 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.

ANNUAL WATER QUALITY REPORT FOR CALENDAR YEAR 2020
POUGHKEEPSIE TOWNWIDE WATER DISTRICT
1 Overocker Road
Poughkeepsie, New York
Federal Public Water Supply ID #NY1302812

Introduction:
To comply with State regulations, the Poughkeepsie Townwide Water District annually issues this 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. 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. Sampling and analyses are carried out routinely as directed by the Dutchess County Health Department and the New York State Department of Health and currently meet the drinking water standards.

If you have any questions about this report or concerning your drinking water, please contact Keith Ballard, Department Manager, at the Town of Poughkeepsie Water Department, at (845) 462-6535, or the Dutchess County Health Department at (845) 486-3404. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled meetings. Town of Poughkeepsie Board and Committee of the Whole meetings are scheduled on Wednesdays at 7:00 pm in the Town Hall at One Overocker Road in Poughkeepsie; please phone the Water Department to confirm meetings at (845) 462-6535. You may also visit the Poughkeepsies' Water Treatment Facility website at http://www.pokwater.com. Learn more about the water treatment plant by attending any of the regularly scheduled Joint Water Board meetings held the first Tuesday of every month in the conference room at the Joint Water Plant (behind Marist College); for further information about the Poughkeepsies' Water Treatment Facility, telephone the Joint Water Board Administrator's office at (845) 451-4173, ext. 2003.

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 Environmental Protection Agency (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 source of water for the Town of Poughkeepsie is treated surface water (Hudson River) which is purchased from the jointly owned town and city treatment plant, Poughkeepsies' Water Treatment Facility. The Poughkeepsies' Water Treatment Facility utilizes conventional, state of the art, filtration process to treat the water supply. This process includes chemical application of polyaluminum chloride to stabilize the small particles in the raw water supply. Once stabilized, the particles are combined with an organic polymer and previously settled solids, then slowly mixed to form larger particles. The larger particles are then removed through settling. Occasionally carbon dioxide is added prior to this process to aid coagulation for enhanced removal of organic compounds. Following the settling process, ozone is added to assist in the breakdown of organic compounds. The water is then passed through filters made of biologically activated carbon and sand. These filters help polish the water and reduce the organic compounds that can cause disinfection byproducts when water is chlorinated. Disinfection, the process used to kill disease-producing organisms, is accomplished through application of ultraviolet light followed by a carefully monitored chlorination process. Post treatment includes the addition of phosphoric acid and sodium hydroxide. Phosphoric acid is added at 2.3 mg/L to reduce corrosion of customer's lead piping and fixtures. Sodium hydroxide is added when necessary to increase the treated water to a pH of 7.7 in effort to minimize corrosion of pipes within the distribution system and customers plumbing.

Facts and Figures
The Poughkeepsie Townwide Water District serves a population of approximately 45,000 through 10,535 service connections. In 2020 a total volume of 2,626,094,570 gallons of potable water was withdrawn from sources for the Town Water System. Of this total, 663,524,228 gallons was delivered to 3rd party customers and 2,401,032,128 gallons was delivered to Poughkeepsie Townwide Water District customers. The Town billed its customers for 1,531,064,744 gallons of water. Non-billed water was 206,443,156 gallons which were for losses due to the flushing program for water quality purposes, water main breaks, firefighting, and the ongoing fire hydrant maintenance program. This represents a 9% loss of water within the Town's Water System. The Town of Poughkeepsie employs an ongoing leak detection program to locate any system leaks and make repairs in a timely manner.

Water Cost
In 2020, the Town of Poughkeepsie billed its users based on quarterly water meter readings at the rate of $2.50 per 100 cubic feet of water (or 748 gallons), with $18.78 being the minimum rate for 0-750 cubic feet of water consumed.

Facility Modification
No facility modifications were made in 2020.

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 Bacteria, Turbidity, Orthophosphate, Lead and Copper, Residual Chlorine, Total Trihalomethanes and Haloacetic Acids. 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.

The test data presented in this report cover solely the Poughkeepsie Townwide Water District distribution system. An addendum to this report contains data from the Poughkeepsies' Water Treatment Facility. Additional information about the water supplied by the Poughkeepsies' Water Treatment Facility may be found in the Annual Water Quality Report published by the Joint Town/City Water Board.

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 Health Department at 845-486-3404, or by viewing the EPA drinking water website, www.epa.gov/safewater, and the New York State Health Department website, www.health.ny.gov.

Salt Front Information

Our water is taken from the Hudson River Estuary, which is subject to increased chloride and sodium levels during low rainfall periods. During September 2020, the facility experienced a salt front episode (defined by USGS as chloride levels exceeding 100 mg/L). During this time the sodium concentration of the water produced was elevated. An advisory was issued to the public to notify consumers on severely restricted sodium diets that the sodium content increased to greater than 50 mg/L. The advisory was lifted in November 2020. The plant effluent was tested for sodium 14 times in 2020 with values ranging from 22.8 mg/L to 57.6 mg/L and an average of 31.5 mg/L.

