Annual Drinking Water Quality Report for 2021
Queensbury Water Department
823 Corinth Rd
Queensbury, NY 12804
(Public Water Supply ID# 5600114)

INTRODUCTION

To comply with State and Federal regulations, the Queensbury Water Department 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. 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 **Alexander Benway, Engineer, telephone number 793-8866 Ext. 2026.** 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 on the first and third Mondays of each month (exceptions, because of Holidays will be January, February, and September of 2022) at 7:00 PM at the Queensbury Activity Center on Bay Rd. (next to the Town Hall)

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 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 that limit the amount of certain contaminants in water provided by public water systems. The State Health Department and the FDA's regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.
The Queensbury Water District source is the Hudson River, a surface water supply that is located at the Sherman Island Dam. During 2021, our system did not experience any restriction of our water source.

SOURCE WATER ASSESSMENT

The NYS Department of Health has evaluated the Hudson River's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this water supply. The Queensbury Water District provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

Based on documented polychlorinated biphenyl (PCB) contamination of sediments upstream of the intake, the Queensbury Water District is tested throughout the year for PCBs. The finished water is tested annually, and the raw water is tested quarterly. During 2021, PCBs were not detected in source or finished drinking water. It should also be noted that rivers in general are highly sensitive to microbial contaminants.

HOW IS OUR WATER TREATED

Water is pumped from the river into a complete treatment facility consisting of the following: chemical pre-treatment, flocculation, coagulation, sedimentation, pre-chlorination, filtration, post-chlorination, and corrosion control. The treatment plant is manned 24 hours a day, 365 days per year under the supervision of a IA operator.

I. Typical or average raw and treated water information:

	Raw Water	**Finished Water (Filtered-Entry Point)**
pH	6.3-7.0	8.12 (7.6-8.4)
Alkalinity	7.3-18.7 mg/L	25.9 mg/L (15.3-41.3 mg/L)
Hardness		18.4 mg/L (12.0-24.0 mg/L)
Turbidity	0.74 NTU (0.41-2.23 NTU)	0.08 NTU (0.05-0.12 NTU) 0.06-0.94 NTU in distribution system The average was 0.15 NTU. The MCL is 5 NTU/month.
Color	32.0 units (19-97 units)	0.83 unit (0-3 units)
Chlorine, Free	0 mg/L	0.91 mg/L (0.67 – 1.2 mg/L) 0.01 – 0.78 mg/L in the distribution system. The average was 0.38 mg/L in the distribution system. The MRDL and MRDLG is 4.0 mg/l

II. Chemicals used in the treatment process:

Chemical	Typical Feed Rate	Maximum Feed Rate
Aluminum Sulfate	32.9 mg/L	122 mg/L
Sodium Hypochlorite	1.1 mg/L	2.4 mg/L
Sodium Carbonate	22.7 mg/L	42.9 mg/L

Definitions of terminology and abbreviations are found on page 4.

FACTS AND FIGURES

There are approximately 9,100 connections served by the water treatment plant. The Queensbury Consolidated Water District serves a population of approximately 21,200. The system also serves the Kingsbury Water District, Hudson Falls, Moreau, and the Warren-Washington Industrial Park.

The total amount of water produced in the previous four billing cycles was 1,723,120,903 gallons. The daily average of water treated and pumped into the distribution system is 4,770,000 gallons per day. Our highest single day was 10,047,000 gallons. The amount of accounted water is 1,665,141,000 gallons. This leaves an unaccounted total of 57,979,000 gallons, or 3.36%. This unaccounted water use was due to fighting fires, leakage, recreation, street sweeping and illegal use. Accounting for these factors, our leakage rate is at about 2.86% - an extraordinarily low number and a sign of a well-maintained distribution system along with an aggressive capital plan.

In 2021, water customers were billed quarterly at the rate of $32.50 for the first 8,000 gal then $2.25 per 1,000 gallons up to 3,250,000 gallons. The rate then drops to $0.85 per 1,000 gal for bulk customers above 3,250,000 gallons. An Ad Valorem tax is collected through the town's property tax bill and is directed toward capital improvements and bond payments. The rate for 2021 was $0.29/$1,000. On average, the total bill including taxes and water consumption, for a house assessed at $225,000, using 80,000 gallons per year, was approximately $300. For comparison, the cost in 1993, with the same figures, was approximately $315.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. The list of tested contaminants we test for can be found in NYS DOH Part 5, Subpart 5-1. Appendix A of this document lists the contaminants that were tested for and undetected. Appendix B of this document lists the contaminants that were detected and the levels they were measured at.

