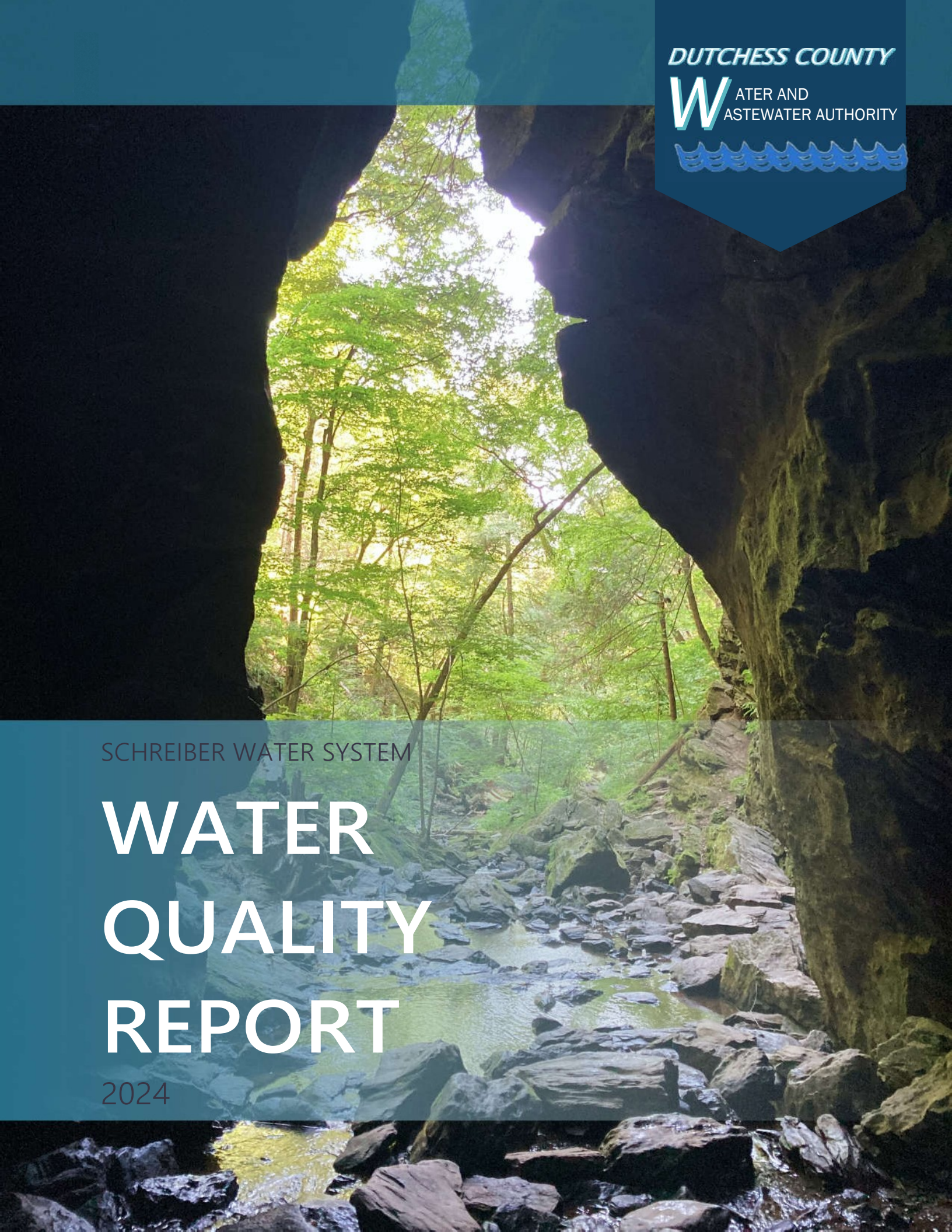
DUTCHESS COUNTY
WATER AND WASTEWATER AUTHORITY



SCHREIBER WATER SYSTEM

WATER QUALITY REPORT

2024

UNDERSTANDING THIS REPORT

Each year, Dutchess County Water and Wastewater Authority (DCWWA) publishes a report on the quality of the Schreiber water system's drinking water. This report is not only required by state and federal agencies but also gives us an important opportunity to share where your water comes from, what's in it, and how we work to keep it safe and reliable.

