Annual Drinking Water Quality Report for 2018
D.C.W.W.A. Zone D (Harbourd Hills) Water Service Area
Hyde Park, New York 12538
Public Water Supply ID# 1302768

INTRODUCTION

To comply with Federal and State regulations, the DCWWA-Zone-D System annually issues a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water, and the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report, or concerning your drinking water, please contact the Authority at 845-229-2524 and ask for Alain Petit, Jr.. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Authority Board meetings. The meetings are generally held the third Wednesday of every month at 1 LaGrange Avenue, Poughkeepsie, NY in the conference room beginning at 3:30 PM. Please contact our office at 845-486-3601 for agenda details and any last-minute meeting time, location, or date changes.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Zone-D System is fed through the Hyde Park System. Our water source is the Hudson River. The Hyde Park facility is a conventional filtration plant that consists of a raw water station located at the end of River Road by Rogers Point, and the treatment plant located at the end of South Drive. The raw water station pumps water from the Hudson River to the treatment facility approximately one-half mile away. At the main treatment facility water received is treated by chemical coagulation, sedimentation, and filtration for the removal of particulate matter and large microorganisms. Disinfection with chlorine is provided to eliminate pathogens. Sodium Hypochlorite is added to the raw water for zebra muscle control. Copper sulfate is added in the treatment process for taste and odor control. Tri-polyphosphate is added to the treated water for corrosion control in the distribution system. In the process of turning raw water into a finished product, the water quality is consistently monitored at each step along the way. Raw and finished water characteristics are checked daily for temperature, turbidity, total dissolved solids, and pH. Treatment is optimized based on these results,

and other process control sampling results made along the treatment path. Finished water is checked for chlorine residual and turbidity by continuous monitoring equipment, and verified by grab sampling. The finished water is then pumped out into the distribution system for customer use. The distribution system water is monitored for coliform bacteria, chlorine residual, turbidity, and other regulated parameters. Two elevated storage tanks located in the Hyde Park distribution system float on the system, storing water for peak flow periods and fire protection. A pressure booster station located on Roosevelt Road for the Zone-D distribution system is used to help keep water pressure up to acceptable limits.

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

FACTS AND FIGURES

Our water system serves approximately 1544 persons thru 356 service connections. In 2011, water service commenced along the newly constructed Rt. 9G interconnection main in the Town of Hyde Park, making public water available to 46 residential and commercial properties. With this alternate supply source, metered totals for Zone-D are not reflective of the total water used by the system. For more information, please contact the Authority at 845-486-3601. In 2018 there were 2 water main breaks, and 0 water service line leaks repaired by the Authority and/or customers. In 2018, water customers were charged $5.91 per 1,000 gallons of water with a monthly service charge of $11.50 per month for a residential service connection.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants which may have gotten into our water source. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological, and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. If you wish to have a copy of all test results for all non-detected contaminates please contact the DCWWA, and we will be happy to provide them to you. Please note water from the Hyde Park Plant is not fluoridated. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, might be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the 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 (1-800-426-4791), or the Dutchess County Department of Behavioral and Community Health at 845-486-3404.

A Summary of the Regulated Contaminants Detected in Our Treated Water

Microbiological Contaminants							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg/Max) (Range)**	**Unit Measure -ment**	**MCLG**	**Regulatory Limit (MCL, TT, or AL)**	**Likely Source of Contamination**
Turbidity (1)	No	5/18/18	(Max) 0.19	NTU	N/A	0.30	Soil Runoff
Turbidity (1)	No	Every 4 hours	100% ≤ 0.3	NTU	N/A	TT = 95% of samples ≤ 0.3 NTU	
Distribution Turbidity (2)	No	5/2018 10/2018	(Max Avg.) 0.20	NTU	N/A	MCL > 5NTU	
Entry Point Total Organic Carbon	No	1/mo	(Avg.) 2.02 (Range) 1.5 - 2.8	mg/l	N/A	TT	Naturally present in the environment