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, is more than one year old.

The Queensbury Water Department reports that in 2021 there was one sampling violation regarding the lead and copper testing for the year. Results can be found below.

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 (New York State Department of Health – Glens Falls District Office) at (518) 793-3893.

FURTHER INFORMATION ON CONTAMINANTS

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. Through September 2018, as part of our routine sampling, monthly samples were collected of untreated Hudson River source water and analyzed for Cryptosporidium oocysts. Of these samples, three showed oocysts with the average being 0.3. Therefore, our testing indicates the presence of Cryptosporidium in 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 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.

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. Through September 2018, as part of our routine sampling, monthly samples were collected of untreated Hudson River source water and analyzed for Giardia cysts. Of these samples, five showed cysts with the average being 5.6. Therefore, our testing indicates the presence of Giardia in 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. 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.

Lead

If present in your household, 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 Queensbury Water Department 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 two 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.

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. MRDLG's 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 that a water system must follow.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
- Locational Running Annual Average (LRAA): Running annual average for a specific sample point.
- Non Detects (ND): Laboratory analysis indicates that the constituent is not present.
- Non-Applicable: (NA)
- 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): one part per million corresponds to one minute in two years or a single penny in $10,000.
- Micrograms per liter (µg/l): one part per billion corresponds to one minute in 2,000 years or a single penny in $10,000,000.
- Picocuries per liter (pCi/L): A measure of the radioactivity in water.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the tables in the appendices, our system had one MCL violation. Details can be found in the Appendix B. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the state. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

SUMMARY OF DISTRIBUTION SYSTEM SAMPLING POINTS

Distribution system samples are collected daily for turbidity, chlorine residual, pH, and bacteriological analysis. Typically, eighteen sample locations are regularly monitored throughout the distribution system.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2021, our system complied with all applicable State drinking water requirements. All testing was performed and reported in the required time.

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).

WHY TO 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.
- 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 up to 10 gallons for every cycle, regardless of how many dishes are loaded.
- 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 2021:

Pipe on Ridge Road was rehabilitated between Quaker Road and Cronin Road. This was a problem area for water main breaks that will now be alleviated.

A 300HP high lift motor was purchased to replace an aging motor used for our plant effluent.

A backup 125HP low lift motor was purchased to have in stock if a plant influent pump were to fail.

The 5000gal below-ground diesel storage tank was being replaced due to an aging tank that cannot meet DEC regulations.

In 2022:

Further security enhancements to the water filtration plant property will be considered and planned.

Engineering will be completed to replace the water main on Glenwood Avenue and parts of Haviland Avenue. It is anticipated that American Rescue Plan Act (ARPA) funding will be used for these improvements.

It should be noted that the Queensbury Water District fully funds all of its capital improvement projects without state financing or grants. For additional information about the Queensbury Water Department please visit the Town of Queensbury web site at: www.queensbury.net, from the menu select "Departments" then choose "Water".

Appendix A – Undetected Contaminants

New York State Sanitary Code Compliance Monitoring Requirements

Regulated Contaminants

Table 6 - Microbiologicals	
Contaminant	Monitoring Frequency
E. coli	Monthly
Coliforms	**NON-DETECT**

Table 7 – Radiological Contaminants	
Radium 226 Radium 228	One sample every 9 years **NON-DETECT** (4/6/17)
Gross Alpha	One sample every 6 years **NON-DETECT** (3/2/16)

Table 8B – Primary Inorganic Chemicals	
Antimony	One Sample Annually (2/03/2021) **NON-DETECT**
Arsenic	
Beryllium	
Cadmium	
Chromium	
Cyanide	
Mercury	
Nickel	
Selenium	
Thallium	
Fluoride	

Table 8D – Secondary Inorganic Chemicals	
Silver	One Sample Yearly **NON-DECTECT** (2/6/19)
Iron	
Odor	Monthly
Taste	**NON-DETECT**

