

DUTCHESS COUNTY

WATER AND
ASTEWATER AUTHORITY



ROKEBY WATER SYSTEM

WATER QUALITY REPORT

2025

WHO WE ARE

Dutchess County Water and Wastewater Authority (DCWWA) is an independent, not-for-profit public benefit corporation that was established in 1991 by an act of the State at the request of Dutchess County. Authority actions are governed by a Board of Directors appointed by the Dutchess County Legislature.

As owner and operator of 18 drinking water systems that collectively serve over 22,000 people, DCWWA is committed to providing reliable drinking water with quality customer service at a reasonable cost, proportionate to the cost of proper operation and environmental stewardship.

OUR MISSION

To protect and enhance the health, environmental sustainability and economic stability of Dutchess County and its residents through the provision of clean drinking water and proper treatment of wastewater.

CONTACT US

Call our office Monday-Friday, 8:00 a.m. to 4:00 p.m. at

(845) 486-3601



Email us anytime at

DCWWA@dutchessny.gov



Visit our website to sign up for system-specific Alerts and Advisories

<http://www.dcwwa.org/>



Attend one of our monthly Board Meetings virtually, or in person at our office located at

1 Lagrange Ave, Poughkeepsie, NY



DRINKING WATER FACTS

FROM THE U.S. EPA AND THE NEW YORK STATE DEPARTMENT OF HEALTH



How water sources can contain contaminants

Drinking water (both tap water and bottled water) comes from natural sources, including rivers, lakes, streams, ponds, reservoirs, springs and wells.

As water travels over the surface of the land and through the ground, it dissolves naturally-occurring minerals. Substances resulting from the presence of animal or human activity, even radioactive material, can also be picked up along the way.



Potential contaminants in New York water sources

All drinking water, including bottled water, may reasonably be expected to contain at least some small amount of contamination. This does not necessarily indicate that the water poses a health risk.

In the Hudson Valley's groundwater supplies, potential sources of contamination include:

- Microbial contaminants, such as viruses, bacteria, and protozoa
- Inorganic contaminants, including metals, salts, and radioactive materials that may occur naturally in rocks and soils or leach from manmade sources
- Organic contaminants, which often result from chlorine combining with naturally occurring organic matter



How safe water standards are set and enforced

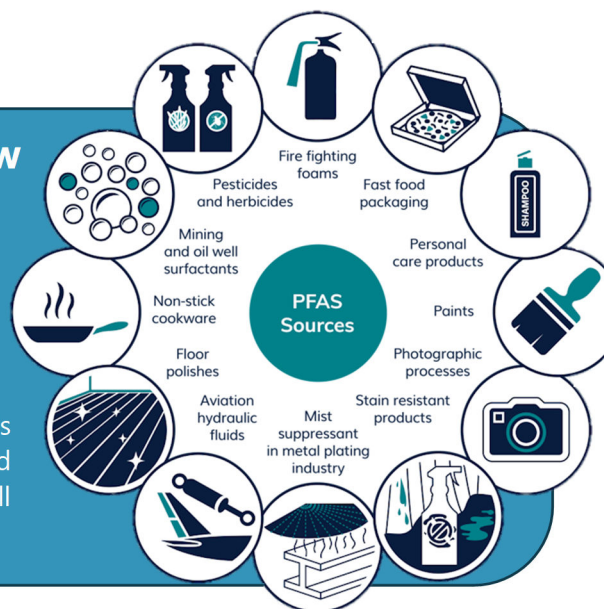
To ensure tap water is safe to drink, the State and the EPA set regulations that limit the levels of certain contaminants in water provided by public water systems. Water providers are required to perform routine testing for regulated contaminants and report the results to the New York State Department of Health and water users. If a water system fails to meet drinking water standards or violates regulations, penalties can be imposed. These penalties might include fines, mandatory corrective actions, or, in extreme cases, legal action to shut down or restrict a water system. If something is wrong with your water, you will be notified.

More information about contaminants and their potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1 (800) 426-4791 or the Dutchess County Department of Health at (845) 486-3404.

When Science Evolves, Water Standards Follow

Drinking water standards are updated over time as new health research becomes available. In New York State, the current drinking water standard for the PFAS compounds PFOA and PFOS is 10 nanograms per liter (ng/L). In 2024, the EPA established a new national standard of 4 ng/L for each of these compounds based on updated health risk information.