During normal water years the sodium level varies from 15 – 25 mg/L with higher levels occurring during periods of low rainfall. **Customers that are on a salt restricted diet should consult with their physician concerning sodium in their drinking water.** Information concerning sodium levels in your water can be obtained at any time by contacting the Water Plant Administrator, Randy Alstadt at 451-4173 x 2003.

EPA's Unregulated Contaminant Monitoring Rule 4 (UCMR4)

The purpose of the Unregulated Contaminant Monitoring Rule is to assist the EPA in determining the occurrence of suspected contaminants in drinking water and whether regulation is required. Every five years a new list suspected contaminants is developed. The contaminants are not regulated by the EPA or state and therefore do not currently have set drinking water standards. UCMR4 testing was completed in 2019. Contaminants detected are listed in the table. For more information on the testing and results please contact the department manager listed at the beginning of this report.

Table of Detected Contaminants, Poughkeepsie Townwide Water District, 2020
Water Distribution System

Contaminant	Violation Yes/No	Sample Date(s)	Level Detected	Unit of Measure-ment	MCLG	Regulatory Limit	Likely Source of Contamination
Lead and Copper Monitoring							
Copper	No	8/25/20 thru 9/24/20	0.05[1] Range = ND to 0.861	mg/L	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits.
Lead	No	8/25/20 thru 9/24/20	4.7[2] Range = ND to 6.1	ug/L	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits
Inorganic Contaminants							
Orthophosphate (reported as Phosphorus)	N/A	3 per week	Average = 0.64 Range = 0.56 to 0.70	mg/L	N/A	N/A	Orthophosphate is added at the Poughkeepsies' Water Treatment Facility to inhibit corrosion of lead piping in the distribution system.
Turbidity	No	5 per week	Average = 0.2 Range = 0.041 to 2.61	NTU	N/A	MCL = 5.0[3]	Soil runoff
Disinfection Byproducts							
Free Chlorine Residual	No	minimum of 50 per month	Average = 1.31 Range = 0.1 to 2.19	mg/L	N/A	MCL = 4[4]	Water additive used to control microbes.
Total Trihalomethanes (TTHMs -- chloroform, bromo-dichloromethane, dibromochloro-methane, and bromoform)	No	02/12/20 05/13/20 08/12/20 11/10/20	Stage 2 Calculation[5] Highest LRAA = 60.3 (Range of detects = 19.3 – 117)	ug/L	N/A	MCL = 80 for four-quarter average	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acids (mono-, di-, and trichloroacetic acid,	No	02/12/20 05/13/20 08/12/20 11/10/20	Stage 2 Calculation[5] Highest LRAA = 23.9 (Range of detects = 10.3 to 27.2)	ug/L	N/A	MCL = 60 for four-quarter average	By-product of drinking water disinfection needed to kill harmful organisms.

and mono- and di-bromoacetic acid)							
Asbestos							
Asbestos	No	12/30/19	1.2	mf/L	N/A	7	Decay of asbestos cement water mains; Erosion of natural deposits.
Unregulated Contaminant Monitoring Rule (UCMR3 and UCMR4)							
Manganese	No	2/13/19 5/22/19 9/25/19	Average = 1.404 Range = 0.673 to 2.6	ug/L	N/A	300	Naturally occurring; Indicative of landfill contamination
Bromochloroacetic acid	No	2/13/19 5/22/19 9/25/19	Average = 3.57 Range = 2.19 to 5.6	ug/L	N/A	N/A	By-product of drinking water disinfection needed to kill harmful organisms.
Bromodichloroacetic acid	No	2/13/19 5/22/19 9/25/19	Average = 4.0 Range = 2.67 to 5.06	ug/L	N/A	N/A	By-product of drinking water disinfection needed to kill harmful organisms.
Chlorodibromoacetic acid	No	2/13/19 5/22/19 9/25/19	Average = 1.54 Range = 1.02 to 2.4	ug/L	N/A	N/A	By-product of drinking water disinfection needed to kill harmful organisms.

Footnotes:

1. The level presented represents the 90th percentile of the 30 sites tested for copper. In this case, 30 samples were collected throughout the distribution system and the 90th percentile was the 27th highest value (0.05 mg/L). The action level for copper was not exceeded at any of the sites tested.
2. The level presented represents the 90th percentile of the 30 sites tested for lead. In this case, 30 samples were collected throughout the distribution system and the 90th percentile was the 27th highest value (4.7 µg/L). The action level for lead was not exceeded at any of the sites tested.
3. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of the filtration system of the Poughkeepsies' Water Treatment Facility. In accordance with State regulations for distribution systems, we test for turbidity 5 days/week, 52 weeks/year. Results are reported for the year. Since the Town purchases its water from the Poughkeepsies' Water Treatment Facility, Treatment Technique regulations do not apply to the Town's distribution system. State regulations for distribution systems require that the monthly average for turbidity must be below 5 NTU.
4. 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 consumer's tap without an unacceptable possibility of adverse health effects.
5. The regulation requires a Locational Running Annual Average (LRAA) be calculated at each site by averaging the results of the 4 most recent quarters. The LRAA reported in this table is the highest LRAA obtained in 2020.