Table 9C - PFAS/1,4-Dioxane	
PFOA	Quarterly **NON-DETECT**
PFOS	
1,4-Dioxane	

Table 9C – Polychlorinated Biphenyls (PCBs)	
Raw Water PCB	Quarterly **NON-DETECT**
Finished Water PCB	11/3/2021 **NON-DETECT**

Table 9B/D – Primary Organic Chemicals		
Contaminant	Contaminant	Monitoring Frequency
Benzene	cis-1,3-Dichloropropene	One Sample Annually (12/1/21) **NON-DETECT**
Bromobenzene	trans-1,3-Dichloropropene	
Bromochloromethane	Ethylbenzene	
Bromomethane	Hexachlorobutadiene	
N-Butylbenzene	Isopropylbenzene	
sec-Butylbenzene	p-Isopropyltoluene	
tert-Butylbenzene	Methylene Chloride	
Carbon Tetrachloride	n-Propylbenzene	
Chlorobenzene	Styrene	
2-Chlorotoluene	1,1,1,2-Tetrachloroethane	
4-Chlorotoluene	1,1,2,2-Tetrachloroethane	
Dibromomethane	Tetrachloroethene	
1,2-Dichlorobenzene	Toluene	
1,3-Dichlorobenzene	1,2,3-Trichlorobenzene	
1,3-Dichlorobenzene	1,4-Dichlorobenzene	
1,4-Dichlorobenzene	Dichlorodifluoromethane	
Dichlorodifluoromethane	1,1-Dichloroethane	
1,2-Dichloroethane	Trichloroethene	
1,1-Dichloroethene	Trichlorofluoromethane	
cis-1,2-Dichloroethene	1,2,3-Trichloropropane	
trans-1,2-Dichloroethene	1,2,4-Trimethylbenzene	
1,2-Dichloropropane	1,3,5-Trimethylbenzene	
1,3-Dichloropropane	m-Xylene	
2,2-Dichloropropane	o-Xylene	
1,1-Dichloropropene	p-Xylene	
Chloromethane	MTBE	
	Vinyl Chloride	

Table 9C – Synthetic Organic Chemicals		
Group 1	**Group 2**	One Sample Annually (6/02/21) **NON-DETECT**
Alachor	Aldrin	
Aldicarb	Benzo(a)pyrene	
Aldicarb sulfoxide	Butachlor	
Aldicarb sulfone	Carbaryl	
Atrazine	Dalapon	
Carbofuran	Di(2-ethylhexyl)adipate	
Chlorodane	Di(2-ethylhexyl)phthalate	
Dibromochloropropane	Dicamba	
2,4-D	Dieldrin	
Endrin	Dinoseb	
Ethylene Dibromide	Diquat	
Heptachlor	Endothall	
Heptachlor epoxide	Glyphosate	
Lindane	Hexachlorobenzene	
Methoxyclor	Hexachlorocyclopentadiene	
Polychlorinated Biphenyls (PCBs)	3-Hydroxycarbofuran	
Pentachlorophenol	Methomyl	
Toxaphene	Metolachlor	
2,4,5-TP (Silvex)	Metribuzin	
2,3,7,8-TCDD (Dioxin)	Oxamyl (vydate)	
	Pichloram	
	Propachlor	
	Simazine	

Unregulated Contaminants

UCMR3	Monitoring Frequency		UCMR4	Monitoring Frequency
1,2,3-trichloropropane	Quarterly 2015 **NON-DETECT**		Germanium	Microsystins: Bi-weekly during the summer All others: Quarterly 2019 **NON-DETECT**
1,3-butadiene			a-Hexachlorocyclohexane	
Chloromethane			Chlorpyrifos	
1,1-dichloroethane			Dimethipin	
Bromomethane			Ethopop	
HCFC-22			Oxyfluorfen	
Halon 1011			Profenofos	
1,4-dioxane			Tebuconazole	
Molybdenum			Total Permethrin (cis-,trans-)	
Cobalt			Tribufos	
Chromium			1-Butanol	
Chlorate			2-Methoxyethanol	
PFOS			2-Propen-1-ol	
PFOA			Butylated Hydroxyanisole	
PFNA			o-Toluidine	
PFHxS			Quinoline	
PFHpA			Total Microsystins	
PFBS			Microsystin –LA	
17b-estradiol			Microsystin – LF	
17a-ethynylestradiol			Microsystin – LR	
Estriol			Mircrosystin – LY	
Equilin			Microsystin – RR	
Estrone			Microsystin – YR	
Testosterone			Nodularin	
4-androstene-3,17-dione			Anatoxin-a	
Enteroviruses			Cylindrospermopsin	
Noroviruses			Bromide	
Total Coliforms				
E. coli				
Enterococci				
Aerobic spores				
Somatic phage				
Male specific phage				

