Annual Drinking Water Quality Report for 2021
Village of Hamilton Municipal Water System
3 Broad Street, Hamilton, NY 13346
PWS #NY2602377

INTRODUCTION

To comply with State regulations, Village of Hamilton will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact David Jordan, water system operator, Village of Hamilton or James Stokes, Village Administrator at 315-824-1111. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled M.U.C. meetings. The meetings are held the 2ND Tuesday of each month at 4:30 PM at the Village of Hamilton Offices.

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 and FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves approximately 4000 people through 859 service connections. Our water source is two drilled wells approximately 83 and 77 feet deep, located in the Village. The water is pumped from the wells and is immediately disinfected with sodium hypochlorite. Prior to being distributed your water is treated with fluoride, which helps fight tooth decay.

NEW YORK STATE DEPARTMENT OF HEALTH SOURCE WATER ASSESSMENT PROGRAM SUMMARY

The NYS DOH has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that water delivered to consumers, is or will be contaminated. See section "Are There Contaminants In Our Drinking Water?" for a list of contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

The public water supply serving the Village of Hamilton is derived of two drilled wells. The source water assessment has rated these wells as having a medium–high susceptibility rating for industrial contaminants as well as a high susceptibility rating for industrial solvents, nitrates, and microbials. These ratings are due primarily to the close proximity of permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and or federal government) to the wells. Based on submitted data, the well field could be prone to flooding. Please note, while the source water assessment rates these wells as being susceptible

to microbials, the water is disinfected to ensure that the finished water delivered into your home meets the New York State Drinking Water Standards for microbial contamination.

County and State Health Departments will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning and education programs. If you should have any questions or would like to review the Source Water Assessment in our office please feel free to contact the Madison County Department of Health at (315) 366-2526.

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, 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) or the Madison County Department of Health at 315-366-2526.

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Y/N	Date of Sample	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Disinfection By-Product Contaminants							
Total Trihalomethanes	N	8/19/21	8	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.
Total Haloacetic Acids	N	8/19/21	2	ug/L	N/A	60	By-product of drinking water chlorination needed to kill harmful organisms.
Inorganic Contaminants							
Fluoride	N	Quarterly in 2021	Avg. 0.72 Range (0.61 – 0.83)	mg/L	N/A	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum plants.
Sodium Well #1 (Footnote 1)	N	8/19/21	80.1	mg/L	N/A	(See health effects, footnote 1)	Naturally occurring; Road Salt: Water Softeners; Animal Wastes.
Sodium Well #2 (Footnote 1)	N	8/19/21	85.8	mg/L	N/A	(See health effects, footnote 1)	Naturally occurring; Road Salt: Water Softeners; Animal Wastes.
Nitrate Well #1	N	8/19/2021	1.25	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Contaminant	Violation Y/N	Date of Sample	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Nitrate Well #2	N	8/19/21	1.70	mg/L	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Inorganic Contaminants

Lead (Footnote 2)	N	5/7/21 - 6/25/21	7.8 Range (ND – 16.5)	ug/L	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (Footnote 3)	N	5/7/21 - 6/25/21	0.328 Range: (0.018-0.354)	mg/L	1.300	AL=1.300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Barium Well #1	N	11/21/2019	0.112	mg/L	2.0	2.0	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Barium Well #2	N	11/21/2019	0.130	mg/L	2.0	2.0	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nickel Well #1	N	11/21/2019	1.2	ug/L	NA	NA	Erosion of natural deposits
Nickel Well #2	N	11/21/2019	0.98	ug/L	NA	NA	Erosion of natural deposits
Selenium Well #1	N	08/16/2016	0.69	ug/L	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Selenium Well #2	N	08/16/2016	0.65	ug/L	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Organic Contaminants

Bis(2-Ethylhexyl) Phthalate Well #2	N	2/16/2016	0.88	ug/L	0	6	Used in plastic products such as polyvinyl chloride, plastic toys, vinyl upholstery, adhesives and coatings. Compound likely to be released to the environment during production and waste disposal of these products. Also used in inks, pesticides, cosmetics and vacuum pump oil.
Bis(2-Ethylhexyl) Phthalate Well #2	N	8/16/2016	1.1	ug/L	0	6	Used in plastic products such as polyvinyl chloride, plastic toys, vinyl upholstery, adhesives and coatings. Compound likely to be released to the environment during production and waste disposal of these products. Also used in inks, pesticides, cosmetics and vacuum pump oil.l.