Since 2022, the Schreiber's water has contained **levels of radium and gross alpha activity that exceed state drinking water standards**. These are naturally occurring radioactive materials found in deep rock formations. While the water remains safe for everyday uses like bathing, washing dishes, and doing laundry, long-term consumption of water with elevated levels of radioactive contaminants may increase the risk of developing health issues. We are actively working with the Department of Health and state and county funding agencies to find the best long-term solution for our customers. This includes **developing a new source well**, which we expect will have lower levels of these contaminants, and **planning for additional treatment options if necessary**. Many home water softeners can also help remove some radioactive contamination, offering you an added layer of protection as we work toward a sustainable solution.

If you have any questions about this report or anything it contains, **please don't hesitate to reach out** using the contact information below. We welcome your feedback and encourage you to stay involved in the conversation about your water system.

WHO WE ARE

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 an appointed Board of Directors.

As owner and operator of 18 drinking water systems that collectively serve over 22,000 people, DCWWA is committed to the 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, 9:00 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.

NEW YORK STATE | Department of Health

Important Information from the New York State Department of Health

The NYS DOH has completed a source water assessment for this system, based on available information. Possible and actual threats to this water source were evaluated. The State source water assessments include a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. Susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is or will be contaminated. See section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected, if any. The source water assessments provide resource managers with additional information for protecting source waters in the future. The source water assessment has rated our water source as having an elevated susceptibility to microbial and nitrate contamination. These ratings are due primarily to the proximity of the wells to a landfill and a permitted discharge facility (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and the residential and agricultural land use and related activities in the assessment area. In addition, the wells draw from fractured bedrock and overlying soils may not provide adequate protection from potential contamination. The county and state health departments will use this information to direct future source water protection activities. The source water assessment summary for your system is available by calling the Dutchess County Department of Health at (845) 486-3404 and requesting a copy.