Definitions:

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

CFU/100 mL: Colony Forming Units per 100 milliliters of sample.

LRAA: Locational Running Annual Average; used to calculate Trihalomethane and Haloacetic Acid levels for reporting for the Stage 2 Disinfection Byproduct rule ("DBR Stage 2")

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as possible.

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.

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).

Million Fibers per Liter (mf/L): million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers

N/A: Not Applicable.

ND (Non-Detects): Laboratory analysis indicates that the contaminant 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.

90th Percentile Value: The values reported for lead and copper represent the 90th percentile. 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 and copper values detected at your water system.

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

Running Annual Average (RAA): This value is determined by first calculating the quarterly average of all 4 locations sampled and then averaging the 4 most recent quarterly averages.

Locational Running Annual Average (LRAA): This value is determined by averaging the 4 most recent quarterly results from one location.

What does this information mean?

As you can see by the table, our system had no violations in 2020. We learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the state.

Information on Lead

We must provide information on lead in drinking water even though our last round of testing showed no problems. Please take a moment to read the following information on lead:

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 Poughkeepsie Townwide Water District 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.

Information on Fluoride

Up until February 2008, our system was one of the many drinking water systems in New York State that provided drinking water with a controlled, low level of fluoride for consumer dental health protection. The fluoride was added by the Poughkeepsies' Water Treatment Facility before it was delivered to us. 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 provided optimal dental protection, the State Department of Health required that the Joint Town and City of Poughkeepsie Water Treatment Facility monitor fluoride levels on a daily basis. During the period when fluoride was being added to the water, no monitoring test results showed levels of fluoride which approached the 2.2 mg/L MCL.

In February 2008, the Poughkeepsies' Water Treatment Facility stopped adding fluoride to the water. You may want to discuss this with your family dentist to see if some other form of fluoride supplement should be considered for your dental protection.

Is our water system meeting other rules that govern operations?

During 2020, 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 at 1-800-426-4791.

Why Save Water? How Do I 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.
- Water your garden and lawn only when necessary. Remember that a layer of mulch in the flower beds and garden is not only aesthetically pleasing but will help retain moisture.
- Turn off the tap when brushing your teeth.
- 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.

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 us at the number listed at the beginning of this report if you have any questions.

Addendum

Poughkeepsies' Water Treatment Facility
Table of Detected Contaminants 2020

Contaminant	Violation Yes/No	Sample Date(s)	Level Detected	Unit of Measure-ment	MCLG	Regulatory Limit	Likely Source of Contamination

