Annual Drinking Water Quality Report for 2020 Village of Tivoli Water System 26 Public Works Drive, Tivoli, NY 12583 (Public Water Supply ID#1302778)

INTRODUCTION

To comply with State regulations, the Village of Tivoli Water System, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, our 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 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 attend any of our regularly scheduled board meetings. They are generally held on the third Wednesday of each month. The meetings begin at 4:00 and take place in the conference room at 1 Lagrange Ave., Poughkeepsie, NY. Please call our office at 845-486-3601 for agenda details and any last-minute meeting date or time 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 Departments 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 1,118 people and 476 service connections. Our water source is groundwater drawn from a total of eight (8) wells. Wells were drilled in 1940, 1947, 1953, 1957, 1980, and 2002. The water is pumped from the wells to three different pump stations at which point the water is chlorinated prior to distribution. Excess water is stored in the elevated water tank at Pine Street.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, synthetic organic compounds, total haloacetic acids, and radioactive contaminants. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Dutchess County Health Department at (845) 486-3404.

Table of Detected Contaminants								
Contaminant	Location	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit Measure-ment	MCLG	Regulatory Limit	Likely Source of Contamination
Disinfection Byproducts								
Total Trihalomethanes	MCK	No	09/18/2019	10.1	ug/L	N/A	80 (MCL)	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Total Trihalomethanes	Ball Lot	No	09/18/2019	8.81	ug/L	N/A	80 (MCL)	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Total Trihalomethanes	Potts/WM	No	09/18/2019	3.39	ug/L	N/A	80 (MCL)	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Total Haloacetic Acids	Ball Lot	No	09/18/2019	1.50	ug/L	N/A	60 (MCL)	By-product of drinking water disinfection needed to kill harmful organisms.
Radioactive Contaminants								
Combined radium – 226 and 228	MCK	No	9/6/2013	0.16+0.63 =0.79	Pci/L	0	5 (MCL)	Erosion of natural deposits.
Combined radium – 226 and 228	Potts/WM	No	9/6/2013	0.09+0.39 =0.48	Pci/L	0	5 (MCL)	Erosion of natural deposits.
Inorganics								
Iron[4]	Ball Lot	Yes	12/7/2020	0.396	mg/L	N/A	0.3 (MCL)	Naturally occurring
Iron[4]	MCK	Yes	10/21/2020	1.95	mg/L	N/A	0.3 (MCL)	Naturally occurring
Iron[4]	Potts/WM	No	10/21/2020	0.233	mg/L	N/A	0.3 (MCL)	Naturally occurring
Manganese	Ball Lot	No	12/7/2020	0.0405	mg/L	N/A	0.3 (MCL)	Naturally occurring, indicative of landfill contamination
Manganese	MCK	No	10/21/2020	0.0888	mg/L	N/A	0.3 (MCL)	Naturally occurring indicative of landfill contamination
Manganese	Potts/WM	No	10/21/2020	0.041	mg/L	N/A	0.3 (MCL)	Naturally occurring indicative of landfill contamination
Sodium[3]	Ball Lot	No	3/26/2019	78.6	mg/L	N/A	See foot note 3	Naturally occurring; Road salt; Water softeners; Animal waste.
Sodium[3]	MCK	No	8/28/2019	39.1	mg/L	N/A	See foot note 3	Naturally occurring; Road salt; Water softeners; Animal waste.

Sodium[3]	Potts/WM	No	8/28/2019	27.8	mg/L	N/A	See foot note 3	Naturally occurring; Road salt; Water softeners; Animal waste.
Zinc	Ball Lot	No	3/26/2019	0.0151	mg/L	N/A	5	Naturally occurring; Mining waste.
Zinc	MCK	No	8/28/2019	0.00812	mg/L	N/A	5	Naturally occurring; Mining waste.
Zinc	Potts/WM	No	8/28/2019	0.00601	mg/L	N/A	5	Naturally occurring; Mining waste.
Silver	MCK	No	8/28/2019	0.0006	mg/L	N/A	0.1	Naturally occurring, discharge from photographic and radiographic processing; Manufacturing of electronic products; Jewelry making; Plating and soldering.
Odor	Ball Lot	No	3/26/2019	1	TON	N/A	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources.
Odor	MCK	No	8/28/2019	2	TON	N/A	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources.
Odor	Potts/WM	No	8/28/2019	1	TON	N/A	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources.
Chloride	Ball Lot	No	3/26/2019	20	mg/L	N/A	250	Naturally occurring or indicative of road salt contamination
Chloride	MCK	No	8/28/2019	78	mg/L	N/A	250	Naturally occurring or indicative of road salt contamination
Chloride	Potts/WM	No	8/28/2019	37	mg/L	N/A	250	Naturally occurring or indicative of road salt contamination
Nitrate	Potts/WM	No	4/14/2020	0.421	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Color	Ball Lot	No	3/26/2019	10	PtCo	N/A	15	Large quantities of organic chemicals, inadequate treatment, high disinfectant demand and the potential for production of excess amounts of disinfectant byproducts such as trihalomethanes, the presence of metals such as copper, iron and manganese; Natural color may be caused by decaying leaves, plants, and soil organic matter
Color	MCK	No	8/28/2019	5	PtCo	N/A	15	Large quantities of organic chemicals, inadequate treatment,

