

ANNUAL WATER QUALITY REPORT CLIFTON PARK WATER AUTHORITY May 2018

Contained on the following pages is the 2017 Annual Water Quality Report for the Clifton Park Water Authority (PWSID# 4500175). The CPWA system has 13,350 service connections (approx. 35,000 people). This report will be made available to our customers each year providing analytical data compiled during the previous year. This report is a requirement of the NYS Department of Health (DOH). It is designed to allow our customers to review the sample results from their water supply and compare those results with standards established by the DOH. Should you have any questions or comments regarding this report or wish to address the Authority regarding any related issues, you may contact the Authority Administrator, Mr. Donald Austin, during business hours at 383-1122. The Authority also holds a public meeting once a month at the Authority offices located at 661 Clifton Park Center Road, just west of Town Hall (PLEASE CALL TO CONFIRM DATE AND TIME).

Where Does Our Water Come From?

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 can pick up substances from the presence of animals or from human activity. Contaminants that may be present in source water include: **Microbial contaminants**, such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. **Inorganic Contaminants**, such as salts and metals which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. **Pesticides and Herbicides** may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses. **Organic Chemical contaminants**, including synthetic and volatile organic chemicals, are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Ground water wells are the predominant source of water in the Authority's system. We have wells located throughout town at 7 different sites listed below:

Vischer Ferry Preserve (2), Plank Road, Kinns Road, Boyack Road (2), Berry Farm, Oakwood and Shenendehowa.

The Vischer Ferry Preserve wells are considered ground water under the direct influence of surface water (GWUDI). Additional treatment is performed on this water to ensure removal of certain surface water organisms.

The majority of our water (approximately 70%) is pumped from the Preserve and Boyack wells. This water is treated to remove iron and manganese at the Boyack Road Treatment Plant. Cartridge filters are also used to provide adequate treatment of the GWUDI wells in the Preserve. This source is pumped on a year round basis because of the improved quality. Also pumped year round are: the Berry Farm, Oakwood and Plank Road sources. These sources provide the highest quality water with the lowest hardness available. The remainder of the sources are used during the summer months to meet the higher demand created by outdoor uses. Liquid chlorine is added to the water at all sources for disinfection purposes. Phosphates are added at the Berry Farm and Oakwood locations in an effort to sequester the iron, manganese and hardness in those sources.

In 2017, we purchased a portion of our water from the Saratoga County Water Authority. The water source for the SCWA is the Hudson River. Water treatment consists of addition of a coagulant, sodium permanganate and filtration through 0.1 micron membrane filters. Caustic soda is added for pH adjustment and orthophosphates are added for corrosion control. Sodium hypochlorite is added for disinfection and to maintain a residual through the transmission system. Granular activated carbon filters are used on the finished water to adsorb natural organic compounds, taste and odor compounds and synthetic organic chemicals.

Restricted or Limited Use Sources

Our water supply includes groundwater from 9 wells on 7 different sites. Most of these sources are in use year round. However, due to limitations in the production capabilities, or due to less than favorable water qualities, some sources are limited to backup use or have been removed from service. The backup sources are generally used during periods of high demand or at times when one or more of our everyday sources are out of service for repair or maintenance.

The Clifton Park Water Authority has an interconnection with the Town of Halfmoon water system at The Crossing. The CPWA did not purchase water from the Town of Halfmoon in 2016. The Authority also has an interconnection with the Town of Glenville and the Saratoga County Water Authority. The CPWA purchased a total of 263,415,000 gallons of water from the Saratoga County Water Authority in 2017. It did not purchase any water from the Town of Glenville in 2017.

Source Water Assessment Summary

The NYS Department of Health 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. For ground water sources, the assessment evaluated risk of contamination in two zones: an inner zone, of smaller radius around the well considered more sensitive; and an outer zone, extending either 1 mile from the well, or as limited by a hydrogeologic barrier (such as a change in soil or rock layer or the presence of a water body). The higher of these ratings was used as the overall rating for the source. **The susceptibility rating is an estimate of the potential for contamination of the source water, and does not mean that the water delivered to consumers is, or will be contaminated.** See the spreadsheet that follows for a list of contaminants detected. The source water assessments provide resource managers with additional information for protecting source waters in the future.