Plant Effluent - Inorganic Contaminants							
Orthophosphate (reported as Phosphorus)	N/A	2 per day	Average = 0.612 Range = 0.206 to 1.23	mg/L	N/A	N/A	Orthophosphate is added at the Poughkeepsies' Water Treatment Facility to inhibit corrosion of lead piping in the distribution system.
Total Organic Carbon	N/A	1 per week	Average = 1.32 Range = 1.038 to 1.825	mg/L	N/A	N/A	Naturally present in the environment
Turbidity (Plant Effluent)	No	Continuous Monitoring	Average = 0.044 Range = 0.024 to 0.22	NTU	N/A	MCL = 1 NTU monthly average[1] MCL = 5 NTU two day average	Soil runoff
Turbidity (Filter Effluent)	No	Continuous Monitoring	Average = 0.036 Range = 0.011 to 0.227	NTU	N/A	TT = 95% of samples < 0.3 NTU[2]	Soil runoff
Aluminum	No	1 per week	Average = 34.5 Range = ND to 85	ug/L	200	N/A	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Barium	No	9/30/20	0.0206	mg/L	2	MCL = 2	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Bromate	No	Monthly	Average = 5.8 Range = ND to 22.3[3]	µg/L	N/A	MCL = 10 Annual average	By-product of drinking water disinfection at treatment plants using Ozone.
Chlorate	No	9/24/20, 10/1/20, 11/5/20, 12/3/20	Average = 200.5 Range = 117 to 324	µg/L	N/A	N/A	By-product of drinking water disinfection at treatment plants using sodium hypochlorite.
Chloride	No	9/30/20	97.7	mg/L	250	N/A	Naturally occurring or indicative of road salt contamination
Nitrate	No	9/30/20	0.60	mg/L	10	MCL = 10	Runoff from fertilizer, Leaking septic tanks, sewage, erosion of natural deposits
Nickel	No	9/30/20	0.530	µg/L	N/A	N/A	Naturally occurring, leaching from pipes
Sodium	No	Monthly	Average = 31.46 Range = 22.8 to 57.6	mg/L	N/A	N/A[4]	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate	No	9/30/20	26.2	mg/L	N/A	MCL = 250	Naturally occurring
Plant Effluent - Disinfectants							
Free Chlorine Residual	No	Continuous Monitoring	Average = 2.42 Range = 1.62 to 3.38	mg/L	N/A	MCL = 4[5]	Water additive used to control microbes.
Plant Effluent - Disinfection Byproducts							
Total Trihalomethanes (chloroform, bromo-dichloromethane, dibromochloro-methane, and bromoform)	No	02/12/20 05/13/20 08/12/20 11/10/20	Stage 2 Calculation[6] Highest LRAA = 7.1 (Range of detects = 2.36 – 11.8)	µg/L	N/A	MCL = 80 for four-quarter average	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acids (mono-, di-, and trichloroacetic acid, and mono- and di-bromoacetic acid)	No	02/12/20 05/13/20 08/12/20 11/10/20	Stage 2 Calculation[6] Highest LRAA = 6.0 (Range of detects = 2.79 – 5.56)	µg/L	N/A	MCL = 60 for four-quarter average	By-product of drinking water disinfection needed to kill harmful organisms.
Plant Effluent – Synthetic Organic Contaminants							
Perfluorooctanoic acid (PFOA)	No	10/19/20	2.00	ng/L	N/A	MCL = 10	Released into the environment from widespread use in commercial and industrial applications.
Perfluorooctane sulfonate (PFOS)	No	10/19/20	1.39	ng/L	N/A	MCL = 10	Released into the environment from widespread use in commercial and industrial applications.
Plant Effluent - Radioactive Contaminants							
Gross Alpha Plant Effluent	No	9/30/20	0.502	pCi/L	0	MCL = 15	Erosion of natural deposits.
Gross Beta	No	9/30/20	1.32	pCi/L	0	MCL = 50[7]	Decay of natural deposits and man-made emissions.
Radium-226	No	9/30/20	0.0415	pCi/L	0	MCL = 5	Erosion of natural deposits.
Radium-228	No	9/30/20	0.860	pCi/L	0	MCL = 5	Erosion of natural deposits.
Uranium	No	9/30/20	0.050	ug/L	0	MCL = 30	Erosion of natural deposits.
Raw Water - Radioactive Contaminants							
Gross Alpha	No	4/11/18 7/6/18 10/4/18	Average = 3.71 Range = ND to 6.33	pCi/L	0	MCL = 15	Erosion of natural deposits.
Gross Beta	No	4/11/18 7/6/18 10/4/18	Average = 4.815 Range = ND to 8.89	pCi/L	0	MCL = 50[7]	Decay of natural deposits and man-made emissions.
Uranium	No	4/11/18 7/6/18 10/4/18	Average = 0.221 Range = 0.191 to 0.246	µg/L	0	MCL = 30	Erosion of natural deposits.

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 turbidity measurement on the plant effluent (0.22 NTU) occurred on 8/26/20. An MCL violation occurs when the average of all daily entry point analyses for the month exceed the MCL of 1 NTU or when the daily two-day average exceeds 5 NTU.
2. The turbidity of each filter is monitored to determine treatment compliance. State regulations require that turbidity must always be below 1 NTU. State regulations require that 95% of samples are below 0.3 NTU. In 2020, 100% of samples were less than 0.3

NTU. The highest filter turbidity reading (0.227 NTU) occurred on 12/18/20.

3. Bromate was detected above the MCL on 9/24/20 at a concentration of 22.3 ug/L. Although the MCL value was exceeded for the monthly testing, an MCL violation did not occur as the yearly average is used to determine compliance. Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
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 of sodium should not be used for drinking by people on moderately restricted sodium diets.
5. Value presented represents the Maximum Residual Disinfectant Level (MRDL) which is a level of disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.
6. The regulation requires a Locational Running Annual Average (LRAA) be calculated by averaging the results of the 4 most recent quarters. The LRAA reported in this table is the highest LRAA obtained in 2020.
7. The State considers 50 pCi/L to be the level of concern for beta particles.

Table Definitions

NYSDOH: New York State Department of Health

USEPA: United States Environmental Protection Agency

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in the drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's 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.

NTU (Nephelometric Turbidity Unit): A measure of the clarity of the water. Turbidity in excess of 5.0 NTU is just noticeable to the average person.

TT: Treatment Technique

N/A: Not Applicable

ND: Not Detected

ng/L (nanograms per liter): Corresponds to one mass part in one trillion parts of another liquid (parts per trillion)

mg/L (milligrams per liter): Corresponds to one mass part in one million parts of another liquid (parts per million)

µg/L (micrograms per liter): Corresponds to one mass part in one billion parts of another liquid (parts per billion)

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

mrem/yr (millirems per year): A measure of radiation absorbed by the body.