								high disinfectant demand and the potential for production of excess amounts of disinfectant byproducts such as trihalomethanes, the presence of metals such as copper, iron and manganese; Natural color may be caused by decaying leaves, plants, and soil organic matter
Color	Potts/WM	No	8/28/2019	5	PtCo	N/A	15	Large quantities of organic chemicals, inadequate treatment, high disinfectant demand and the potential for production of excess amounts of disinfectant byproducts such as trihalomethanes, the presence of metals such as copper, iron and manganese; Natural color may be caused by decaying leaves, plants, and soil organic matter
Sulfate	MCK	No	8/28/2019	50	mg/L	N/A	250	Naturally occurring
Sulfate	Potts/WM	No	8/28/2019	25	mg/L	N/A	250	Naturally occurring
Sulfate	Ball lot	No	3/26/2019	19	Mg/l	N/A	250	Naturally occuring
Lead[1]	System Wide	No	7/9/2020-7/14/2020	0.001 (<0.001-0.030)	mg/L	0	0.015 (AL)	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper[2]	System Wide	No	7/9/2020-7/14/2020	0.248(0.028-0.263)	mg/L	1.3	1.3 (AL)	Corrosion of household plumbing systems leaching from wood preservatives; Erosion of natural deposits.

Table of Detected Contaminants (Continued)

Contaminant	Location	Violation Yes/No	Date of Sample	Level Detected (Avg/Max)	Unit Measure-ment	MCLG	Regulatory Limit	Likely Source of Contamination
Inorganics (Continued)								
Arsenic	Ball Lot	No	12/7/2020	4.31	ug/L	N/A	10 (MCL)	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Arsenic	MCK	No	10/21/2020	1.66	ug/L	N/A	10 (MCL)	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	Ball Lot	No	12/7/2020	0.0629	mg/L	2	2 (MCL)	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Barium	Potts/WM	No	10/21/2020	0.193	mg/L	2	2 (MCL)	Discharge of drilling wastes; Discharge from

								metal refineries; Erosion of natural deposits.
Barium	MCK	No	10/21/2020	0.0826	mg/L	2	2 (MCL)	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Notes:

1 – The level presented represents the 90th percentile of the 10 samples collected. The action level for lead was exceeded at one of the sites. The homeowner was notified.

2 – 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 the water system and the 90th percentile value was the 0.248 mg/L value. The action level for copper was not exceeded at any of the sites tested.

3- 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

4- Iron is not considered hazardous to health. In fact, iron is essential for good health because it transports oxygen in your blood. Iron is considered a secondary or "aesthetic" contaminant. The present recommended limit for iron in water, 0.3 mg/l (ppm), is based on taste and appearance rather than on any detrimental health effect. When the level of iron in water exceeds the 0.3 mg/l limit, we experience red, brown, or yellow staining of laundry, glassware, dishes and household fixtures such as bathtubs and sinks. The water may also have a metallic taste and an offensive odor. Water system piping and fixtures can also become restricted or clogged.

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.

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).

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

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

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had violations for Iron. In order to reduce Iron level exposure, we have stopped the use of the wells with high Iron production and only use them in times of emergency, which when blended with our other sources it dilutes the iron levels in our water to acceptable levels. We have learned through our testing that some other contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

We are required to present the following information on lead in drinking water:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The Village of Tivoli Water System 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, our system was in compliance with most 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 at 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 firefighting needs are met.

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

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So, get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

CLOSING

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 questions.