The new federal rule also expands regulation to include the PFAS compounds PFHxS, PFNA, HFPO-DA (GenX chemicals), and PFBS, which are evaluated together using a Hazard Index approach. Water systems across the country will work toward meeting these updated standards as the rule is phased in.

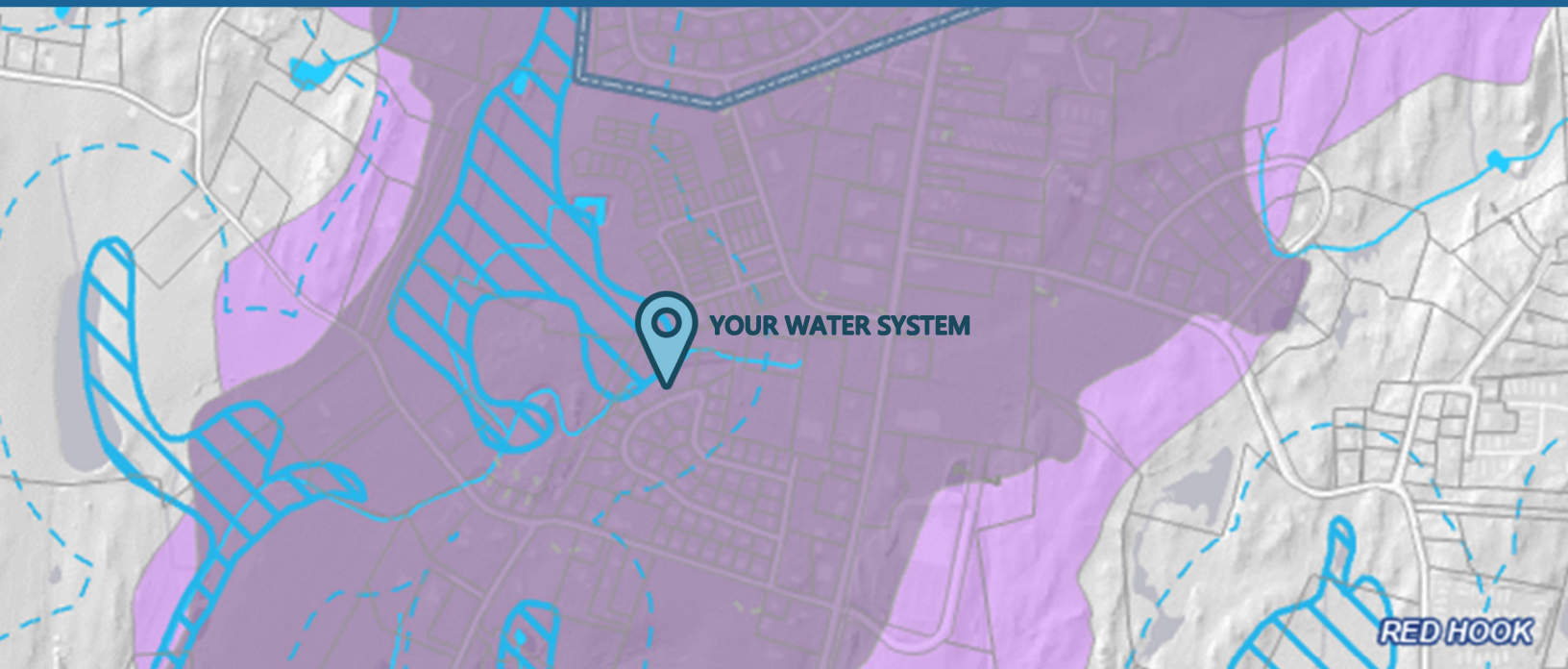


WHERE DOES OUR

WATER COME FROM?

The Rokeby Water System has been a cornerstone of your community since 1960. Owned by DCWWA since 2000 and operated by our dedicated staff since 2022, the system continues to deliver safe, high-quality drinking water to 160 residents every day.

Your water comes from two groundwater wells, which pump to the treatment plant, where, we add sodium hypochlorite to disinfect the water and eliminate any harmful microbes. Treated water is pumped directly to a 5,000-gallon hydropneumatic tank that keeps water pressure consistent through 1.5 miles of distribution piping.



Are There Contaminants in Our Drinking Water?

We work hard to ensure your drinking water is safe, and that starts with testing. In 2025, as required by New York State regulations, our team tested your water for a wide range of potential contaminants. All tested contaminants were within safe limits.

