

City of Troy
Annual Drinking Water Quality Report for 2022

Public Water Supply ID# 4100050



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Introduction

To comply with State and Federal regulations, 10 NYCRR, Subpart 5-1.72 and 40CFR Part 141, Subpart O, respectively, the City of Troy, Department of Public Utilities is issuing this annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and increase your awareness of the need to protect our drinking water sources. Last year, we conducted tests for over 50 contaminants. We detected 10 of those contaminants, and only found 1 of those contaminants at a level higher than the State allows. As we told you at that time, our water temporarily exceeded a drinking water standard, and we rectified the problem by working with state and federal regulators to follow the lead and copper rule and developed a plan to replace lead service lines. This report provides an overview of last year's water quality. Included in the report 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 the City of Troy, Department of Public Utilities at 518-237-0319. If you want to learn more, please attend any of the regularly scheduled City Council meetings. The meetings are held the first Thursday of each month at the Troy City Hall, 433 River Street, 5th Floor.

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 Health Department and the EPA prescribe regulations, which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The water source for the City of Troy is the Tomhannock Reservoir, a man-made reservoir 6 ½ miles northeast of the city. The reservoir is 5 ½ miles long and holds 12.3 billion gallons when full. The quality of the water from the Tomhannock Reservoir is good to excellent. During 2022, the city did not experience any restriction of our water source. Water flows from the reservoir by gravity where seasonally potassium permanganate is added at the intake and at the Melrose Chlorination Station the water is predisinfected with chlorine dioxide all year long. The water then flows to the John P. Buckley Water Treatment Plant (WTP) a conventional water treatment plant utilizing coagulation, flocculation, sedimentation, filtration, chlorination and fluoridation processes.

The New York State Health Department completed a Source Water Assessment for the Tomhannock Reservoir. It includes a susceptibility rating based on the risk posed by each potential source of contamination and how likely contaminants could enter the reservoir and is only an estimate of the potential for contamination. It does not mean that the water delivered to your home is or will become unsafe to drink. The assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural land in the assessment area results in an elevated potential for protozoa and pesticides contamination, however, there is reason to believe that the land cover data may over estimate the percentage of row crops in the assessment area. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality, based on their density in the assessment area. In addition, it appears that the total amount of wastewater discharged to surface water in this assessment area is not high enough to further raise the potential for contamination (particularly for protozoa). There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include mines and closed landfills. Finally, it

should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

Facts and Figures

The City of Troy, Department of Public Utilities serves water to over 50,000 residents of Troy, as well as the industrial and commercial customers within the city, through over 13,000 service connections. In addition, the city wholesales water to the City of Rensselaer, Towns of East Greenbush, North Greenbush, Brunswick, Schaghticoke, Poestenkill, and Halfmoon, and Villages of Menands and Waterford. The total finished water produced at the water treatment plant in 2022 was 6,322.3 million gallons or an average of 17.27 million gallons a day. Of this, 1,273.59 million gallons were accounted for through metered sales within the city, with the remainder being used for the wholesale customers and the unaccounted for water. The unaccounted-for water is estimated to be about 30%. In 2022, water customers within the city of Troy were charged \$ 3.632 per 1,000 gallons of water.

Are There Contaminants In Our Drinking Water?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Rensselaer County Department of Health 518-270-2711

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 City of Troy is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. In 2022 there was an exceedance to the lead and copper rule. The City of Troy has implemented a plan to minimize lead levels in your drinking water. This program includes: 1) a study of the corrosion control program currently implemented, 2) Conducting a water service line survey/inventory to better sample lead service line; 3) public education and 4) implementing a lead service line replacement program. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 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>.

What Does This Information Mean?

The table shows that our system uncovered some problems this year due to an exceedance of the 90th percentile for lead. It should be noted that the action level for lead was exceeded, meaning the city has detected lead levels above the action level in more than ten percent of the homes tested. We are required to present the following information on lead in drinking water:

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 City of Troy is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact the Department of Public Utilities at 518-237-0343 or www.troyny.gov/lead. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

Is Our Water System Meeting Other Rules That Govern Operations?

The City of Troy is in violation of State lead and copper control requirements for an exceedance of the 90th percentile and is required to 1) study the corrosion control program currently implemented, 2) Conduct water service line survey/inventory to better sample lead service lines; 3) complete a public education program. Therefore, we must include the following statement in this report: "Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning disabilities. Adults who drink this water over many years could develop kidney problems or high blood pressure."