Annual Drinking Water Quality Report for 2020
Poughkeepsies' Water Treatment Facility
3431 North Road, Poughkeepsie NY 12601
Public Water Supply NY1302774

The Poughkeepsies' Water Treatment Facility, which is owned and operated by the City and Town of Poughkeepsie, provides drinking water to 80,000 individuals within the City of Poughkeepsie, Town of Poughkeepsie, the Dutchess County Water Authority, and the Town of Hyde Park. To comply with State regulations, The Poughkeepsies' Water Treatment Facility annually issues this 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 Randy Alstadt, Water Plant Administrator, Poughkeepsies' Water Treatment Facility at 451-4173 x2003 or the Dutchess County Department of Behavioral & Community Health, 85 Civic Center Plaza, Suite 106, Poughkeepsie 12601 at 486-3404. If you want to learn more, please attend any of our regularly scheduled Joint Water Board meetings. The meetings are held the first Tuesday of every month at the Water Treatment Facility. Minutes and information reviewed at those meetings are available on our web site www.pokwater.com. For additional information you may also visit EPA's drinking water web site (*www.epa.gov/safewater/*) and the New York State Department of Health's web site (*www.health.state.ny.us).*

The tables in this report contain various water quality parameters and the concentration of contaminates detected along with the possible source. A copy of this report and the complete list and results of organic and inorganic contaminates tested throughout the 2020 year can be obtained by contacting Water Plant Administrator, Randy Alstadt at 451-4173 x2003. We are pleased to present to you the 2020 Annual Water Quality Report.

Where does our water come from?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems and require monitoring for the contaminants. 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, which originates from the north in the Adirondacks at Lake Tear of the Clouds, located on the southwest shoulder of Mount Marcy; New York State's highest peak. The Hudson River Watershed is very expansive, covering nearly 12,500 square miles, of which the majority is within New York State, however, small portions are located in Vermont, Massachusetts, Connecticut and New Jersey. Raw water is taken from the Hudson River adjacent to our treatment plant, approximately 1,000 feet from shore at a depth of 48 feet below the mean river elevation. Water quality tests have shown the river to be of very high quality. During 2020, our system did not experience any restriction of our water source.

Water Treatment

The Poughkeepsies' Water Treatment Facility utilizes a conventional, state of the art, filtration process to treat the water supply. This process includes chemical application of polyaluminum chloride to stabilize the small particles in the raw water supply. Once stabilized the particles are combined with an organic polymer and previously settled solids, then slowly mixed to form larger particles. The larger particles are then removed through settling. Occasionally carbon dioxide is added prior to this process to aid coagulation for enhanced removal of organic compounds. Following the settling process, ozone is added to assist in the breakdown of organic compounds. The water is then passed through filters made of biologically activated carbon and sand. These filters help polish the water and reduce the organic compounds that can cause disinfection byproducts when water is chlorinated. Disinfection, the process used to kill disease-producing organisms, is accomplished through application of

ultraviolet light followed by a carefully monitored chlorination process. Post treatment includes the addition of phosphoric acid and sodium hydroxide. Phosphoric acid is added at 2.3 mg/L to reduce corrosion of customer's lead piping and fixtures. Sodium hydroxide is added when necessary to increase the treated water to a pH of 7.7 in effort to minimize corrosion of pipes within the distribution system and customers plumbing.

Facts and Figures

The Poughkeepsies' Water Treatment Facility, which is located along the Hudson River within the Marist College Campus on Route 9, was constructed in 1962 and upgraded in 2004 and 2016. The Facility is currently rated at a maximum production capacity of 19.3 million gallons per day (MGD).

In 2020, the treatment facility produced 3,827,711,000 gallons of potable water, approximately 10.487 MGD. Total billed water to the City was 1,201,66,430 gallons (3.3 MGD) while gallons billed to the Town of Poughkeepsie was 2,626,094,570 (7.2 MGD). The cost of production in 2020 was $1.25 per 1,000 gallons. This equates to 10 gallons of water for one penny!

Are There Contaminants in our Drinking Water?

To insure maximum water quality for our customers, the Poughkeepsies' Water Treatment Facility staff monitors source, treated and distribution water daily. In addition to continuous plant effluent monitoring for turbidity, chlorine residuals, and pH, approximately 30,000 water quality tests were conducted by the water plant staff in 2020. Operators at our facility analyzed chlorine residual, effluent turbidity and pH 12 times daily or combined or 13,140 analyses. In addition, orthophosphate was analyzed 730 times or twice daily. Additional analyses performed on raw water, plant effluent, and/or distribution system samples included inorganic compounds (metals), volatile organic compounds, total trihalomethanes, haloacetic acids, and synthetic organic compounds. The table presented in this report depicts which compounds were detected in your drinking water.

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 & Community Health at 486-3404.