The following pages show what was detected, when samples were collected, how much was found, and how those results compare with State health standards. Some contaminants are tested less often because their levels usually remain stable over time. When that happens, the most recent available result may be from an earlier year, but still reflects the current quality of your drinking water.

Keep reading to learn more about what's in your water and what it means for you.

TABLE OF DETECTED CONTAMINANTS

Rokeby Water System

Public Water System ID Number NY1302799

Disinfectants and Treatment Chemicals

Chlorine Residual

An oxidizing chemical added during water treatment to kill bacteria and other pathogens.

<u>Sample Collection Information</u>			<u>Contaminant Detection Range</u>			<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Dates	Min	Average	Max	MRDL	MCLG		Yes/No
Entry Point	Daily	1/1/25 - 12/31/25	0.26	1	2	4	N/A	mg/L	Yes ✓

Disinfection Byproducts

Total Trihalomethanes (TTHM)

Byproducts formed when chlorine used to disinfect drinking water reacts with naturally occurring organic matter from soil and decaying vegetation in the source water.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>		<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result		MCL	MCLG		Yes/No
System Wide	Every 3 Years	8/23/23	2.2		80	N/A	µg/L	Yes ✓

Haloacetic Acids (HAA5)

Byproducts formed when chlorine used to disinfect drinking water reacts with humic and fulvic acids, naturally occurring organic substances that enter water from soil and rock.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>		<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result		MCL	MCLG		Yes/No
System Wide	Every 3 Years	8/23/23	7.4		60	N/A	µg/L	Yes ✓

Lead and Copper Monitoring

Lead

A heavy metal commonly used in plumbing until 1986 that can enter drinking water when older household plumbing systems corrode. Less-common sources include erosion of natural mineral deposits.

<u>Sample Collection Information</u>			<u>Contaminant Detection Range</u>			<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Dates	Min	90th Percentile	Max	AL	MCLG		Yes/No
System Wide	5 Samples Every 3 Years	8/16/23 - 8/22/23	ND	2.86	4.66	15	0	µg/L	Yes ✓

Note: The value presented above represents the 90th percentile of the sites tested for lead. In this case, 5 samples were collected throughout the distribution system, and the action level was not exceeded at any of the sites tested.

Copper

A metal commonly used in household plumbing that can enter drinking water when piping corrodes. It may also come from erosion of natural mineral deposits or from copper released by some wood preservatives.

<u>Sample Collection Information</u>			<u>Contaminant Detection Range</u>			<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Dates	Min	90th Percentile	Max	AL	MCLG		Yes/No
System Wide	5 Samples Every 3 Years	8/16/23 - 8/22/23	0.0192	0.0561	0.0673	1.3	1.3	mg/L	Yes ✓

Note: The value presented above represents the 90th percentile of the sites tested for copper. In this case, 5 samples were collected throughout the distribution system, and the action level was not exceeded at any of the sites tested.

Inorganic Contaminants

Sulfate

A naturally occurring mineral that enters drinking water as it dissolves from rocks and soil.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 3 Years	4/14/21	21	250	N/A	mg/L	Yes ✓

Sodium

A naturally occurring mineral that can enter drinking water from rocks and soil, road salt used for winter deicing, water softener brine discharges, and animal waste.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 3 Years	4/14/21	110	See Note	N/A	mg/L	Yes ✓

Note: 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.

Nitrate (as N)

A nutrient that occurs naturally in the environment and is also widely used in fertilizers. It can enter drinking water through runoff from fertilizer use, septic systems or sewage, and erosion of natural mineral deposits.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Annual	4/9/25	0.202	10	10	mg/L	Yes ✓

Manganese

A mineral that occurs naturally in soil and rock that can enter drinking water from these natural deposits. Elevated levels may also indicate contamination from nearby landfill sites.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 3 Years	4/14/21	19	300	N/A	µg/L	Yes ✓

Fluoride

This naturally occurring mineral can enter drinking water from erosion of natural deposits or from industrial discharges such as fertilizer or aluminum manufacturing. Although it is used in many public drinking water supplies to promote strong teeth, fluoride is not added in this water system's treatment process.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 3 Years	8/6/24	0.6	2.2	4	mg/L	Yes ✓

Chloride

This naturally occurring mineral can enter drinking water from rocks and soil. Elevated levels may also indicate contamination from road salt used for winter deicing.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 3 Years	4/14/21	52	250	N/A	mg/L	Yes ✓

