

ANNUAL DRINKING WATER QUALITY REPORT FOR 2020
Village of Ballston Spa
66 Front Street, Ballston Spa, New York, 12020
(Public Water Supply ID# NY4500162)

INTRODUCTION

In compliance with Section 5-1.72 of the New York State Sanitary Code (10 NYCRR), the Village of Ballston Spa publishes an Annual Drinking Water Quality Report (Report) to inform the public about the quality of the Village's drinking water. This Report details any vulnerabilities or susceptibilities of source water to contamination, provides an overview of modifications or improvements made to the water distribution system (System) in 2020, makes public the results of testing/sampling that occurred in 2020, and compares testing results to New York State (State) standards. The intent of this Report is to raise public understanding and awareness of the overall quality of the Village's drinking water and to convey the importance of preventative measures, such as source protection, that ensure a safe drinking water supply.

Last year, the Village's drinking water was tested for numerous contaminants and was determined to meet all drinking water health standards; the System did not violate a maximum contaminant level or any other water quality standard.

Any questions about this Report or concerns about drinking water quality can be directed to the Village Water Department which can be reached by phone at: (518) 885-6211. Alternatively, questions, comments, and/or concerns can be raised at Village Board Meetings held at the Village of Ballston Spa Public Library on the second and fourth Mondays of each month at 7:00 pm.

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

The Village of Ballston Spa sources drinking water from five (5) groundwater wells located in the Town of Milton. Two (2) of the wells are located on Geysers Road and three (3) are located on Rowland Street. The wells vary in depth from 50 to 200-feet. During 2020, there were no restrictions on the Village's water source.

Groundwater is pumped from the wells to the Rowland Street Pump Station where it is disinfected using chlorine gas and subsequently dosed with fluoride prior to distribution. The Village is among the many municipalities in New York State that add a low level of fluoride to drinking water in order to provide consumer dental health protection. Chlorine and fluoride residuals are tested daily in the System, averaging 0.91 mg/l and 0.5 mg/l respectively in 2020. Additionally, water samples from two locations are tested for coliform three times per month.

The NYSDOH has completed a source water assessment (Assessment) for the Village in which potential and actual threats to the source groundwater were evaluated. The Assessment established a susceptibility rating based on several factors including types of potential contaminants, contaminant mobility, and health risks posed by any potential contaminant. Note that the rating is an estimate of the potential for source water contamination and does not indicate that the water delivered to consumers is or will become contaminated. The Village's water sources were rated as having an elevated susceptibility to microbials and nitrates. The primary rationale behind this determination is twofold; the source water wells lay in close proximity to permitted discharge facilities and concern exists that the overlying soils may not provide adequate protection from potential contamination. While the Assessment determined the Village's wells to be susceptible to microbials, note that the public water supply is disinfected to ensure that the finished and distributed water meets New York State's drinking water standards for microbial contamination.

The Assessment provides resource managers with additional information for protecting source waters into the future and can be used by the NYSDOH to direct future source water protection activities. A copy of the assessment can be obtained by contacting the Village Water Department. See Section "Are There Contaminants in Our Drinking Water?" for a comprehensive list of the contaminants that have been detected in the source water.

FACTS AND FIGURES

In 2020, the Village of Ballston Spa provided water service to approximately 6,541 people through 2,423 service connections. The total volume of source water extracted and treated in 2020 was 283,840,058 gallons, for an average of 777,644 gallons per day (gpd). Of the total volume extracted, 209,787,288 gallons (or approximately 73.9%) was delivered and billed to customers. The remaining 74,052,770 gallons (approximately 26.1% of the total volume extracted) was used to fight fires, flush hydrants, for filling the Village swimming pool and ice-skating rink, and includes losses such as leakage and/or water main breaks. The highest single day demand was 1,298,766 gallons. In 2020, the average cost per 1,000 gallons for customers within the Village was \$2.07.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

The Village routinely tests the drinking water supply for a myriad of contaminants in accordance with the NYSDOH Sanitary Code Part 5. The contaminants that the Village tests for include total coliform bacteria, inorganic compounds, nitrate, lead and copper, disinfection byproducts, synthetic organic compounds, radiologicals and principal organic compounds. The table presented below summarizes the test results for 2020 (contaminants tested for but not detected are not shown). Note that the State allows the Village to test for some contaminants less frequently than once per year; these contaminants are known to exhibit stable concentrations that vary infrequently. Some of the data, though representative, is 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 Glens Falls District Office at (518) 793-3893.