Our source of drinking water is derived from ground water (drilled wells) and ground water under the direct influence of surface water sources. The source water assessment has rated most of our ground water sources as having an elevated susceptibility to microbial and nitrate contamination. These ratings are due primarily to the residential land use and associated activities, such as fertilizing lawns, in the assessment area. One well is also rated as having an elevated susceptibility to herbicide/pesticide contamination, primarily due to the agricultural land use near the well. While the source water assessment rates our wells as being susceptible to microbials, please note that our water is disinfected, and the Vischer Ferry wells filtered, to ensure that the finished water delivered to your home meets the New York State's drinking water standards for microbial contamination. Public notification is required if regulated contaminants are found in our water, and increased monitoring may result.

The Saratoga County Water Authority source water assessment states that hydrologic characteristics generally make rivers highly sensitive to existing and new sources of nitrate, phosphorus, and

microbial contamination. This does not mean that source water contamination has or will occur, and the SCWA provides treatment and regular monitoring to ensure that the water delivered to customers meets all applicable standards.

Water suppliers and 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. A copy of this assessment, including a map of the assessment area, can be obtained by contacting this office.

Are There Contaminants in Our Drinking Water?

Drinking water, including bottled water, may reasonably be 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).

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. Clifton Park Water Authority 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 the 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- 426-4729) or at <http://.epa.gov/safewater/lead>.

Information on Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. During 2017, as part of their routine sampling, eleven samples were collected of untreated Hudson River source water and analyzed for Cryptosporidium oocysts. Of these samples, one showed one oocysts and ten showed no oocysts. Also during 2017, the Clifton Park Water Authority collected 9 samples from the Vischer Ferry wells and analyzed for Cryptosporidium oocysts. There were no oocysts found in any of these samples. Testing performed by the SCWA indicates the presence of Cryptosporidium in their (our) source water. The Saratoga County Water Authority utilizes membrane filtration technology which removes these contaminants at higher rates than conventional water treatment technologies. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Information on Giardia

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. During 2017, as part of their routine sampling, eleven samples were collected of untreated Hudson River source water and analyzed for Giardia cysts. Of these samples, six samples showed a total of six cysts and five samples showed no cysts. Also during 2017, the Clifton Park Water Authority collected 9 samples from the Vischer Ferry wells and analyzed for Giardia cysts. There were no cysts found in any of these samples. Testing performed by the SCWA indicates the presence of Giardia in their (our) source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Giardia may cause giardiasis, an intestinal illness. The Saratoga County Water Authority utilizes membrane filtration technology which removes these contaminants at higher rates than conventional water treatment technologies. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where hand washing practices are poor.

Detected and Non-Detected Contaminants

In accordance with State regulations, the Clifton Park Water Authority routinely monitors your drinking water for various contaminants. Your water is tested for inorganic contaminants, nitrate, lead and copper, volatile organic contaminants, synthetic organic contaminants, and disinfection byproducts. Additionally, the CPWA analyzes 40 samples from throughout the distribution system for coliform bacteria each month. Only the contaminants that have been detected in your drinking water are included in the Table of Detected Contaminants. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Therefore, some of the data, though representative of the water quality, is more than one year old.

Do I Need to Take Special Precautions?

Although our drinking water meets 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 HN/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).

Monitoring Violations

The CPWA had a violation in 2017 for failing to submit its monthly operation report on time to the Department of Health in October. Reports are due to the Department of Health by the 10th day of the month following the monitoring period. The CPWA did submit a monthly report in October, but it was not submitted prior to the DOH deadline.

CPWA System Improvements in 2017

In 2017, the CPWA replaced the production well at the Berryfarm with a gravel-packed well in order to deal with issues of fine silt migrating into the well from the surrounding formation.

Also in 2017, the CPWA added tank mixers to the water storage tanks at Blue Spruce, Miller Road and Knolltop to eliminate issues with icing in the winter and to help minimize levels of disinfection byproducts.

Why Save Water and How Do We Avoid Wasting It?

Although the CPWA system has an adequate amount of supply to meet the present demands of the system, 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.
- 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 and saving yourself money in the process 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:

- Use low flow shower heads and faucets
- Repair all leaks in your plumbing system
- Water your lawn sparingly early morning or late evening
- Do only full loads of wash and dishes
- Wash your car with a bucket and hose with a nozzle
- Don't cut the lawn too short; longer grass saves water

Definitions

The following definitions apply to the tables on the following pages for the Clifton Park Water Authority and Saratoga County Water Authority systems:

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 the addition of a disinfectant is necessary for the 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): Measure of radioactivity in water (curie) – pico corresponds to one part of liquid in one trillion parts of liquid.