Barium

A naturally occurring metal that can enter drinking water from erosion of natural mineral deposits. Other sources may include discharges from drilling wastes and metal refineries.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 3 Years	8/6/24	0.131	2	2	mg/L	Yes ✓

Radiological Contaminants

Uranium

A radioactive element naturally present in rocks and soils that can enter drinking water through erosion of natural deposits.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 6 Years	4/28/22	0.165	30	0	µg/L	Yes ✓

Gross Alpha Activity (including radium-226 but excluding radon and uranium)

This measure of naturally occurring radioactivity can result from erosion of natural mineral deposits.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 6 Years	4/28/22	0.913	15	0	pCi/L	Yes ✓

Combined Radium - 226 and 228

Naturally occurring radioactive elements that can enter drinking water through erosion of rocks and soils.

<u>Sample Collection Information</u>			<u>Contaminant Detection Level</u>	<u>Compliance Levels</u>		<u>Units</u>	<u>Compliance</u>
Location	Frequency	Date	Result	MCL	MCLG		Yes/No
Entry Point	Every 6 Years	4/28/22	0.495	5	0	pCi/L	Yes ✓

DCWWA routinely tests your water for many other potential contaminants, not just those listed in the main table.

In the Rokeby Water System, the following contaminants were tested during the reporting period, but were not detected at measurable levels.

Entry Point

Microbiological Contaminants

Total Coliform Bacteria

Inorganic Contaminants

Antimony • Arsenic • Beryllium • Cadmium • Chromium • Cyanide • Mercury • Nickel • Selenium • Titanium

System Wide

Microbiological Contaminants

Total Coliform Bacteria

Well 1

Volatile Organic Contaminants

1,1,1-Trichloroethane • 1,1-Dichloroethylene (1,1-Dichloroethene) • 1,2,4-Trichlorobenzene • 1,2-Dichloroethane • 1,2-Dichloropropane • Benzene • cis-1,2-Dichloroethylene (cis-1,2-Dichloroethene) • o-Xylene • p-Xylene • Tetrachloroethylene (Tetrachloroethene) (Perchloroethylene) (Perchloroethene) (PCE) • Toluene • Total Xylenes • Trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene) • Vinyl chloride

Synthetic Organic Contaminants

1,4-Dioxane • Perfluoro-octanesulfonic Acid (PFOS) • Perfluoro-octanoic Acid (PFOA)

Unregulated Perfluoroalkyl Substances

11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS) • 4,8-Dioxa-3h-Perfluoronanoic Acid (ADONA) • 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS) • Hexafluoro-propylene oxide dimer acid (HFPO-DA) • N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) • N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) • Perfluoro-butanesulfonic Acid (PFBS) • Perfluorodecanoic Acid (PFDA) • Perfluorododecanoic Acid (PFDoA) • Perfluoroheptanoic Acid (PFHpA) • Perfluorohexanesulfonic Acid (PFHxS) • Perfluoro-hexanoic Acid (PFHxA) • Perfluoronanoic Acid (PFNA) • Perfluorotetradecanoic Acid (PFTA) • Perfluorotridecanoic Acid (PFTrDA) • Perfluoroundecanoic Acid (PFUnA)

Well 2

Organic Contaminants

Methyl-tertiary-butyl-ether (MTBE)

Volatile Organic Contaminants

1,2-Dichloroethane • Chlorobenzene • cis-1,2-Dichloroethylene (cis-1,2-Dichloroethene) • Ethylbenzene • p-Dichlorobenzene (1,4-Dichlorobenzene) • Styrene • Tetrachloroethylene (Tetrachloroethene) (Perchloroethylene) (Perchloroethene) (PCE) • Total Xylenes • Vinyl chloride

Synthetic Organic Contaminants

1,4-Dioxane • Perfluoro-octanesulfonic Acid (PFOS) • Perfluoro-octanoic Acid (PFOA)

Unregulated Perfluoroalkyl Substances

11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS) • 4,8-Dioxa-3h-Perfluoronanoic Acid (ADONA) • 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS) • Hexafluoro-propylene oxide dimer acid (HFPO-DA) • N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) • N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) • Perfluoro-butanesulfonic Acid (PFBS) • Perfluorodecanoic Acid (PFDA) • Perfluorododecanoic Acid (PFDoA) • Perfluoroheptanoic Acid (PFHpA) • Perfluorohexanesulfonic Acid (PFHxS) • Perfluoro-hexanoic Acid (PFHxA) • Perfluoronanoic Acid (PFNA) • Perfluorotetradecanoic Acid (PFTA) • Perfluorotridecanoic Acid (PFTrDA) • Perfluoroundecanoic Acid (PFUnA)

