

Annual Drinking Water Quality Report for 2023

City of Rensselaer
62 Washington Street, Rensselaer, NY 12144
(Public Water Supply Identification Number NY4100044)

INTRODUCTION

To comply with State regulations, the City of Rensselaer, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. . Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard.. Included are details about where your water comes from, what it contains, and how it compares to New York State standards. 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 concerning this report or concerning your drinking water please contact: Jim Brady, *Water Department Commissioner, City of Rensselaer, 62 Washington Street, Rensselaer, NY 12144-2628; Telephone (518) 462-6466*. We want our valued customers to be informed about their water service. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held on the 1st and 3rd Wednesday of each month, 7:00 PM *at the City Hall, 62 Washington Street*, and Telephone (518) 462-9511.

WHERE DOES OUR WATER COME FROM?

The City of Rensselaer purchases its water from the City of Troy. Water is supplied to us under a contract arrangement. The City of Troy draws its water from a "surface water" supply, the spring fed Tomhannock Reservoir. It is located to the northeast of the City of Troy. Water flows from the Tomhannock Reservoir to the Troy Water Treatment Plant (TWTP), a complete treatment facility. In an effort to lower the formation of disinfection byproducts (DBBPs), TWTP has started to add potassium permanganate at the Tomhannock Reservoir. Potassium permanganate is a strong oxidant that is used to oxidize iron and manganese, but does not produce the DBBPs that chlorine does. Potassium permanganate is being fed seasonally from mid June to about September or October depending on the iron and manganese levels in the raw water. Additionally, chlorine dioxide is added at Melrose Station to oxidize the organic material that leads to the formation of disinfection byproducts when it reacts with chlorine but unlike chlorine, chlorine dioxide does not form DBBPs like THM's or HAA5's. Chlorine dioxide is fed year-round. They also add fluoride at low levels to protect teeth against dental cavities. Finished water from the Troy WTP is piped to our distribution system. We have a 0.75-million-gallon storage tank and two new 5-million-gallon storage tanks to meet consumer demand and provide adequate fire protection.

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 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.

FACTS AND FIGURES

The City provides water through 2,900 service connections to a population of approximately 9,800 people. In 2023 we purchased 1,177,325,000 gallons of water from the City of Troy. Our average daily demand is approximately 3,225,000 gallons. Our single highest day was 5,445,000 gallons. Approximately 64% of the total amount of water purchased from Troy was billed directly to consumers. The balance of approximately 31%, or unaccounted for water, was used for firefighting purposes, hydrant use by City trucks for street sweeping, distribution system leaks and unauthorized use. Residential customers in the City are charged \$5.95 per thousand gallons of water. Residential customers are billed semi-annually with a minimum charge of \$75.00/12,600 gallons. Commercial customers are billed monthly with a minimum charge of \$55.00. *However, we also serve a few customers in North Greenbush and East Greenbush through contract agreement.*

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the City of Rensselaer routinely monitors your drinking water for numerous contaminants. We test your drinking water for inorganic contaminants, radiological contaminants, trihalomethanes, haloacetic acids, lead and copper, nitrate, volatile organic contaminants, and synthetic organic contaminants. In addition, we are required to test a minimum of ten samples for coliform bacteria each month. The table presented below depicts which contaminants were detected in your drinking water. 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. Some of the data, though representative of the water quality, is more than one year old and is noted.

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 pose 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 Health Department (518) 270-2711.

WHAT DOES THIS INFORMATION MEAN?

As you can see from the attached tables, we 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.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2023, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

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 microbiological pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. Systems that purchase fluoridated water may want to add: Fluoride is added to your water by City of Troy Water Department before it is delivered to us. 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, the City of Troy Water Department monitors fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 1.0 mg/l. During 2023 monitoring showed that fluoride levels in your water were within 0.2 mg/l of the target level 100% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

INFORMATION ON LEAD

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 Rensselaer Water Department 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 Jim Brady, Water Department Commissioner at City of Rensselaer Water Department (518) 462-6466. 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>.

WHAT IS THE SOURCE WATER ASSESSMENT PROGRAM (SWAP)?

To emphasize the protection of surface and ground water sources used for public drinking water, Congress amended the Safe Drinking Water Act (SDWA) in 1996. The amendments require that New York State Department of Health's Bureau of Public Water Supply Protection is responsible for ensuring that source water assessments are completed for all of New York's public water systems.