Appendix B – Detected Contaminants

New York State Sanitary Code Compliance Monitoring Requirements

Regulated Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
Table 4A - Combined Filter Effluent Turbidity *(5 filters)*							
Turbidity [1]	No	9/24/21	0.12	NTU	N/A	TT=<1 NTU	Soil Runoff
Turbidity [1]	No	September	100%	%	100%	TT=95% of samples <0.3 NTU	Soil Runoff
Inorganic Contaminants							
Copper	No	8/18/20	20.0 [3] 7.0-27.0	µg/l	1300 µg/l	AL – 1300 µg/l	Corrosion of household plumbing systems: Erosion of natural deposits
Lead	No	8/18/20	2.8 [4] ND – 9.3	µg/l	0	AL-15 µg/l	Corrosion of household plumbing systems; Erosion of natural deposits
Table 8B – Primary Inorganic Chemicals							
Barium	No	2/3/21	0.006	mg/l	2.0 mg/l	2.0 mg/l	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Table 8D – Secondary Inorganic Chemicals							
Sodium [2]	No	2/3/21	19.5[2]	mg/l	N/A	N/A	Naturally occurring, road salt, animal waste, sodium carbonate
Chloride	No	2/6/19	9.4	mg/l	N/A	250 mg/l	Erosion of natural deposits, water disinfection by-product
Manganese	No	2/6/19	0.005	mg/l	N/A	0.3 mg/l	Erosion of natural deposits
Sulfate	No	2/6/19	19.2	mg/l	N/A	250 mg/l	Erosion of natural deposits, Runoff from fertilizer
Zinc	No	2/6/19	0.002	mg/l	N/A	5.0 mg/l	Erosion of natural deposits
Table 8C - Nitrates							
Nitrate	No	2/3/21	0.13	mg/l	10 mg/l	10.0 mg/l as Nitrogen	Erosion of natural deposits, Runoff from fertilizer
Table 9A – Disinfection Byproducts							
Total Trihalomethanes	No	Quarterly Samples 2/3/21, 5/5/21, 8/4/21, 11/3/21	48.6 – Highest running location annual average[6] 23.8 – 58.4 – Annual range	µg/l	N/A	80 µg/l	By-products of drinking water chlorination. THM's are formed when source water contains large amounts of organic matter.
Total Haloacetic Acids	No	Quarterly Samples 2/3/21, 5/5/21 8/4/21, 11/3/21	20.1 – Highest running location annual average[6] 11.7-23.0 – Annual range	µg/l	N/A	60 µg/l	By-products of drinking water chlorination. HAA5's are formed when source water contains large amounts of organic matter.

Total Organic Carbon	No	Monthly	Annual Range [5] 1.5-2.1 Average – 1.78	mg/l	N/A	TT	Naturally present in the environment
Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) [7]							
Giardia	No	Jan – Sept 2018	Range 0-21 Average 5.6	Total Count	N/A	N/A	Soil Runoff
Cryptosporidium	No	Jan – Sept 2018	0-1 Average 0.3	Total Count	N/A	N/A	Soil Runoff