Salt Front

Our water is taken from the Hudson River Estuary, which is subject to increased chloride and sodium levels during low rainfall periods. During September 2020, the facility experienced a salt front episode (defined by USGS as chloride levels exceeding 100 mg/L). During this time the sodium concentration of the water produced was elevated. An advisory was issued to the public to notify consumers on severely restricted sodium diets that the sodium content increased to greater than 50 mg/L. The advisory was lifted in November 2020. The plant effluent was tested for sodium 14 times in 2020 with values ranging from 22.8 mg/L to 57.6 mg/L and an average of 31.5 mg/L.

During normal water years the sodium level varies from 15 – 25 mg/L with higher levels occurring during periods of low rainfall. **Customers that are on a salt restricted diet should consult with their physician concerning sodium in their drinking water.** Information concerning sodium levels in your water can be obtained at any time by contacting the Water Plant Administrator, Randy Alstadt at 451-4173 x 2003.

Hardness

The water obtained from the Hudson River is considered moderately hard. The average hardness of the plant effluent in 2020 was 74.83 mg/L or 4.38 grains/gallon.

What are PFAS chemicals and are they in my drinking water?

Over the past few years contamination of drinking water supplies with PFAS chemicals has frequently been in the news. PFAS chemicals are man-made per- and polyfluoroalkyl substances. These include PFOA, PFOS, GenX, and many other chemicals. Environmental watchdog groups often refer to these chemicals as "Forever Chemicals" because they are persistent in the environment, do not break down, and can accumulate over time. PFAS can be found in food packaging, non-stick products, stain and water repellent fabrics, other commercial household products, and firefighting foams. 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

Water produced by the Poughkeepsies' Water Treatment Facility was tested multiple times from December 2013 through February 2015 for 6 common PFAS compounds through the EPA's Unregulated Contaminant Monitoring Rule (UCMR). All samples analyzed during this timeframe had no detection of PFAS compounds above the laboratory's reporting limit. Additionally, samples were collected on March 4, 2020 from the Hudson River at our intake and the Plant Effluent with no detection of PFAS compounds above the laboratory's reporting limit in either sample.

On August 26, 2020, NYS adopted new requirements for water utilities to begin testing for PFAS chemicals in drinking water. NYS has set the PFOA and PFOS Maximum Contaminant Level (MCL) to 10 ng/L (nanograms per liter also known as parts per trillion). As part of the new requirements, the Plant Effluent was tested in October 2020 and detected PFOA at 2.00 ng/L and PFOS at an estimated concentration of 1.39 ng/L. Quarterly monitoring will continue through 2021.

Poughkeepsies' Water Treatment Facility
Table of Detected Contaminants 2020

Contaminant	Violation Yes/No	Sample Date(s)	Level Detected	Unit of Measure-ment	MCLG	Regulatory Limit	Likely Source of Contamination
Plant Effluent - Inorganic Contaminants							
Orthophosphate (reported as Phosphorus)	N/A	2 per day	Average = 0.612 Range = 0.206 to 1.23	mg/L	N/A	N/A	Orthophosphate is added at the Poughkeepsies' Water Treatment Facility to inhibit corrosion of lead piping in the distribution system.
Total Organic Carbon	N/A	1 per week	Average = 1.32 Range = 1.038 to 1.825	mg/L	N/A	N/A	Naturally present in the environment
Turbidity (Plant Effluent)	No	Continuous Monitoring	Average = 0.044 Range = 0.024 to 0.22	NTU	N/A	MCL = 1 NTU monthly average[1] MCL = 5 NTU two day average	Soil runoff
Turbidity (Filter Effluent)	No	Continuous Monitoring	Average = 0.036 Range = 0.011 to 0.227	NTU	N/A	TT = 95% of samples < 0.3 NTU[2]	Soil runoff
Aluminum	No	1 per week	Average = 34.5 Range = ND to 85	ug/L	200	N/A	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Barium	No	9/30/20	0.0206	mg/L	2	MCL = 2	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Bromate	No	Monthly	Average = 5.8 Range = ND to 22.3[3]	µg/L	N/A	MCL = 10 Annual average	By-product of drinking water disinfection at treatment plants using Ozone.
Chlorate	No	9/24/20, 10/1/20, 11/5/20, 12/3/20	Average = 200.5 Range = 117 to 324	µg/L	N/A	N/A	By-product of drinking water disinfection at treatment plants using sodium hypochlorite.
Chloride	No	9/30/20	97.7	mg/L	250	N/A	Naturally occurring or indicative of road salt contamination
Nitrate	No	9/30/20	0.60	mg/L	10	MCL = 10	Runoff from fertilizer, Leaking septic tanks, sewage, erosion of natural deposits
Nickel	No	9/30/20	0.530	µg/L	N/A	N/A	Naturally occurring, leaching from pipes
Sodium	No	Monthly	Average = 31.46 Range = 22.8 to 57.6	mg/L	N/A	N/A[4]	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate	No	9/30/20	26.2	mg/L	N/A	MCL = 250	Naturally occurring
Plant Effluent - Disinfectants							
Free Chlorine Residual	No	Continuous Monitoring	Average = 2.42 Range = 1.62 to 3.38	mg/L	N/A	MCL = 4[5]	Water additive used to control microbes.
Plant Effluent - Disinfection Byproducts							
Total Trihalomethanes (chloroform, bromo-dichloromethane, dibromochloro-methane, and bromoform)	No	02/12/20 05/13/20 08/12/20 11/10/20	Stage 2 Calculation[6] Highest LRAA = 7.1 (Range of detects = 2.36 – 11.8)	µg/L	N/A	MCL = 80 for four-quarter average	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Haloacetic Acids (mono-, di-, and trichloroacetic acid, and mono- and di-bromoacetic acid)	No	02/12/20 05/13/20 08/12/20 11/10/20	Stage 2 Calculation[6] Highest LRAA = 6.0 (Range of detects = 2.79 – 5.56)	µg/L	N/A	MCL = 60 for four-quarter average	By-product of drinking water disinfection needed to kill harmful organisms.
Plant Effluent – Synthetic Organic Contaminants							
Perfluorooctanoic acid (PFOA)	No	10/19/20	2.00	ng/L	N/A	MCL = 10	Released into the environment from widespread use in commercial and industrial applications.
Perfluorooctane sulfonate (PFOS)	No	10/19/20	1.39	ng/L	N/A	MCL = 10	Released into the environment from widespread use in commercial and industrial applications.