Distribution System Maximum Residence Time (DSMRT): A location within the water distribution system that represents the point at which water from a particular source has resided in the water system for the longest duration.

Water Treatment Plant (WTP): Any facility at which water is taken directly from the source, treated and pumped into the system.

Clifton Park Water Authority Water System Table of Detected Contaminants

Bacteriological Contaminants							
Contaminant	Sample Date	Violation	MCL, (AL) or (TT)	MCLG	Units	Contaminant Level	Likely Source of Contamination
Total Coliform	5/22/17 6/5/17 11/6/17	No	((3 positive results per month))	0	N/A	1 Positive Sample ¹	Naturally present in the environment.
Inorganic Contaminants							
Shenendehowa Well							
Barium	6/9/15	No	2	2	mg/l	0.048	Erosion of natural deposits
Fluoride	6/9/15	No	2.2	N/A	mg/l	0.136	Erosion of natural deposits; discharge from fertilizer
Nitrate	6/27/17	No	10	10	mg/l	2.68	Erosion of natural deposits
Sulfate	6/27/17	No	250	N/A	mg/l	46.3	Erosion of natural deposits
Chloride	Multiple Dates ²	Yes	250	N/A	mg/l	Avg: 528	Range: 424 - 666 Erosion of natural deposits
Sodium	Multiple Dates ²	No	N/A	N/A	mg/l	Avg: 199	Range: 126-253 Erosion of natural deposits
Berryfarm Well							
Fluoride	6/9/15	No	2.2	N/A	mg/l	0.133	Erosion of natural deposits; discharge from fertilizer
Nitrate	9/6/17	No	10	10	mg/l	0.051	Erosion of natural deposits
Barium	10/5/17	No	2	2	mg/l	0.12	Erosion of natural deposits
Iron	10/5/17	No	300	N/A	ug/l	284	Erosion of natural deposits
Sodium	12/11/17	No	N/A	N/A	mg/l	63.2	Erosion of natural deposits
Zinc	10/5/17	No	5	N/A	mg/l	0.011	Erosion of natural deposits
Sulfate	10/5/17	No	250	N/A	mg/l	39.7	Erosion of natural deposits
Chloride	12/11/17	No	250	N/A	mg/l	113	Erosion of natural deposits
Manganese	10/5/17	No	300	N/A	ug/l	120	Erosion of natural deposits

¹ In May, June and November of 2017, the CPWA detected coliforms in 1 of the 40 routine monthly compliance samples collected. Follow-up samples were collected in both instances and coliforms were not detected. Since total coliforms were detected in less than 5% of the samples collected for the month, the system was not in violation of regulatory limits.

² The CPWA took 3 samples for sodium and chloride from the Shenendehowa well in 2017 (6/27, 8/23 and 11/27). All 3 chloride samples exceeded the maximum contaminant level. Chloride is essential for maintaining good health. Research has not conclusively demonstrated that human exposure to chloride itself causes adverse health effects, although exposure to high levels of certain chloride salts has been associated with adverse health effects in humans. For example, high dietary intake of sodium chloride can be a contributing factor to high blood pressure, but this has been attributed mainly to the presence of sodium. The New York State standard for chloride is 250 mg/l and is based on chloride's effects on the taste and odor of the water. The CPWA has discontinued the use of this well in 2018.