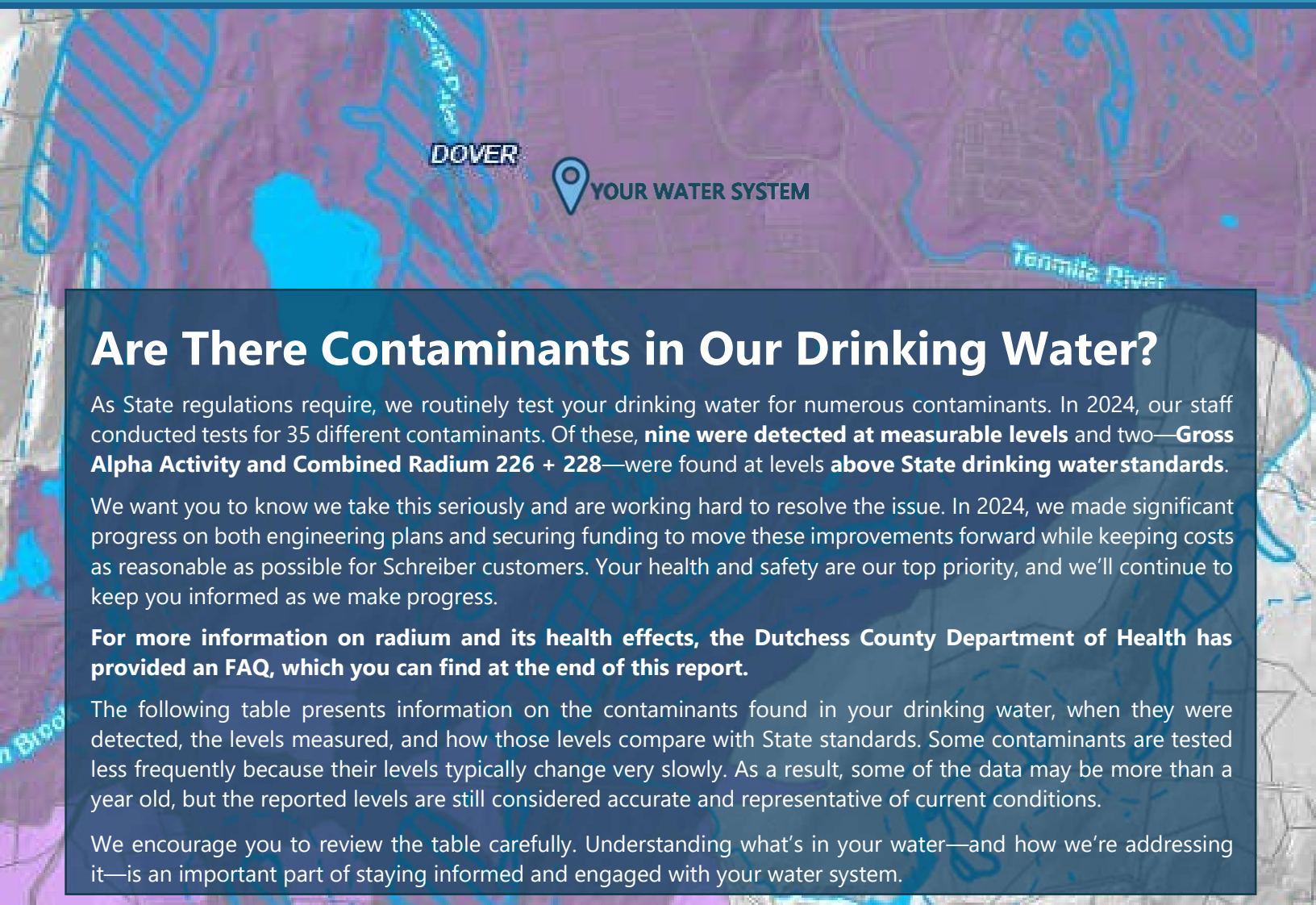
WHERE DOES OUR WATER COME FROM?

The Schreiber Water System has been in service since 1954 and has been owned by DCWWA since 1999.

Schreiber's water comes from a single deep well located right on the treatment plant property. At about 1,500 feet deep, this well provides a steady and reliable supply of water. However, the U.S. EPA has noted that very deep wells, while dependable, can sometimes be a source of naturally occurring radiological contaminants. To enhance the system's resilience and water quality, we are planning to drill a second, shallower well in 2025.

After being pumped from the source well, water is treated with sodium hypochlorite, which disinfects to control harmful pathogens. No other treatment processes, such as softening or radionuclide removal, are present. Treated water is stored in a 19,000-gallon atmospheric storage tank, and from there it flows by gravity through about 2,700 feet of distribution main to your tap.

The Schreiber Water System serves about 50 people through 23 customer connections. While that's much smaller than the national average of around 8,000 customers per system, it allows us to stay closely connected to the community we serve. Every household is an important part of this system, and we're committed to making the improvements needed to ensure a safe and reliable water supply for the long term.



Are There Contaminants in Our Drinking Water?

As State regulations require, we routinely test your drinking water for numerous contaminants. In 2024, our staff conducted tests for 35 different contaminants. Of these, **nine were detected at measurable levels** and two—**Gross Alpha Activity and Combined Radium 226 + 228**—were found at levels **above State drinking water standards**.

We want you to know we take this seriously and are working hard to resolve the issue. In 2024, we made significant progress on both engineering plans and securing funding to move these improvements forward while keeping costs as reasonable as possible for Schreiber customers. Your health and safety are our top priority, and we'll continue to keep you informed as we make progress.

For more information on radium and its health effects, the Dutchess County Department of Health has provided an FAQ, which you can find at the end of this report.