Plant Effluent - Radioactive Contaminants							
Gross Alpha Plant Effluent	No	9/30/20	0.502	pCi/L	0	MCL = 15	Erosion of natural deposits.
Gross Beta	No	9/30/20	1.32	pCi/L	0	MCL = 50[7]	Decay of natural deposits and man-made emissions.
Radium-226	No	9/30/20	0.0415	pCi/L	0	MCL = 5	Erosion of natural deposits.
Radium-228	No	9/30/20	0.860	pCi/L	0	MCL = 5	Erosion of natural deposits.
Uranium	No	9/30/20	0.050	ug/L	0	MCL = 30	Erosion of natural deposits.
Raw Water - Radioactive Contaminants							
Gross Alpha	No	4/11/18 7/6/18 10/4/18	Average = 3.71 Range = ND to 6.33	pCi/L	0	MCL = 15	Erosion of natural deposits.
Gross Beta	No	4/11/18 7/6/18 10/4/18	Average = 4.815 Range = ND to 8.89	pCi/L	0	MCL = 50[7]	Decay of natural deposits and man-made emissions.
Uranium	No	4/11/18 7/6/18 10/4/18	Average = 0.221 Range = 0.191 to 0.246	µg/L	0	MCL = 30	Erosion of natural deposits.

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 turbidity measurement on the plant effluent (0.22 NTU) occurred on 8/26/20. An MCL violation occurs when the average of all daily entry point analyses for the month exceed the MCL of 1 NTU or when the daily two-day average exceeds 5 NTU.
2. The turbidity of each filter is monitored to determine treatment compliance. State regulations require that turbidity must always be below 1 NTU. State regulations require that 95% of samples are below 0.3 NTU. In 2020, 100% of samples were less than 0.3 NTU. The highest filter turbidity reading (0.227 NTU) occurred on 12/18/20.
3. Bromate was detected above the MCL on 9/24/20 at a concentration of 22.3 ug/L. Although the MCL value was exceeded for the monthly testing, an MCL violation did not occur as the yearly average is used to determine compliance. Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
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 of sodium should not be used for drinking by people on moderately restricted sodium diets.
5. Value presented represents the Maximum Residual Disinfectant Level (MRDL) which is a level of disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.
6. The regulation requires a Locational Running Annual Average (LRAA) be calculated by averaging the results of the 4 most recent quarters. The LRAA reported in this table is the highest LRAA obtained in 2020.
7. The State considers 50 pCi/L to be the level of concern for beta particles.

Table Definitions

NYSDOH: New York State Department of Health
USEPA: United States Environmental Protection Agency
MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in the drinking water.
MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's 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.
NTU (Nephelometric Turbidity Unit): A measure of the clarity of the water. Turbidity in excess of 5.0 NTU is just noticeable to the average person.
TT: Treatment Technique
N/A: Not Applicable
ND: Not Detected
ng/L (nanograms per liter): Corresponds to one mass part in one trillion parts of another liquid (parts per trillion)
mg/L (milligrams per liter): Corresponds to one mass part in one million parts of another liquid (parts per million)
µg/L (micrograms per liter): Corresponds to one mass part in one billion parts of another liquid (parts per billion)
pCi/L (Picocuries per liter): A measure of the radioactivity in water.
mrem/yr (millirems per year): A measure of radiation absorbed by the body.

Lead in Your Drinking Water

The facility adds phosphoric acid at 2.3 mg/L to the treated water in order to protect lead plumbing in customer's homes. This program has resulted in significantly reducing lead levels in most homes.