A source water assessment provides information on the potential contaminant threats to public drinking water sources:

- ◆ each source water assessment will: determine where water used for public drinking water comes from (delineate the source areas)
- ◆ Inventory potential sources of contamination that may impact public drinking water sources
- ◆ Assess the likelihood of a source water area becoming potential contaminated

A SWAP summary for the Troy Water supply is attached to this report.

WATER CONSERVATION TIPS

Although the City is fortunate to have a good supply of water coming from Troy and water restrictions are a rarity, we encourage all residents to conserve. The following are just a few of the simple measures that can be implemented:

- ◆ Only run the dishwasher and clothes washer when there is a full load.
- ◆ Use water saving showerheads.
- ◆ Install faucet aerators in the kitchen and the bathroom to reduce the flow from 4 to 2.5 gallons per minute.
- ◆ Water garden and lawn for only a couple of hours after sunset.
- ◆ Check and repair all leaks in toilets, faucets and outside spigots.
- ◆ Cover swimming pools during hot spells, thereby reducing the need to replenish water.
- ◆ Instead of hosing, sweep driveways and sidewalks.
- ◆ Turn water off and on while washing hands, brushing teeth, shaving etc.
- ◆ 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 an invisible toilet leak. 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.

Not only will these steps conserve precious water resources, they will reduce your water bills.

CAPITAL IMPROVEMENTS

There were no major capital improvements made to the water system in 2023.

CLOSING

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit our customers. We ask that all our customers help us protect our water sources. Please call our office if you have questions at (518) 462-6466.

Tomhannock Reservoir Source Water Assessment Summary

The NYS DOH has completed a Source Water Assessment for the Tomhannock Reservoir. The assessment is summarized below. The assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how likely contaminants could enter the reservoir(s). The susceptibility rating is 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. See section “Are there contaminants in our drinking water?” of this report, for information concerning low levels of contaminants in your water.

The assessment found the amount of pasture in the assessment area results in a potential for protozoa contamination.

There is also possible contamination susceptibility associated with landfills in the assessment area. It should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs sensitive to existing and new sources of phosphorus and microbial contamination.

Troy’s water treatment plant performs multi level treatment to insure that Troy and Rensselaer residents receive safe drinking water. Additionally, as this annual report shows your water is routinely monitored for a great number of potential contaminants.

A copy of the full Source Water Assessments, including a map of the assessment area, is available for review by contacting us at the number provided in this report.

As illustrated in the table above, Troy’s monitoring and testing detected some contaminants; all other contaminants were below the maximum levels permitted by the State, known as the maximum contaminant levels (MCL). Many of the test results were **NON-DETECTABLE**. The type/group (number of contaminants in each group) tested for were as follows: volatile organic compounds (52) +MTBE, synthetic organic compounds (41), PFOCs, PFOA/PFAS, 1,4 Dioxane and asbestos. The inorganic contaminants tested for and non-detectable were, arsenic, cadmium, chromium, iron, manganese, mercury, nickel silver, selenium, antimony, beryllium, thallium, zinc, nitrite, and cyanide.