Do I Need to Take Special Precautions?

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

Information on Fluoride Addition

In 2022 there was an interruption to fluoride addition. Since June of 2021, supplemental fluoride has not been added to your drinking water. Fluoride addition has recently been restored in 2023. The cause of the interruption was due to supply chain issues.

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 sources, pumping systems and water storage tanks; 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.
- 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

The Department of Public Utilities completed the replacement of a first phase of water transmission mains that bring water to the treatment plant, in 2022 over 33,000 feet of 36 inch ductile iron pipe were installed. We also received phone and communication upgrades at the treatment plant as well as several security upgrades at all of our sites.

Combined Sewer Overflows (CSO's)

The City of Troy in cooperation with the City of Albany Water Board, the cities of Cohoes, Rensselaer, Watervliet and the Village of Green Island joined in a venture to develop a CSO Long Term Control Plan (LTCP), with the Capital District Regional Planning Commission coordinating the project. This is being done as mandated by the NYSDEC and USEPA to comply with the National CSO Control Policy. The communities mentioned conducted the monitoring, sampling and analysis in the summer of 2008 to identify the issues associated with CSO's during wet weather events. The results are being used to determine CSO impacts to the receiving water bodies, i.e. Hudson River, and to develop the required LTCP. NYSDEC implemented a final plan for the communities to reduce the amount of CSO's. For more information please visit www.cdrpc.org/CSO.html

Municipal Separate Storm Sewer Systems (MS4)

The City of Troy in cooperation with other Rensselaer County communities, the NYSDEC and the EPA have been working with the county and local governments to help control storm water run-off and try to educate and inform the public about stormwater. Stormwater should naturally seep into the ground, but impervious areas restrict this process causing flooding and pollution. For questions and brochures please visit: www.troyny.gov/departments/public-utilities/stormwater-management/, www.epa.gov/npdes/stormwater

Closing

Thank you for allowing us to provide your family with quality drinking water in 2022. We will continue to strive to improve and deliver you safe drinking water for years to come. We ask that all our customers help us protect our local water sources, which are the heart of our community and our way of life. The Rensselaer Land Trust is interested in helping us protect the Tomhannock Watershed. For more information visit their website at www.renstrust.org or write to RTLC, 415 River St., Troy, NY 12180.

Definitions:

* Lead and Copper are reported at 90th percentile, where 90% of samples collected are less than the average value. Four of the thirty lead samples collected were above the Action Level (AL) of 0.015 mg/l.

** 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.

*** A violation occurs when a total coliform positive sample is positive for E. coli or when a total coliform positive sample is negative for E. coli but a repeat total coliform sample is positive and the sample is also positive for 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 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 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 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 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.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

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

Picocuries per liter (pCi/l): Corresponds to 0.037 disintegrations per second per liter. The average activity within the human body from Potassium-40 is 0.1 micro curies.

