

Annual Drinking Water Quality Report for 2021
Chesterfield Water District (former Village of Keeseville Water System)
PO Box 456 Keeseville, NY 12944
(Public Water Supply ID NY1500283)

INTRODUCTION

To comply with State regulations, the Town of Chesterfield issues a report annually to describe the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, we conducted tests for over 80 contaminants and found some of the contaminants at a level higher than the State allows. 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 **Dave Winter, Water Operator at (518) 834-9042**. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled town board meetings. The meetings are held at the Town Hall at 6:00pm on the second Tuesday of every month. We would also be pleased to discuss any drinking water issues in person.

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 source of water for the Chesterfield Water District is Butternut Pond, a shallow natural pond. The water intake piping is 16" cast iron piping and extends approximately 180 feet into the pond. Water from Butternut Pond flows by gravity to the dual sand water filtration plant, where the water is filtered and disinfected with liquid chlorine and an orthophosphate corrosion control additive. Water is then pumped into a 308,000-gallon glass lined water tank at the filtration plant and flows to the water district through approximately 25,000 ft. of 12" ductile iron main. There a 500,000-gallon storage tank located on the west side of Prospect Mountain.

The NYS Dept. of Health completed a source water assessment for this system based on available information. This assessment found a moderate susceptibility to contamination for this source of drinking water. Land cover and its associated activities within the assessment area does not increase the potential for contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality, based on their density in the assessment area. There are no noteworthy contamination threats associated with other discrete contaminant sources. Additional sources of potential contamination include roadways. While lakes are not generally considered to have a high natural sensitivity to phosphorus in SWAP, this lake already has algae problems. Therefore, additional phosphorus contribution would likely result in future water quality degradation. The Health Dept. will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning, and education programs.

FACTS AND FIGURES

Our water system serves approximately 2,300 through 1,100 service connections. The total volume of water produced in 2021 was 93.5 million gallons and our average daily production was 256,225 gallons per day. The volume of water generated on the highest single day was 459,328 gpd which occurred on November 23, 2021. Approximately 2.8 million gallons of treated water were lost from the system due to water main breaks, fire flow, and flushing of the distribution system. The current water rate for residents in the Chesterfield Water District \$90.00 for the first 11,000 gallons used and then \$8.00 per 1,000 gallons above 11,000 gallons for each quarter. Additionally, residents in the water district are charged \$70/quarter to cover debt service costs.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. 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), the New York State Department of Health at (518) 891-1800.

During 2021, we started to sample our drinking water for the per- and polyfluorinated compounds PFOA and PFOS and 1,4-dioxane on a quarterly basis. We collected samples during all 4 quarters of 2021 for PFOS and PFOA and the results indicated that there were very low levels of PFOS present in our water. The levels were detectable, but less than the reporting limit. 1,4-dioxane samples were collected all 4 quarters of 2021 and the results were below the detection limit. We will collect PFOA and PFOS samples again during the second quarter of 2022.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Microbiological Contaminants							
Turbidity ²	No	3/10/2021	1.0 ²	NTU	n/a	TT=<1NTU	Soil Runoff
Turbidity	No	2021	99% < 0.30 ²	NTU	n/a	TT=95% of Samples must be <0.3NTU	Soil Runoff
Radioactive Contaminants							
Radium 226 & 228	No	2014	0.3	pCi/L	0	5 (MCL)	Erosion of natural deposits
Gross Alpha	No	2014	0	pCi/L	0	15 (MCL)	Erosion of natural deposits.
Gross Beta	No	2014	0	pCi/L	0	50 (MCL)	Erosion of natural deposits.
Inorganic Contaminants							
Barium	No	2021	ND	mg/l	2	2(MCL)	Erosion of natural deposits
Copper	No	2019	0.039 ³ ND -0.05 ⁴	mg/L	1.3	1.3 (AL)	Corrosion of household plumbing systems.
Fluoride	No	2021	ND	mg/L	n/a	2.2 (MCL)	Naturally occurring.
Lead	No	2019	ND ³ ND - 0.0011 ⁴	mg/L	0	0.015 (AL)	Corrosion of household plumbing systems.
Nitrate	No	2021	ND	mg/L	10	10 (MCL)	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Sodium	No	2020	32 ⁵	mg/L	n/a	See Note 5	Naturally occurring; Road salt; Water softeners; Animal waste.
Synthetic Organic Contaminants							
Dalapon	No	2021	ND	ug/L	n/a	50 (MCL)	Runoff from herbicide used on rights of way.
Perfluorooctane Sulfonic Acid (PFOS)	No	2021	0.636	ng/L	n/a	10 (MCL)	Released into the environment from widespread use in commercial and industrial applications.
Disinfections Byproducts							
Total Trihalomethanes (TTHMs)	No	2021	50.7 ⁶ 25.6 - 83.7 ⁷	ug/L	n/a	80(MCL)	By-products of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains measurable amounts of organic matter.
Haloacetic Acids (HAA5)	Yes	2021	51.4 ⁶ 32.3 - 77.9 ⁷	ug/L	n/a	60(MCL)	By-products of drinking water chlorination needed to kill harmful organisms.

NOTES:

² Turbidity is a measure of the cloudiness of our water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our single highest measurement for the year occurred on 3/10/2021 (1.0 NTU). State regulations require that turbidity must always be below 1NTU. The regulations require that 95% of the turbidity samples collected each month have measurements below 0.3 NTU.

³ The level presented represents the 90th percentile of the 10 sites tested in 2019. 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. In this case, 10 samples were collected at your water system and the 90th percentile value was the second highest value.

⁴ The level presented represents a range of the samples collected in 2019. The action level for lead and copper was not exceeded at any of the 10 test sites

⁵ 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.

⁶ The value represents the highest Locational Running Annual Average of the samples collected.

⁷ The values represent the range of the samples 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.

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).

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

Nanograms per liter (ng/l) corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

WHAT DOES THIS INFORMATION MEAN?

During 2021, the Chesterfield Water District did not have any Maximum Contaminant Level (MCL) violations. The sodium level was slightly elevated and could be an issue for people on a highly restrictive sodium diet. Please review Note 5 above and discuss this issue with your physician if you fall into this category. Lead was present in our system at very low levels and the 90th percentile lead concentration did not exceed the Action Level for lead. Even though the lead levels were low, 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 and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Chesterfield 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 or at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

All monitoring and reporting requirements are satisfied in a timely manner. The water system is in full compliance with all other regulations.

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 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 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.

CLOSING

We are working diligently to resolve the disinfection byproduct violations that we have had in previous years, a mixer was installed in the storage tank by the filtration plant, we are applying a corrosion control additive, and we are looking into ways to improve the maintenance of the filtration plant and the distribution system. The disinfection byproduct levels are dropping with our efforts. We are currently working on upgrading our filter plant and adding a well as part of our source. Construction work began in 2020 and should be concluding in the next several months.

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.