Bacteriological

Total Coliform (Footnote 5)	N	4/14/2020	1 positive sample	n/a	n/a	MCL= 2 or more positive samples before April 1, 2016.	Naturally present in the environment.

Synthetic Organic Contaminants including Pesticides and Herbicides

Perfluoroctanoic Acid (PFOA) (Well #2)	N	3/24/21 - 8/19/21	Avg. 1.18 Range (1.06 - 1.39)	ng/l	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.
Perfluoroctanoic Acid (PFOA) (Well #1)	N	3/24/21 – 8/19/21	Avg. 0.631 Range (0.601 – 0.659)	ng/L	NA	10 ng/L	Released into the environment from widespread use in commercial and industrial applications.
Perfluoroctane Sulfonic Acid (PFOS) (Well #1)	N	3/24/21 – 8/19/21	Avg. 0.750 Range (0.702 – 0.778)	ng/L	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.
Perfluoroctane Sulfonic Acid (PFOS) (Well #2)	N	3/24/21 – 8/19/21	Avg. 2.106 Range (0.769 – 2.97)	ng/L	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.
Perfluorobutane Sulfonic Acid (PFBS) (Well #1)	N	6/10/21 – 8/19/21	Avg. 0.912 Range (0.842 – 0.982)	ng/L	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.
Perfluorobutane Sulfonic Acid (PFBS) (Well #2)	N	6/10/21 – 8/19/21	Avg. 1.47 Range (1.35 – 1.59)	ng/L	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.
Perfluorohexane Sulfonic Acid (PFHXS) (Well #1)	N	6/10/21 – 8/19/21	Avg. 0.769 Range (0.696 – 0.842)	ng/L	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.
Perfluorohexane Sulfonic Acid (PFHXS) (Well #2) (Footnote 4)	N	6/10/21 – 8/19/21	Avg. 1.117 Range (0.993 – 1.24)	ng/L	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.

Perfluorohexanoic Acid (PFHXA) (Well #1) (Footnote 4)	N	6/10/21 – 8/19/21	Avg. 1.110 Range (0.989 – 1.23)	ng/L	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.
Perfluorohexanoic Acid (PFHXA) (Well #2) (Footnote 4)	N	6/10/21 – 8/19/21	Avg. 1.505 Range (1.31 – 1.7)	ng/L	NA	10 ng/l	Released into the environment from widespread use in commercial and industrial applications.

Footnotes

1. Individuals on a moderately restricted sodium diet should not consume water having levels of sodium greater than 270 mg/L. Individuals on severely restricted sodium diets should not consume water having levels of sodium greater than 20 mg/L.
2. The lead level presented represents the 90th percentile of the 40 sites. 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 values detected at your water system. In this case, 40 samples were collected at your water system and the 90th percentile value was the 36th value (7.8 ug/L). The lead level was above the action level of 15 ug/L at two of the sites tested.
3. The copper level presented represents the 90th percentile of the 40 sites. 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 values detected at your water system. In this case, 40 samples were collected at your water system and the 90th percentile value was the 36th value (0.328 mg/L). The copper level was not above the action level of 1.300 mg/L at any of the sites tested.
5. Three repeat water samples were collected on 4/16/2020 and all were negative for total coliform and e.coli.

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.
Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).
Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).
Nanograms per liter(ng/l): Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion-ppt).
Picocuries per liter (pCi/L): A measure of the radioactivity in water.
N/A: N/A means not applicable.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations during 2021. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. 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 Hamilton 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?

We provide water to Colgate University through our distribution system. In 2019, Colgate University began to test the water at their properties for lead. The lead results from the 2019 Colgate University study may be viewed at https://www.colgate.edu/about/offices-centers-institutes/office-communications/university-correspondence. We are currently working with Colgate University to develop a plan of action to reduce the level of lead at these locations. In response to the lead detections at the Colgate University properties, we collected the Village of Hamilton 67 lead and copper samples at described in Footnotes 5 and 6 above and revised our led and copper sampling plan. During 2021, The Village of Hamilton water 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).

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 0.7 mg/l. During 2021, monitoring showed that fluoride levels in your water were within 0.2 mg/l of the target level for nearly 100% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

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.

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. 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.