Inorganic Contaminants							
Contaminant	Sample Date	Violation	MCL (or AL)	MCLG	Units	Contaminant Level	Likely Source of Contamination
Plank Road Well							
Barium	6/9/15	No	2	2	mg/l	0.288	Erosion of natural deposits
Fluoride	6/9/15	No	2.2	N/A	mg/l	0.444	Erosion of natural deposits; discharge from fertilizer
Iron	6/27/17	No	300	N/A	ug/l	161	Erosion of natural deposits
Manganese	6/27/17	No	300	N/A	ug/l	16.4	Erosion of natural deposits
Sodium	6/27/17	No	N/A	N/A	mg/l	43.6	Erosion of natural deposits
Chloride	6/27/17	No	250	N/A	mg/l	31.8	Erosion of natural deposits
Vischer Ferry Preserve Wells (Raw Water)							
Total Dissolved Solids	6/8/16	No	N/A	N/A	mg/l	335	Erosion of natural deposits
Turbidity	6/8/16	No	N/A	N/A	NTU	0.13	Oxidation of natural deposits
Alkalinity	6/8/16	No	N/A	N/A	mg/l	205	Erosion of natural deposits
Antimony	6/8/16	No	6	6	ug/l	2	Erosion of natural deposits
Arsenic	6/8/16	No	10	0	ug/l	0.7	Erosion of natural deposits
Copper	6/8/16	No	(1.3)	1.3	mg/l	0.006	Erosion of natural deposits
Manganese	6/8/16	No	50	N/A	ug/l	2960 ³	Erosion of natural deposits
Sodium	6/8/16	No	N/A	N/A	mg/l	20.2	Erosion of natural deposits
Total Hardness	6/8/16	No	N/A	N/A	mg/l	251	Erosion of natural deposits
Selenium	6/8/16	No	50	50	ug/l	4	Erosion of natural deposits
Chloride	6/8/16	No	250	250	mg/l	41.5	Erosion of natural deposits
Sulfate	6/8/16	No	250	250	mg/l	19.9	Erosion of natural deposits
Barium	6/27/17	No	2	2	mg/l	0.024	Erosion of natural deposits
Fluoride	6/27/17	No	2.2	N/A	mg/l	0.174	Erosion of natural deposits
Nitrate	6/27/17	No	10	10	mg/l	0.052	Erosion of natural deposits
Boyack Road Water Treatment Plant							
Barium	6/9/15	No	2	2	mg/l	0.083	Erosion of natural deposits
Fluoride	6/9/15	No	2.2	N/A	mg/l	0.159	Erosion of natural deposits; discharge from fertilizer
Sodium	6/27/17	No	N/A	N/A	mg/l	33.7	Erosion of natural deposits
Chloride	6/27/17	No	250	N/A	mg/l	59.4	Erosion of natural deposits
Calcium	5/30/17	No	N/A	N/A	mg/l	6.04	Erosion of natural deposits
Sulfate	6/27/17	No	250	N/A	mg/l	66.4	Erosion of natural deposits

³ The samples from the Vischer Ferry wells are raw water samples (before filtration), which is why there is not a violation for the high level of manganese in the water. The manganese is removed from the water during the filtration process.

Inorganic Contaminants										
Contaminant	Sample Date	Violation	MCL (or AL)	MCLG	Units	Contaminant Level				Likely Source of Contamination
Kinns Road Well										
Barium	6/9/15	No	2	2	mg/l	0.472				Erosion of natural deposits
Fluoride	6/9/15	No	2.2	N/A	mg/l	0.422				Erosion of natural deposits; discharge from fertilizer
Oakwood Blvd Well										
Barium	6/9/15	No	2	2	mg/l	0.079				Erosion of natural deposits
Fluoride	6/9/15	No	2.2	N/A	mg/l	0.151				Erosion of natural deposits; discharge from fertilizer
Radiological Contaminants										
Contaminant	Sample Date	Violation	MCL (or AL)	MCLG	Units	Contaminant Level				Likely Source of Contamination
Berryfarm Well										
Radium 226 & 228	9/6/17	No	5	0	pCi/L	1.49				Erosion of natural deposits
Oakwood Blvd Well										
Radium 226 & 228	6/27/17	No	5	0	pCi/L	2.48				Erosion of natural deposits
Shenendehowa Well										
Gross Alpha	7/21/09 and 12/7/09	No	15	0	pCi/L	Range: 1.1-2.5		Avg.: 1.8		Erosion of natural deposits
Combined Radium-226 and 228	7/21/09 and 12/7/09	No	5	0	pCi/L	Range: 0.04-0.92		Avg: 0.48		Erosion of natural deposits
Secondary Inorganic Contaminants ⁴										
Contaminant	Sample Date	Violation	MCL (or AL)	MCLG	Units	Contaminant Level				Likely Source of Contamination
						Site 1	Site 2	Site 3	Site 4	
Iron	7/13/2016	No	300	300	ug/l	58.5	ND	ND	ND	Naturally occurring
Sodium	7/13/2016	No	N/A	N/A	mg/l	36.2	35.6	36.2	217 ⁵	Naturally occurring
Zinc	7/13/2016	No	5	5	mg/l	0.0149	ND	ND	ND	Naturally occurring
Chloride	7/13/2016	No	250	250	mg/l	69.1	65.7	65.9	65.3	Naturally occurring
Sulfate	7/13/2016	No	250	250	mg/l	67.1	63.5	63.6	62.7	Naturally occurring
Color	7/13/2016	No	15	15	cpu	ND	5	ND	ND	

⁴ Secondary inorganic sampling was conducted in 2016 at 4 sites in the southern end of the water system, near the Boyack Road Water Treatment Plant, in order to test the performance of the filtration process.