CITY OF RENNELLAER TABLE OF DETECTED CONTAMINANTS Public Water Supply Identification Number NY4100044							
Contaminant	Violation Y/N	Date of Sample	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants							
Copper Range of copper concentrations	N	6/22/23- 6/28/23	0.0379 ¹ 0.0027- 0.414	mg/l	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (samples from Range of lead concentrations)	N	6/22/23- 6/28/23	4.3 ² ND-263	µg/l	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits;
Stage 2 Disinfection Byproducts (Quarterly samples from 2 sites)							
Haloacetic Acids [HAA5] Polsinello Fuels	N	2/14/23 5/8/23 8/14/23 11/13/23	21.7 6.02-18.2	µg/l	N/A	MCL=60	By-product of drinking water chlorination
Haloacetic Acids [HAA5] Church		2/14/23 5/8/23 8/14/23 11/13/23	30.6 38.4-90.4				
TTHM[Total Trihalomethanes]] Polsinello Range of values for THM	Y	2/14/23 5/8/23 8/14/23 11/13/23	66.2 51.3-99.2	µg/l	N/A	MCL=80	By-product of drinking water chlorination
TTHM[Total Trihalomethanes] Church Range of values for THM		2/14/23 5/8/23 8/14/23 11/13/23	59.6 38.1-83.6				
Chlorine	N	Daily testing	1.93 0.43-1.93	mg/l	MRDLG N/A	MRDL MCL=4	Used in the treatment and disinfection of drinking water
Notes - The level presented represents the 90th percentile of 20 test sites. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 20 samples were collected at your water system and the 90th percentile value was the 18th sample with the third highest value (level detected 0.05 mg/l). The action level for copper was not exceeded at any of the sites tested. - The level presented represents the 90th percentile of 20 test sites. The action level for lead was exceeded at 1 of the 20 sites tested. - The average is based on a Locational Running annual average. The average shown is the highest LRAA measured. The highest TTHM & HAA5 LRAAs were in the 1st quarter of 2023. <i>Non-Detects (ND)</i> - laboratory analysis indicates that the constituent is not present. <i>Parts per million (ppm) or Milligrams per liter (mg/l)</i> - one part per million corresponds to one minute in two years or a single penny in \$10,000. <i>Parts per billion (ppb) or Micrograms per liter</i> - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000. <i>Parts per trillion (ppt) or Nanograms per liter (nanograms/l)</i> - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000. <i>Picocuries per liter (pCi/L)</i> - picocuries per liter is a measure of the radioactivity in water. <i>Nephelometric Turbidity Unit (NTU)</i> - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. <i>Action Level</i> - the concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements, which a water system must follow. <i>Treatment Technique (TT)</i> - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water. <i>Maximum Contaminant Level</i> - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. <i>Maximum Contaminant Level Goal</i> The "Goal" (MCLG) is 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. <i>Maximum Residual Disinfectant Level (MRDL)</i>: 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. <i>Maximum Residual Disinfectant Level Goal (MRDLG)</i>: The level of a drinking water disinfectant below which there is no known or expected risk to health. <i>Locational Running Annual Average (LRAA)</i>: The LRAA is calculated by taking the average of the four most recent samples collected at each individual site. <i>N/A-Not applicable</i>							

CITY OF RENNELAER TABLE OF DETECTED CONTAMINANTS Public Water Supply Identification Number NY4100044 Water Purchased from City of Troy NY4100050							
Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measure ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely source of Contamination
Inorganic Contaminants							
Barium	N	7/10/23	25.2	µg/l	2000	MCL=2000	Naturally occurring
Chloride	N	7/10/23	22.4	mg/l	N/A	MCL=250	Naturally occurring, road salt
Color (avg) range	N	Daily	3 ND-6	units	N/A	MCL=15	Naturally occurring
Fluoride (avg) range	N	Daily	0.84 0.33-1.15	mg/l	N/A	MCL2.2	Water additive which promotes strong teeth
Iron (avg) range	N	Weekdays	30 20-30	µg/l	N/A	MCL=300	Geology; Naturally occurring
Manganese (avg) range	N	Weekdays	10 10-20	µg/l	N/A	MCL=300	Geology; Naturally occurring
Nitrate-as N	N	7/10/23	0.068	mg/l	10	MCL=10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium ¹	N	7/6/22	10.3	mg/l	N/A	N/A	Naturally occurring
Sulfate	N	7/6/22	19.9	mg/l	N/A	MCL=250	Naturally occurring
Turbidity	N	Daily	0.74 0.06-5.30	NTU	N/A	MCL=5	Soil runoff
Radiological Contaminants							
Gross Alpha Particles		10/17/22	0.088	pCi/l	0	15	Naturally occurring
Gross Beta Particles	N	10/17/22	0.819	pCi/l	0	4.0	Naturally occurring
Radium 226	N	10/17/22	0.082	pCi/l	0	5.0	Naturally occurring
Radium 228	N	10/17/22	0.450	pCi/l	0	30	Naturally occurring
Disinfection Byproducts							
Chlorine Dioxide Residual (avg) range	N	Daily	0.004 0.00-0.11	mg/l	0.8	0.8	Used in the treatment and disinfection of drinking water
Chlorate (avg) range	N	Monthly	0.16 0.10-0.22	mg/l	N/A	N/A	Byproduct of chlorine dioxide used in disinfection
Chlorite (avg) range	N	Monthly	0.74 0.60-0.95	mg/l	N/A	1.0	Byproduct of chlorine dioxide used in disinfection
Chlorine avg. range	N	Daily	0.81 0.64-1.19	mg/l	MRDL	MRDL	Used in the treatment and disinfection of drinking water
					4	4	
Synthetic Organic Chemicals							
2,4-D	N	8/1/23	0.13	µg/l	N/A	70	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Dalapom	N	8/1/23	1.0	µg/l	N/A	200.0	Runoff from herbicide used on rights of way
Total Organic Carbon (TOC) samples from 2023							
TOC (filter effluent) range	N	Monthly samples	1.3	N/A	>= 1.0	TT	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.							