The following table presents information on the contaminants found in your drinking water, when they were detected, the levels measured, and how those levels compare with State standards. Some contaminants are tested less frequently because their levels typically change very slowly. As a result, some of the data may be more than a year old, but the reported levels are still considered accurate and representative of current conditions.

We encourage you to review the table carefully. Understanding what's in your water—and how we're addressing it—is an important part of staying informed and engaged with your water system.

Map of Dutchess County groundwater and surface water sources available online at https://gis.dutchessny.gov/nri/

TABLE OF DETECTED CONTAMINANTS

SCHREIBER WATER SYSTEM

Public Water System ID NY1315971

UNREGULATED PERFLUOROALKYL SUBSTANCES

Contaminant: **PERFLUOROBUTANOIC ACID (PFBA)**

Why we test for it: Research is ongoing to understand the potential health effects of unregulated perfluoroalkyl compounds.

Sources in drinking water: Released into the environment from widespread use in commercial and industrial applications.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Well 3	9/4/2024	0.65	N/A	N/A	ng/L	☑

RADIOACTIVE CONTAMINANTS

Contaminant: **BETA PARTICLE AND PHOTO RADIOACTIVITY FROM MANMADE RADIONUCLEOTIDES**

Why we test for it: Certain materials are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Sources in drinking water: Decay of natural deposits and man-made emissions.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	2/21/2024 through 5/7/2024	16.65 19 - 19.3	50	0	pCi/L	☑

PFBA: Unregulated, Not Unwatched

PFBA (Perfluorobutanoic Acid) is part of a larger grounp of chemicals called PFAS—man-made chemicals used in products like water-repellent fabrics, non-stick cookware, and firefighting foams. While PFBA isn't currently regulated by state or federal drinking water standards, it's still closely monitored because PFAS compounds are known for persisting in the environment and the human body. We continue to track PFBA to stay ahead of evolving science and potential future regulations.

It's important to know that two of the best-known PFAS chemicals—PFOA and PFOS—*are* regulated, and Schreiber's water showed **no detections of either PFOA or PFOS in 2024**. We'll keep you updated on any new developments as research and regulations continue to evolve.

Contaminant: **COMBINED RADIUM-226 AND RADIUM-228**

Why we test for it: Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Sources in drinking water: Erosion of natural deposits.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	2/21/2024 through 11/14/2024	13.97 9.75 - 14.45	5	0	pCi/L	☒

Contaminant: **GROSS ALPHA ACTIVITY (INCLULDING RADIUM-226 BUT EXCLUDING RADON AND URANIUM)**

Why we test for it: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Sources in drinking water: Erosion of natural deposits.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	2/21/2024 through 11/14/2024	19.09 16.08 - 20.94	15	0	pCi/L	☒

Contaminant: **URANIUM**

Why we test for it: Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer.

Sources in drinking water: Erosion of natural deposits.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	2/21/2024 through 11/14/2024	8.10 7.4 - 8.99	30	0	ug/L	☑

Contaminant Connections: The Relationship Between Radium and Gross Alpha

Gross Alpha Activity measures the total amount of alpha particle radiation in a water sample. This screening test helps identify the presence of alpha-emitting radionuclides, such as certain types of Radium. Radium-226 in particular, is a significant contributor to Gross Alpha Activity because it emits alpha particles as it decays. When Gross Alpha levels are high, it's often a clue that specific contaminants like Radium-226 and Radium-228 are elevated as well, which testing has shown to be true of Schreiber's water supply.

Long-Term Risks, Long-Term Averages: Understanding How Radioactive Contaminants Are Reported

The levels of Beta Particle Activity, Combined Radium, Gross Alpha Activity, and Uranium reported in this document are based on Locational Running Annual Averages (LRAAs) from samples collected in 2023 and 2024. In 2024, we analyzed four samples for radioactive contaminants—one sample in each calendar quarter—and calculated an LRAA for each quarter. The LRAAs for Combined Radium and Gross Alpha Activity exceed State drinking water standards.