⁵ The sample taken at Site #4 had an elevated level of sodium due to the use of a water softener within the home. This result is not representative of the water supplied by the CPWA.

Lead and Copper								
Contaminant	Sample Date	Violation	MCL (or AL)	MCLG	Units	Contaminant Level		Likely Source of Contamination
Distribution System						Range of Detected Levels	90th Percentile ⁶	
Lead	6/14/17 and 7/13/17	No	(15)	0	ug/l	ND-12.6	1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	6/14/17 and 7/13/17	No	(1.3)	1.3	mg/l	ND-1.03	0.766	Corrosion of galvanized pipes; Erosion of natural deposits
Disinfection Byproducts								
Total Trihalomethanes								
Sample Site #1	See Note 7	No	80	N/A	ug/l	Range: 38.4 - 163 ⁸	Avg: 78.7	By-Products of drinking water chlorination.
Sample Site #2	See Note 7	No	80	N/A	ug/l	Range: 27.4 - 75.1	Avg: 42.1	By-Products of drinking water chlorination.
Sample Site #3	See Note 7	No	80	N/A	ug/l	Range: 20.6 - 31.5	Avg: 32.4	By-Products of drinking water chlorination.
Sample Site #4	See Note 7	No	80	N/A	ug/l	Range: 25.7 - 41.1	Avg: 31.5	By-Products of drinking water chlorination.
Haloacetic Acids								
Sample Site #1	See Note 7	Yes	60	N/A	ug/l	Range: 25.3 - 147	Avg: 63.5 ⁹	By-Products of drinking water chlorination.
Sample Site #2	See Note 7	No	60	N/A	ug/l	Range: 4.2 - 93.1	Avg: 37.6	By-Products of drinking water chlorination.
Sample Site #3	See Note 7	No	60	N/A	ug/l	Range: 9.7 - 21.4	Avg: 18.0	By-Products of drinking water chlorination.
Sample Site #4	See Note 7	No	60	N/A	ug/l	Range: ND - 11	Avg: 8.8	By-Products of drinking water chlorination.

⁶ The CPWA took 30 lead and copper samples in 2017. 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 values detected at your water system. In this case, 30 samples were collected at your water system and the 90th percentile value was the 27th highest value. Due to the CPWA's history of low lead and copper test results, the NYS Department of Health reduced our sample frequency for these contaminants to once every three years. 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 Clifton Park Water Authority 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>.

⁷ Sampling for disinfection byproducts was conducted quarterly by the CPWA on 2/13/17, 5/18/17, 8/14/17 and 11/14/17 at four locations in the water system. Sample sites are as follows: #1 - State Farm Region Office Malta, #2 - Blue Spruce Water Tank, #3 - Knolltop Water Tank, #4 - Grooms Road. 2017 sample results are shown for each location as a range of results as well as the locational running annual average (LRAA). The CPWA had a violation of the MCL for Haloacetic Acids in November 2017, as a high result at that time brought the CPWA's locational running annual average at that site over the MCL. This was due to brief issues with the water purchased from the Saratoga County Water Authority and subsequent testing showed levels to be well below the acceptable thresholds. Changes have since been made by the SCWA to ensure that levels remain within an acceptable range going forward. Haloacetic acids do not pose an acute health risk, but some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of cancer.

⁸ Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

⁹ Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Saratoga County Water Authority Water Supply Table of Detected Contaminants

Contaminant	Date of Sample	Violation (Yes/No)	MCL, (AL) or ((TT))	MCLG	Units	Contaminant Level Detected	Likely Source of Contamination
Turbidity							
Entry Point	7/21/2017	No	((1.0))	N/A	NTU	0.092	Soil Runoff
Transmission System	7/5/2017	No	((5.0))	N/A	NTU	0.28	Soil Runoff
Total Organic Carbon (TOC)	2017	No	TT	N/A	mg/l	4.3 (Avg. Raw) / 1.65 (Avg. Treated)	Naturally present in the environment
Inorganic Contaminants							
Nitrate	2/28/2017	No	10	10	mg/l	0.16	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Manganese	3/28/2017	No	300	N/A	ug/l	3.0	Naturally present in the environment
Sodium	3/28/2017	No	270	N/A	mg/l	9.07 ¹	Naturally present in the environment. Road salt contamination
Chloride	3/28/2017	No	250	N/A	mg/l	10.8	Naturally present in the environment. Road salt contamination
Barium	3/28/2017	No	2	2	ug/l	0.005	Naturally present in the environment

¹ Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets; 270 mg/l for people on moderately restricted sodium diets.