DEFINITIONS

AL Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

HAL Health Advisory Level: USEPA Health Advisory Levels identify the concentration of a contaminant in drinking water at which adverse health effects and/or aesthetic effects are not anticipated to occur over specific exposure durations. Health Advisory Levels are not to be construed as legally enforceable federal standards and are subject to change as new information becomes available.

MCL Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

MCLG Maximum Contaminant Level Goal: 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.

mg/L Milligrams per Liter: One part of liquid in one million parts of liquid (parts per million - ppm).

MRDL Maximum Residual Disinfectant Level: 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.

mrem/yr Millirems per Year: A measure of radiation absorbed by the body.

ND Non-Detect: Laboratory analysis indicates that the constituent is not present.

ng/L Nanograms per Liter: One part of liquid to one trillion parts of liquid (parts per trillion - ppt).

pCi/L Picocuries per Liter: A measure of the radioactivity in water.

TON A subjective measure of odor in drinking water, determined by diluting a sample with odor-free water until the smell is no longer detectable. Higher TON values indicate stronger odor.

TT Treatment Technique: Required process intended to reduce the level of a contaminant in drinking water.

µg/L Micrograms per Liter: One part of liquid in one billion parts of liquid (parts per billion - ppb).

One milligram per liter equals about one drop of water in a 10-gallon fish tank.

1 ppm



1 ppb

One microgram per liter equals about one drop of water in a 13,000-gallon swimming pool.



WHAT DOES THIS

INFORMATION MEAN?

Through regular testing, we've learned that some contaminants are present in your water, which is common in public water systems. The good news is that every substance detected was well below the maximum contaminant levels (MCLs) set by the State. These MCLs are strict safety standards designed to protect public health, and our results show that your water continues to exceed those rigorous standards. We share this information to keep you informed and confident in the quality of your drinking water. As always, our team remains committed to providing water that's not just safe, but also clean, clear, and reliable.

Do I need to take special precautions?

Although the drinking water provided to the Rokeby community met or exceeded all health-based State and Federal standards, 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).

IS OUR WATER SYSTEM COMPLYING WITH OTHER RULES THAT GOVERN OPERATIONS?



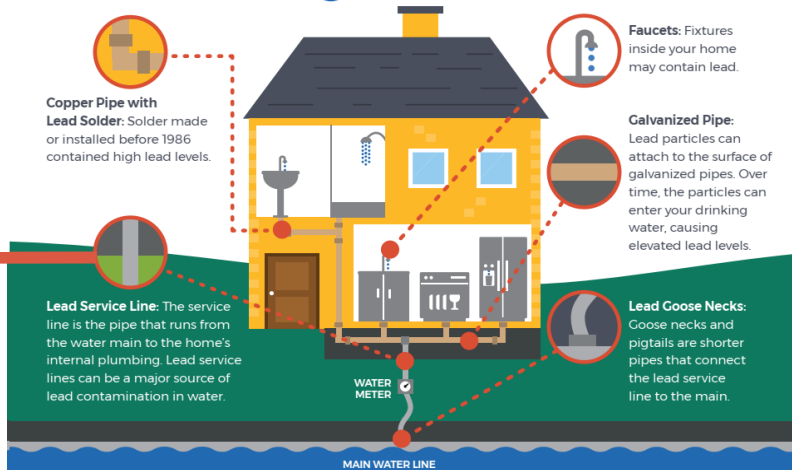
Yes. During 2025, our system complied with applicable State drinking water operating, monitoring and reporting requirements.





CONCERNED ABOUT LEAD IN YOUR DRINKING WATER?

Sources of LEAD in Drinking Water



Although testing has never revealed hazardous levels of lead in your drinking water, we are required to present the following

Important Information on Lead Contamination

from the United States Environmental Protection Agency

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. DCWWA is responsible for providing high quality drinking water and removing lead pipes, but we cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact our office. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>.

Reduce Your Exposure To Lead



Use only cold water for drinking, cooking and making baby formula. Boiling water does not remove lead from water.



Regularly clean your faucet's screen (also known as an aerator).