Organic Contaminants							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg/Max) (Range)**	**Unit Measure -ment**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**
2, 4-D	No	6/6/16	(Max) 0.00028	mg/l	.05	.05	Runoff from herbicide used on row crops

Inorganic Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measure -ment	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Barium	No	6/04/18	(Max) 0.0157	mg/l	2	2	Erosion of natural deposits; Discharge of drilling wastes; Discharge of metal refineries
Copper (3)	No	8/15/17 - 8/18/17	.330 (Range) .100 - .330	mg/L	1.3	AL=1.3	Erosion of natural deposits; Corrosion of household plumbing systems; Leaching from wood preservatives
Lead (4)	No	8/15/17 - 8/18/17	1 (Range) ND - 1	ug/L	0	AL=15	Erosion of natural deposits; Corrosion of household plumbing systems
Nitrate	No	4/02/18	(Max) 0.51	mg/L	10	10	Erosion of natural deposits; Run off from fertilizer use; Leaching from septic tanks; Sewage

Disinfection Byproducts

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measure -ment	MCLG MRDLG	Regulatory Limit (MCL,TT, or AL)	Likely Source of Contamination
Haloacetic Acids (HAA5) (5)	No	Qrtrly	(Avg.) 43 (Range) 21.4 – 45.4	ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Total Trihalomethanes (TTHMs) (5)	No	Qrtrly	(Avg.) 57 (Range) 23.3 – 95.7	ug/l	N/A	80	By-product of drinking water disinfection needed to kill harmful organisms TTHMs are formed when source water contains large amounts of organic matter

Disinfection							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg/Max) (Range)**	**Unit Measure -ment**	**MCLG MRDLG**	**Regulatory Limit (MCL,TT,AL, or MRDL)**	**Likely Source of Contamination**
Entry Point Chlorine Residual (6) & (7)	No	Cont.	(Avg.) 0.63 (Range) 0.01 – 1.24	mg/l	N/A	4.0	Water additive used to control microbes

(1) – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement during the year was on 5/18/18 and was 0.19 NTU. State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. 100% of our measurements for the year were below this level. We monitor turbidity continually and record the readings every four hours.

(2)- Distribution Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Our highest monthly average Distribution Turbidity measurements detected during the year, 0.20 NTU, occurred in May and October 2018. The values are below the State's maximum contaminant level, 5 NTU.

(3) – 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 from 10 different sites at your water system. The 90th percentile value was .330 mg/l, which is below the Action Level of 1.3 mg/l.

(4) –The level presented represents the 90th percentile of the 10 sites that were tested. A percentile is a value on a scale of 100 that indicates the percent distribution that is equal to, or below it. The 90th percentile is equal to, or greater than, 90% of the lead values detected at your water system. In this case, 10 samples were collected from 10 different sites at your water system. The 90th percentile was 1 ug/l, which is below the Action Level of 15 ug/l.

(5)-This level represents the annual quarterly average, and range, calculated from data collected

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

(7)-Chlorine residuals are monitored continuously on water treatment plant effluent.

Definitions:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.
Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).
Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

WHAT DOES THIS INFORMATION MEAN?

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

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The DCWWA 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 2018, our system 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 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 (1-800-426-4791).

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

System Improvements

A preliminary capital plan for the replacement, and rehabilitation, of some of the aging water main in the system was begun in 2011, and continued to be updated in 2018. Work on the upgrade of our plant SCADA and instrumentation system began in the Fall of 2017, as well as the replacement of all of the plant's motor operated valves. This upgrade has been completed. We also replaced one of our 3 aging vertical turbine pumps, which are the pumps needed to pump water from the river to the treatment plant. We will be looking to replace another one of these pumps in 2019.

CLOSING

In closing, the Board members and staff of the Dutchess County Water and Wastewater Authority wish to thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all of our customers help us protect and preserve our water sources, which are the heart of our community, and our way of life. Please call our office if you have any questions.