The following chart contains the results of testing for a series of unregulated contaminants. Unregulated contaminants are those that do not yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. The following chart shows the ranges of the contaminants found in the samples taken throughout the test period (September 2013 - June 2014). A list of all contaminants tested for during this period can be found separately in this report.

	Contaminants							
	Chromium	Molybdenum	Strontium	Chlorate	Hexavalent Chromium	Chlorodifluoromethane	Bromomethane	Chloromethane
Units	ng/l	ug/l	ug/l	ug/l	ng/l	ng/l	ng/l	ng/l
MCL and MCLG	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Location								
Berryfarm Entry Point	ND	ND	400-420	34-170	ND	ND	ND	ND
Moe Road Entry Point	ND	ND	2500-2600	ND-150	ND	ND	ND	ND
Oakwood Entry Point	ND	ND	460	24-120	ND	ND	ND	ND
Boyack WTP Entry Point	ND	ND-1.7	340	26-140	33-45	150-210	ND	ND
Plank Road Entry Point	ND	8.2-9.3	320-360	ND-120	ND	ND	ND	ND
Kinns Road Entry Point	ND	4.7-5.1	600-700	24-230	ND	ND	ND-363	260-741
Shenendehowa Entry Point	360-440	ND	270-280	22-83	350-440	ND	ND	ND
SCWA Magnolia Way Entry Point	ND	ND	27-40	52-220	ND-42	ND	ND	ND
DSMRT for Boyack WTP	ND	ND	340-370	85-200	31-39			
DSMRT for SCWA Magnolia Way	ND	ND	30-160	61-360	ND-66			
Miller Road Water Tank	ND	ND	350	71-180	46-49			
Knolltop Water Tank	ND	1.0-6.0	100-360	31-290	42-53			

Entry Point samples are taken at the point where water from a particular source enters the water system. DSMRT - Distribution System Maximum Residence Time is the point in the system where water from a particular source has been in the system for the longest period of time.

Samples were taken from all locations in September 2013 and March 2014. Samples were taken from the DSMRT locations and the two water tanks only in December 2013 and June 2014.

Likely sources of contamination for these unregulated contaminants can be found on the following page.

	Likely Source of Contamination
Chromium	Naturally occurring
Molybdenum	Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent
Strontium	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
Chlorate	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide
Hexavalent Chromium	Naturally-occurring element; used in steel making and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning and wood preservation
Chlorodifluoromethane	Chlorofluorocarbon; occurs as a gas, and used as a refrigerant, as a low-temperature solvent, and in fluorocarbon resins, especially tetrafluoroethylene polymers
Bromomethane	Halogenated alkane; occurs as a gas, and used as a fumigant on soil before planting, on crops after harvest, on vehicles and buildings, and for other specialized purposes
Chloromethane	Halogenated alkane; used as foaming agent, in production of other substances, and by-product that can form when chloring is used to disinfect drinking water

2017 PUMPAGE AND FINANCIAL STATISTICS

TOTAL GALLONS PUMPED	1,167,926,000
QUANTIFIABLE LOSSES:	
Flushing Program	25,000,000
Flushing New Mains, Etc	2,000,000
TOTAL GALLONS BILLED	<u>1,033,082,300</u>
TOTAL GALLONS ACCOUNTED FOR	1,154,027,400
LOST AND UNACCOUNTED FOR WATER	9.2%
AVERAGE DAILY PUMPAGE FOR 2017	3.12 MGD
PEAK DAILY PUMPAGE - 6/12/17	5.08 MG

FINANCIAL SUMMARY

2017 WATER SALES	\$4,150,711
BASIC SERVICE CHARGE	\$1,021,790
ALL OTHER SOURCES	\$ 776,814
TOTAL REVENUES	<u>\$5,949,315</u>

EXPENDITURES

TOTAL OPERATING EXPENSES	\$3,193,722
DEBT SERVICE	\$1,997,314
RESERVE FOR CAPITAL PROJECTS	\$ 758,279
TOTAL EXPENDITURES	<u>\$5,949,315</u>

Average Annual Residential Charge For Water Service

The average residential customer on the Clifton Park Water Authority system used 75,000 gallons per year in 2017 at a cost of \$365.25.