Consider using a water filter certified to remove lead and know when it's time to replace the filter.



Before drinking, flush your pipes by running your tap, taking a shower, doing laundry or a load of dishes.

To find out for certain if you have lead in drinking water, have your water tested.

Replace Your Lead Service Line



Water systems are required to replace lead service lines if a water system cannot meet EPA's Lead Action Level through optimized corrosion control treatment.

Replacement of the lead service line is often the responsibility of both the utility and homeowner.

Homeowners can contact their water system to learn about how to remove the lead service line.

Identify Other Lead Sources In Your Home

Lead in homes can also come from sources other than water. If you live in a home built before 1978, you may want to have your paint tested for lead. Consider contacting your doctor to have your children tested if you are concerned about lead exposure.



For more information, visit: [epa.gov/safewater](https://www.epa.gov/safewater)

SCAN AND SEARCH

to quickly identify your service line material



INFORMATION ON LEAD SERVICE LINE INVENTORY

A Lead Service Line (LSL) is defined as any portion of pipe that is made of lead which connects the water main to the building inlet. An LSL may be owned by the water system, owned by the property owner, or both. The inventory includes both potable and non-potable SLs within a system. In accordance with the federal Lead and Copper Rule Revisions (LCRR) DCWWA has prepared a lead service line inventory, which you can access by contacting our office to request a copy or by clicking or scanning the QR code above to search for your address on the New York State DOH's LSLI interactive map.

We are partners in

WATER CONSERVATION

Saving Water Saves Money



Using less water reduces the cost of treatment chemicals and electricity used in pumping water to your home. It also reduces strain on equipment, which means we need to replace wells, pumps, storage tanks, and other vital system components less often.

Saving Water Keeps Your System Sustainable



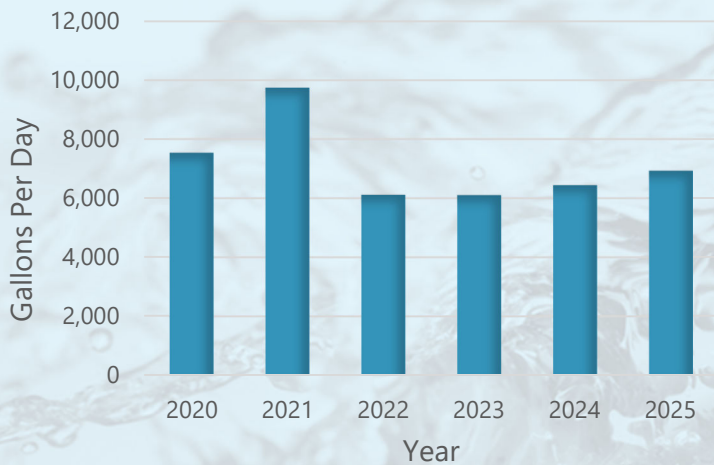
Using less water reduces stress on the aquifer your well draws from, keeping your community prepared for drought conditions and reducing the impact of future shifts in aquifer recharge patterns due to climate change.

Saving Water May Help Improve Water Quality



As the volume of water in the aquifer decreases, certain contaminants may become more concentrated in groundwater, causing users to experience unpleasant taste, color, and odor more often.

Rokeby's Average Daily Water Use



Every Drop Counts

Since 2020, water use in the Rokeby Water system has decreased by 8%, which adds up to over 200,000 gallons each year. Your efforts, big and small, truly make a difference. Even simple changes at home can add up to a lasting impact for the entire system.

If you have a home water softener or filtration system, now's a great time to check that it's running efficiently. These systems can use extra water when they need maintenance or adjustment.

No softener? No problem! Keep reading for easy, effective ways to keep the momentum going and conserve even more water at home.

Simple Tips for Everyday Water Conservation



Don't let leaks drain your wallet. Even a small drip can waste 15 to 20 gallons a day, adding up to over 6,000 gallons a year! Take a few minutes to check faucets, toilets, and pipes, and fix any leaks as soon as you spot them.



Toilet leaks can be sneaky! To check for one, add a few drops of food coloring to the toilet tank and wait 10 to 15 minutes. If color appears in the bowl without flushing, you've got a leak. It's an easy test that could save 30,000 gallons a year.



Water lawns and gardens early in the morning or late in the evening to reduce evaporation. Make the most of every drop by switching to drip irrigation for targeted watering and adding a thick layer of mulch around plants to lock in moisture.