Why report LRAAs? Radiological contaminants pose health risks from long-term exposure, not short-term contact. Even if a single test result is high, it’s the consistent exposure over time that matters most for your health. LRAAs are calculated by averaging the results from the most recent four quarters of sampling at each location. This method allows regulators and water providers to assess whether there is sustained exposure to unsafe levels over time, rather than responding to one-time spikes that may not reflect long-term risks.

PHYSICAL CHARACTERISTICS

Contaminant: **ODOR**

Why we test for it: Odor as measured by this standard procedure has no health effects; although several contaminants exert odors when they are present at levels near their MCLs. Odor is an important quality factor affecting the drinkability of water.

Sources in drinking water: Organic or inorganic pollutants originating from municipal and industrial waste discharges; natural sources.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	4/26/2023	5.30	3	N/A	Units	☒

MICROBIOLOGICAL CONTAMINANTS

Contaminant: **TOTAL COLIFORM**

Why we test for it: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution.

Sources in drinking water: Naturally present in the environment.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
System Wide	10/2/2024	1 positive sample	TT = 2 or more positive samples after April 1, 2016	0	N/A	☑

Coliform Under the Microscope: Treated, Tested, and Trustworthy

Every month, DCWWA tests water from different locations across the distribution system for coliform bacteria, which are naturally found throughout the environment in soil, plants, and the digestive systems of animals (including humans). While these bacteria are often harmless, their presence an important warning sign that harmful pathogens like *E. coli* may also be present. This simple test helps us regularly monitor different parts of the water system for potential contamination. When a positive total coliform result came in on October 2, 2024, our team took action right away. Operators immediately conducted follow-up testing at the original sample site and two nearby properties, as well as the source well. **All follow-up samples came back clean**, including a sample collected from untreated well water. This suggests that the positive sample was caused by either a temporary, isolated issue or a sampling error—not uncommon in this highly sensitive testing. Thanks to our operators' quick response to this positive coliform sample, we can confidently assure you that your water remains free of harmful bacteria.

INORGANIC CONTAMINANTS

Contaminant: **ARSENIC**

Why we test for it: Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Sources in drinking water: Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	12/13/2023	1.84	10	N/A	ug/L	☑

Contaminant: **BARIUM**

Why we test for it: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Sources in drinking water: Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	12/13/2023	0.04	2	2	mg/L	☑

Contaminant: **CHLORIDE**

Why we test for it: Chloride is essential for maintaining good health. Research has not conclusively demonstrated that human exposure to chloride itself causes adverse health effects, although exposure to high levels of certain chloride salts has been associated with adverse health effects in humans. For example, high dietary intake of sodium chloride can be a contributing factor to high blood pressure, but this has been attributed mainly to the presence of sodium. The New York State standard for chloride is 250 milligrams per liter, and is based on chloride's effects on the taste and odor of the water.

Sources in drinking water: Naturally occurring or indicative of road salt contamination.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	4/26/2023	19.85	250	N/A	mg/L	☑

Contaminant: **COPPER**

Why we test for it: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Sources in drinking water: Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
System Wide	7/27/2022 through 7/29/2022	0.088 ND - 0.098	Action Level = 1.3	1.3	mg/L	☑

Contaminant: **IRON**

Why we test for it: Iron is essential for maintaining good health. However, too much iron can cause adverse health effects. Drinking water with very large amounts of iron can cause nausea, vomiting, diarrhea, constipation and stomach pain. These effects usually diminish once the elevated iron exposure is stopped. A small number of people have a condition called hemochromatosis, in which the body absorbs and stores too much iron. People with hemochromatosis may be at greater risk for health effects resulting from too much iron in the body (sometimes called "iron overload") and should be aware of their overall iron intake. The New York State standard for iron in drinking water is 0.3 milligrams per liter, and is based on iron's effects on the taste, odor and color of the water.