TABLE OF DETECTED CONTAMINANTS						
Contaminant	Violation Yes/No	Date of Sample	Detected Level (avg/max) (range)	MCLG	NYSDOH Limits or Guidelines (MCL, or AL)	Likely Sources of Contamination
INORGANICS						
Arsenic	No	6/23/2020	0.0004 mg/l	N/A	0.01 mg/l (MCL)	Naturally occurring
Barium	No	6/23/2020	0.0366 mg/l	2 mg/l	2 mg/l (MCL)	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride	No	6/23/2020	128 mg/l	N/A	250 mg/l (MCL)	Naturally occurring; Road salt
Fluoride	No	6/23/2020	0.5 mg/l	N/A	2.2 mg/l (MCL)	Erosion of natural deposits; Water additive that promotes strong teeth
Manganese	No	6/23/2020	0.0087 mg/l	N/A	3 mg/l (MCL)	Naturally occurring; Indicative of landfill contamination
Nitrate	No	6/23/2020	1.0 mg/l	10 mg/l	10 mg/l (MCL)	Runoff from fertilizer use; Erosion of natural deposits; Leaching from septic tank, Sewage
Odor	No	6/23/2020	1.0 T.O.N.	N/A	3 T.O.N. (MCL)	Organic or inorganic pollutants originating from municipal and industrial waste discharges: natural sources
Sodium	No	6/23/2020	63.2 mg/l	N/A	See Note 1	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate	No	6/23/2020	22.8 mg/l	N/A	250 mg/l (MCL)	Naturally occurring
Zinc	No	6/23/2020	0.00267 mg/l	N/A	5 mg/L (MCL)	Naturally occurring
LEAD AND COPPER						
Lead	No	9/13/18	ND ² ND-2 ³ ug/l	0	15 ug/l (AL)	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	No	9/13/18	0.15 ² mg/l 0.03-0.21 ³ mg/l	1.3 mg/l	1.3 mg/l (AL)	Corrosion of household plumbing systems; Erosion of natural deposits; leaching
DISINFECTION BY PRODUCTS (STAGE 2)						
Total Trihalomethanes (TTHM)	No	8/21/2020	Wood Road 23 ug/l	N/A	80 ug/l (MCL)	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 (HAA5)	No	8/21/2020	Washington Street ND	N/A	60 ug/l (MCL)	By-product of drinking water chlorination needed to kill harmful organisms.
MICROBIOLOGICAL CONTAMINANTS						

TABLE OF DETECTED CONTAMINANTS						
Contaminant	Violation Yes/No	Date of Sample	Detected Level (avg/max) (range)	MCLG	NYSDOH Limits or Guidelines (MCL, or AL)	Likely Sources of Contamination
Total Coliform Bacteria	No	Six times monthly	None	0	Systems with less than 40 samples per month- two or more samples positive for Total Coliform represents an MCL violation	Naturally present in the environment

Notes:

1. 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.
2. The level presented represents the 90th percentile of the 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 lead and copper values detected for the water system.
3. The level presented is the range of sample results from the sites that were tested.

Definitions:

Action Level (AL): The concentration 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. 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.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (µg/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion – ppb).

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

N/A: Not applicable.

T.O.N.: Threshold odor number.

In June 2020 the Village conducted a Principal Organic Chemical Analysis (POCs). Samples were analyzed for the following parameters:

Benzene, Bromobenzene, Bromochloromethane, Bromomethane, Sec-Butylbenzene, Tert-Butylbenzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, Dibromomethane, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, Cis-1,2-Dichloroethene, Trans-1,2-Dichloroethene, 1,2-Dichloropropane, 1,3-Dichloropropane, Methyl Tert Butyl, Ether, 2,2-Dichloropropane, 1,1-Dichloropropene, 1,3-Dichloropropene (Total), Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, 4-Isopropyltoluene, Methylene Chloride, N-Propylbenzene, Styrene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl Chloride, M-Xylene, O-Xylene, and P-Xylene.

All samples tested for POCs were below the detection level, and the MCL as specified by the State.

In May 2020 the Village conducted a Synthetic Organic Chemical Analysis (SOCs) for the follow parameters:

Alachlor, Aldrin, Atrazine, Benzo(a)pyrene, bis(2-ethylhexyl) adipate, bis(2-ethylhexyl) phthalate, Butachlor, Endrin, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Metolachlor, Metribuzin, Propachlor, Simazine, Dieldrin, Aldicarb*, Aldicarb Sulfone*, Aldicarb Sulfoxide*, Carbofuran, Oxamyl, Methomyl, 3-Hydroxy Carbofuran, Carbaryl, 1,2-dibromoethane, 1,2-dibromo-3-chloropropane, 2,4-D, Dalapon, Dicamba, Dichloroprop Dinoseb, Pentachlorophenol, Picloram, 2,4,5-TP, 2,4,5-T, Arochlor: 1016,

1221, 1232, 1242, 1248, 1254, 1260, 1268*; Chlordane Total and Toxaphene.

All samples tested for SOCs were below the detection level, and the MCL as specified by the State.

In October 2020 the Village conducted testing an analysis for the following:

1,4-Dioxane, Perfluorooctanoic Acid (PFOA), and Perfluorooctanesulfonic Acid (PFOS).

All samples tested were below the detection level, and the MCL as specified by the State.

WHAT DOES THIS INFORMATION MEAN?

As is evidenced by the above table, the Village 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.

It should be noted that the action level for lead was not exceeded in the last test completed in 2018; however, 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 Ballston Spa 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 System was in compliance with applicable State operating, monitoring, and reporting requirements.

INFORMATION ON FLUORIDE ADDITION

The Village's water System is one of many in New York State that adds a low level of fluoride to drinking water in order to promote 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, fluoride levels are monitored on a daily basis to ensure fluoride is maintained at a target level of approximately 0.7 mg/l. During 2020, monitoring showed fluoride levels averaged 0.5 mg/l. None of the monitoring results showed a concentration that approaches the 2.2 mg/l MCL for fluoride.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although the Village's 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 the Village has an adequate supply 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.
- ◆ 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

In 2020, seven main valves and two check valves were removed at the Lowell St. Pumphouse. The tower recorder in the Lowell St. Pumphouse was also replaced. Numerous routine repairs on fluoride and Cl₂ pumps and injectors occurred throughout the year as well. Approximately 330-LF of water main was also replaced across the System.

FLUSHING SCHEDULE

Once a year the Village flushes water out of the System to ensure that there are no points of stagnation that may affect water quality. During this time, consumers may experience discolored water for a short time period. Typically, flushing of the water system is conducted in late September/early October. Notices are published in the local paper prior to commencing the system flushing.

CLOSING

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. Please call our office if you have questions.