Unregulated Contaminants

Strontium[8]	Quarterly Samples 2/13/15, 4/13/15, 7/16/15, 10/15/15	22 – 28 Annual Range	ug/l	N/A	N/A	Erosion of Natural Deposits
Chlorate[8]	Quarterly Samples 2/13/15, 4/13/15, 7/16/15, 10/15/15	44-160 Annual Range	ug/l	N/A	N/A	Agriculture Runoff
Vanadium[8]	Quarterly Samples 2/13/15, 4/13/15, 7/16/15, 10/15/15	0.2-0.5 Annual Range	ug/l	N/A	N/A	Erosion of Natural Deposits
Chromium (hexavalent)[8]	Quarterly Samples 2/13/15, 4/13/15, 7/16/15, 10/15/15	ND-0.03 Annual Range	ug/l	N/A	N/A	Erosion of Natural Deposits
Manganese (as per UCMR4)[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	4.3-6.8 Annual Range	ug/l	N/A	N/A	Erosion of Natural Deposits
Total Organic Carbon, Raw Water (as per UCMR4)[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	3.8-4.63 Annual Range	mg/l	N/A	N/A	Erosion of Natural Deposits

LRAA 1

HAA5[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	17.7-20.6 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct
HAA6Br[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	0.5-0.8 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct
HAA9[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	18.3-21.1 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct

LRAA 2

HAA5[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	16.2-20.0 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct
HAA6Br[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	<0.3-0.6 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct
HAA9[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	16.2-20.5 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct

LRAA 3

HAA5[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	13.9-16.9 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct
HAA6Br[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/19/19	<0.3-1.0 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct
HAA9[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19, 12/9/19	13.9-16.9 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct

LRAA 4

HAA5[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19,	15.5-19.4 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct
HAA6Br[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19,	0.4-1.0 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct
HAA9[9]	Quarterly Samples 3/13/19, 6/25/19, 9/12/19,	16.1-19.8 Annual Range	ug/l	N/A	N/A	Disinfection Byproduct

1 - Turbidity is a measure of the cloudiness of the water. We measure it because it is a good indicator of the effectiveness of our filtration system. Our highest combined filter effluent turbidity measurement for the year occurred on 9/24/2021 (0.12 NTU). State regulations require that combined filter effluent point turbidity must always be below 1.0 NTU. The regulations also require that 95% of the combined filter effluent point turbidity samples collected have measurements below 0.3 NTU. All levels recorded were well below the acceptable range allowed and did not constitute a treatment violation.

2 - Water containing more than 20 mg/l sodium should not be used for drinking by people on severely restricted diets. This represents 4.73 mg of sodium in one 8 fluid oz. glass of water.

3 – The level presented represents the 90th percentile of the 32 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, 32 samples were collected at your water system and the 90th percentile value was 20.0 µg/l. The action level for copper was not exceeded at any of the sites tested with the highest level being 27.0 µg/l.

4 – The level presented represents the 90th percentile of the 32 samples collected. The 90th percentile is equal to or greater than 90% of the lead values detected at your water system. In this case, 32 samples were collected at your water system and the 90th percentile value was 4.2 µg/L. Of the 32 samples taken 24 results were ***NON-DETECT.*** The highest level being 190 µg/l. ND (***NON-DETECT***) is any sample less than 1.0 µg/L. **The sample that contained 190 µg/l was tested from a location that was not used often at the residence. Retesting the residence at a more commonly used location resulted in 2.8 µg/l**.

5 - Total Organic Carbon is not regulated, but its calculated removal and compliance ratio must equal or exceed performance requirements established by the US-EPA. All levels recorded were well below the acceptable range allowed and did not constitute a treatment technique violation.

6 – Stage 2 of the Disinfection Byproduct Rule calculates the highest average at a single location-Locational Running Annual Average (LRAA).

7- The Long Term 2 Enhanced Surface Water Treatment Rule was implemented by the US-EPA to monitor drinking water sources. Specifically, Giardia and Cryptosporidium which are highly resistant to traditional water treatment practices. Our system is required to test monthly for two years, starting October 2016. Please note that these results are prior to any water treatment. For more information, please review the US-EPA website.

8- In 2015, we were required to collect and analyze drinking water samples under the Unregulated Contaminant Monitoring Regulation 3 (UCMR3). The contaminants currently do not have a maximum contaminant level but are being tested for future regulations. More information can be found the EPA website under UCMR3.

9 - In 2019, we tested according to Unregulated Contaminant Monitoring Rule 4 (UCMR4). Similar to UCMR3, the contaminants currently do not have a maximum contaminant level.