Lead present at elevated levels 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 Poughkeepsies' Water Treatment Facility is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. Potential exposure to lead in drinking water can be minimized by running the water from the tap for 30 seconds to 2 minuets before using it for drinking or cooking, especially if it has been unused for several hours. 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 www.epa.gov/safewater/lead.

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.

Is Our Water System Meeting Other Rules That Govern Operations?

During 2020, 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 water source 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 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 up and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

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.

Annual Drinking Water Quality Report for 2020
Hopewell Hamlet Water System
Rt 376 Hopewell Junction, NY 12533
(Public Water Supply ID# 1330288)

INTRODUCTION

To comply with State regulations, Hopewell Hamlet 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, 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 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 VRI Environmental Services at (845) 677-3839. 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. In order 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 Department and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves 900 people through 67 service connections. Our water source is from four groundwater wells (Hamlet wells) located in Hopewell Recreation Park and two gravel wells (Cannon Wells) located across the street from Town Hall, which draw water from an aquifer located along the Fishkill/Sprout Creek drainage basin. Water pumped from the Hamlet wells is disinfected with sodium hypochlorite prior to the 149,000 gallon and 370,000 gallon storage tanks located adjacent to the water treatment facility. Water from the Cannon Wells gets dosed with sodium hypochlorite and pumped through 3 green sand filters for iron and manganese removal, then passes through cartridge filtration prior to the 149,000 gallon and 370,000 gallon storage tanks. Water in storage is blended. Water from the storage tanks is pumped to the distribution system with variable frequency pumps.

The New York State Department of Health completed a source water assessment of the water supply in 2003. The source water assessment has rated our water source as having a potential susceptibility to microbial and nitrate contamination. These ratings are due primarily to the reported proximity of the wells to permitted discharge facilities (facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and the residential land use and related activities in the assessment area. The full results of this report are available from the Town of East Fishkill or the Dutchess County Department Behavioral and Community Health. For questions regarding this report, please contact the Dutchess County Department of Behavioral and Community Health at 845-486-3404.

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, inorganic compounds, nitrate, 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 Department of Behavioral and Community Health at (845) 486-3404.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, AL or TT)	Likely Source of Contamination
Odor	No	4/24/2018	1.00	TON	n/a	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources.
Nickel	No	2/20/2020 11/18/2020	0.00255 0.00323	mg/L	n/a	n/a	Corrosion of plumbing systems; Erosion of natural deposits.
Barium	No	2/20/2020 11/18/2020	0.0213 0.0634	mg/L	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate	No	2/20/2020 11/18/2020	3.98 0.379	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Copper *	No	September 2019	59 (Range = 13 – 69.7)	ug/L	1300	AL = 1300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives;
Lead **	No	September 2019	7 (Range = ND – 16.8)	ug/L	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits;

Table of Detected Contaminants							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg/Max) (Range)**	**Unit Measure -ment**	**MCLG**	**Regulatory Limit (MCL, AL or TT)**	**Likely Source of Contamination**
Sodium	No	Quarterly 2020	59.75 (Range = 49.4 – 68.4)	mg/L	n/a	See Health Effects ***	Naturally occurring; Road Salt; Water softeners; Animal waste;
Chloride	No	Quarterly 2020	125.25 (Range = 113 – 143)	mg/L	n/a	250	Naturally occurring or indicative of road salt contamination.
Sulfate	No	4/24/2018	43.1	mg/L	n/a	250	Naturally occurring;
Gross Alpha	No	11/18/2020	3.26	pCi/L	0	15	Erosion of natural deposits.
Beta particle and photon activity from manmade radionuclides	No	11/18/2020	0.841	pCi/L	0	50 ****	Decay of natural deposits and man-made emissions.
Combined Radium 226 & 228	No	11/18/2020	1.02	pCi/L	0	5	Erosion of natural deposits;
Uranium	No	11/18/2020	2.79	ug/L	0	30	Erosion of natural deposits.
Total Trihalomethanes	No	8/14/2020	9.09 (Range = 9.04 – 9.14)	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
Haloacetic Acid	No	8/14/2020	1.75 (Range = 1.05 – 2.45)	ug/L	n/a	60	By-product of drinking water disinfection needed to kill harmful organisms.
Turbidity Entry Point	No	Yearly Average	0.05 (Range = 0.01 – 0.09_	NTU	n/a	5	Soil Runoff.

Footnotes:

* 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.

** The level presented represents the 90th percentile of the 10 samples collected. The action level for lead was exceeded at one of the 10 sites tested.

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

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

Definitions:

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).

Action Level (AL) - The concentrations of a contaminant, which, if exceeded, triggers treatment, or other requirements, which 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. MCLG's 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.

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

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

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had 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. 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 as a result of materials used in your home's plumbing. Hopewell Hamlet Water is responsible for providing high quality drinking water, but can not 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 2020, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

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. 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 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 up and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

Closing

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. 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.