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Date or Frequency of Sample	Level Detected			Unit Measurement	MC LG MRD LG	Regulatory Limit (MCL, TT, MRDL, AL)	Likely Source of Contamination
			Value or Average	Range	Low				
Physical and Chemical Analytes									
pH	No	Daily	8.48	6.36	9.09	-	-	NDL	Adjusted at WTP
Temperature	No	Daily	12.9	3.1	24.5	°C	n/a	NDL	-
Color	No	Daily	2	1	4	color units	n/a	15	Naturally occurring
Turbidity	No	Daily	0.53	0.06	2.00	NTU	n/a	5	Soil runoff
Chlorine	No	Daily	0.79	0.38	1.05	mg/L	4	4.0	Added disinfectant
Chlorine Dioxide	No	Daily	0.015	0.00	0.20	mg/L	0.8	0.8	Added disinfectant
Fluoride	No	Daily	0.77	0.27	0.90	mg/L	n/a	2.2	Adjusted at WTP
Alkalinity, as CaCO ₃	No	Daily	42.7	20.0	51.2	mg/L	n/a	NDL	Naturally occurring
Hardness, as CaCO ₃	No	Weekly	60.7	52.0	72.0	mg/L	n/a	NDL	Naturally occurring
Disinfection By-Products									
Trihalomethanes (THM)									
Campbell Ave FS	No	Quarterly	60.5	31.5	83.3	ug/L	n/a	80	THM & HAA formed by reaction of Chlorine with naturally occurring organic material. Chlorite & Chlorate formed by the reaction of Chlorine Dioxide with naturally occurring organic material
Griswold Heights	No	Quarterly	68.3	48.1	86.1	ug/L	n/a	80	
Cookie Factory	No	Quarterly	64.8	51.2	82.0	ug/L	n/a	80	
Deli & Brew	No	Quarterly	63.5	42.7	82.8	ug/L	n/a	80	
Haloacetic acids (HAA)									
Campbell Ave FS	No	Quarterly	35.7	23.2	53.6	ug/L	n/a	60	THM & HAA formed by reaction of Chlorine with naturally occurring organic material. Chlorite & Chlorate formed by the reaction of Chlorine Dioxide with naturally occurring organic material
Griswold Heights	No	Quarterly	29.4	19.8	34.9	ug/L	n/a	60	
Cookie Factory	No	Quarterly	32.6	19.5	42.4	ug/L	n/a	60	
Deli & Brew	No	Quarterly	26.0	16.9	33.7	ug/L	n/a	60	
Chlorite	No	Monthly	0.78	0.61	1.08	mg/L	n/a	1.00	
Chlorate	No	Monthly	0.21	0.14	0.27	mg/L	n/a	n/a	
Lead and Copper									
Lead * (Jan-June 22)	Yes	Bi-annually	16.2	<1.0	37.9	PPB	0.00	(AL) 15.0	Household plumbing corrosion, erosion of natural deposits.
Copper*(Jan -June 22)	No	Bi-annually	72.9	2.7	368	PPB	1300	(AL)1300	
Lead*(July – Dec 22)	Yes	Bi-annually	28.3	<1.0	82.6	PPB	0.0	(AL) 15.0	
Copper* (July – Dec 22)	No	Bi-annually	50.0	2.7	245	PPB	1300	(AL)1300	
Inorganic Chemicals									
Barium	No	7/6/2022	0.027	-	-	mg/L	2.0	2.0	Naturally occurring
Chloride	No	7/6/2022	21.2	-	-	mg/L	n/a	n/a	Naturally occurring or road salt
Iron	No	Weekly	0.02	0.05	0.01	mg/L	n/a	0.3	Naturally occurring
Manganese	No	Weekly	0.03	0.01	0.12	mg/L	n/a	0.3	Naturally occurring
Nitrate-as N	No	7/6/2022	0.19	-	-	mg/L	10.0	10.0	Runoff from fertilizer
Sodium **	No	7/6/2022	11.4	-	-	mg/L	n/a	**	Naturally occurring
Sulfate	No	7/6/2022	19.1	-	-	mg/L	n/a	250.0	Naturally occurring
Radiological									
Gross Alpha Particles	No	10/17/2022	-0.088			pCi/l	0	15.0	Naturally Occurring
Gross Beta Particles	No	10/17/2022	0.819			pCi/l	0	4.0	Naturally Occurring
Radium 226	No	10/17/2022	0.082			pCi/l	0	5.0	Naturally Occurring
Radium 228	No	10/17/2022	0.450			pCi/l	0	5.0	Naturally Occurring
Total Uranium	No	10/17/2022	ND			pCi/l	0	30.0	Naturally Occurring

TABLE OF NON-DETECTED CONTAMINANTS

Inorganic Chemicals			Organic Chemicals					
Antimony	Chromium	Selenium	2,4,5-TP (Silvex)	Atrazine			Heptachlor	Pentachlorophenol
Arsenic	Cyanide	Silver	2,4-D	Carbofuran			Heptachlor Epoxide	PFOC's (PFOA/PFAS)
Asbestos	Mercury	Thallium	Alachlor	Chlordane			Lindane	Toxaphene
Beryllium	Nickel	Zinc	Aldicarb	Endrin			Methoxychlor	Vinyl Chloride
Cadmium	Nitrite-as N		Aldicarb Sulfone	Endrin			PCB's	1,4 Dioxane

MICROBIOLOGICAL TABLE

Colifom	No	Weekdays	0.0%	-	-	%	0	5%	Naturally occurring
E.Coli ***			0			-	0	***	Human/animal fecal waste