Sources in drinking water: Naturally occurring.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	2/21/2024 through 7/10/2024	52.67 ND - 90	300	N/A	ug/L	☑

Contaminant: **LEAD**

Why we test for it: 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 abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Sources in drinking water: Corrosion of household plumbing systems; Erosion of natural deposits.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
System Wide	7/27/2022 through 7/29/2022	2.7 ND - 3.9	Action Level = 15	0	ug/L	☑

Heavy Metal, Light Risk: Lead and Copper in Your Water

To monitor for lead and copper in drinking water, samples are collected from homes across the distribution system identified by DCWWA and the Department of Health as most likely to have plumbing that could contribute to metal levels, usually older homes with legacy piping. In this round, five samples were collected from across the system. These results are used to calculate the 90th percentile value (presented above), which isn't an average—it's the value that's higher than 90% of the samples. This helps to highlight areas where concentrations may be closer to the action level, which is important for identifying and addressing potential problems. Lead and copper can enter drinking water through corrosion of plumbing materials, especially in homes with lead pipes or copper pipes joined with lead-based solder. These materials were commonly used before the 1986 ban on lead in drinking water plumbing. The Schreiber Water System, which has been in service since the mid-1950s, predates that regulation by decades. However, we have not identified any lead service lines in the system, and for the most recent testing, **all lead and copper results, including 90th percentile values, were well below the action levels set by the EPA**.

Contaminant: **MANGANESE**

Why we test for it: Manganese is a common element in rocks, soil, water, plants, and animals. Manganese occurs naturally in water after dissolving from rocks and soil. Contamination of drinking water may occur if manganese gets into surface or groundwater after dissolving from rocks and soil. It may also occur if manganese gets into surface or groundwater after improper waste disposal in landfills or by facilities using manganese in the production of steel or other products. Manganese is an essential nutrient that is necessary to maintain good health. However, exposure to too much manganese can cause adverse health effects. There is some evidence from human studies that long-term exposure to manganese in drinking water is associated with nervous system effects in adults (e.g., weakness, stiff muscles and trembling of the hands) and children (learning and behavior). The results of these studies only suggest an effect because the possible influences of other factors were not adequately assessed. There is supporting evidence that manganese causes nervous system effects in humans from occupational studies of workers exposed to high levels of manganese in air, but the relevance of these studies to long term drinking water exposure is less clear because the exposures were quite elevated and by inhalation, not by ingestion.

Sources in drinking water: Naturally occurring; Indicative of landfill contamination.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	2/21/2024 through 7/10/2024	6.41 2.28 - 12.7	300	N/A	ug/L	☑

Contaminant: **NITRATE (AS N)**

Why we test for it: Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

Sources in drinking water: Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	4/24/2024	0.37	10	10	mg/L	☑

Contaminant: **SODIUM**

Why we test for it: 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.

Sources in drinking water: Naturally occurring; Road salt; Water softeners; Animal waste.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	4/26/2023	6.85	(See Health Effects)	N/A	mg/L	☑

Contaminant: **SULFATE**

Why we test for it: Drinking water containing high concentrations of sulfate can cause short-term intestinal effects in humans. The effects can range from a laxative effect (loose stools) to diarrhea (unusually frequent and liquid bowel movements). Diarrhea is of particular concern in infants, because it can lead to more serious effects such as dehydration. Travelers or new residents, who may change from drinking water with low sulfate concentrations to drinking water with high sulfate concentrations, may experience short term intestinal effects due to sulfate. The New York State standard for sulfate is 250 milligrams per liter, and is based on sulfate's effects on the taste and odor of the water.

Sources in drinking water: Naturally occurring.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
Entry Point	2/21/2024 through 11/5/2024	122.50 ND - 188	250	N/A	mg/L	☑

DISINFECTION BYPRODUCTS

Contaminant: **HALOACETIC ACIDS (HAA5)**

Why we test for it: Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Sources in drinking water: By-product of drinking water disinfection needed to kill harmful organisms.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
System Wide	8/22/2023	1.20	60	N/A	ug/L	☑

Contaminant: **TOTAL TRIHALOMETHANES (TTHM)**

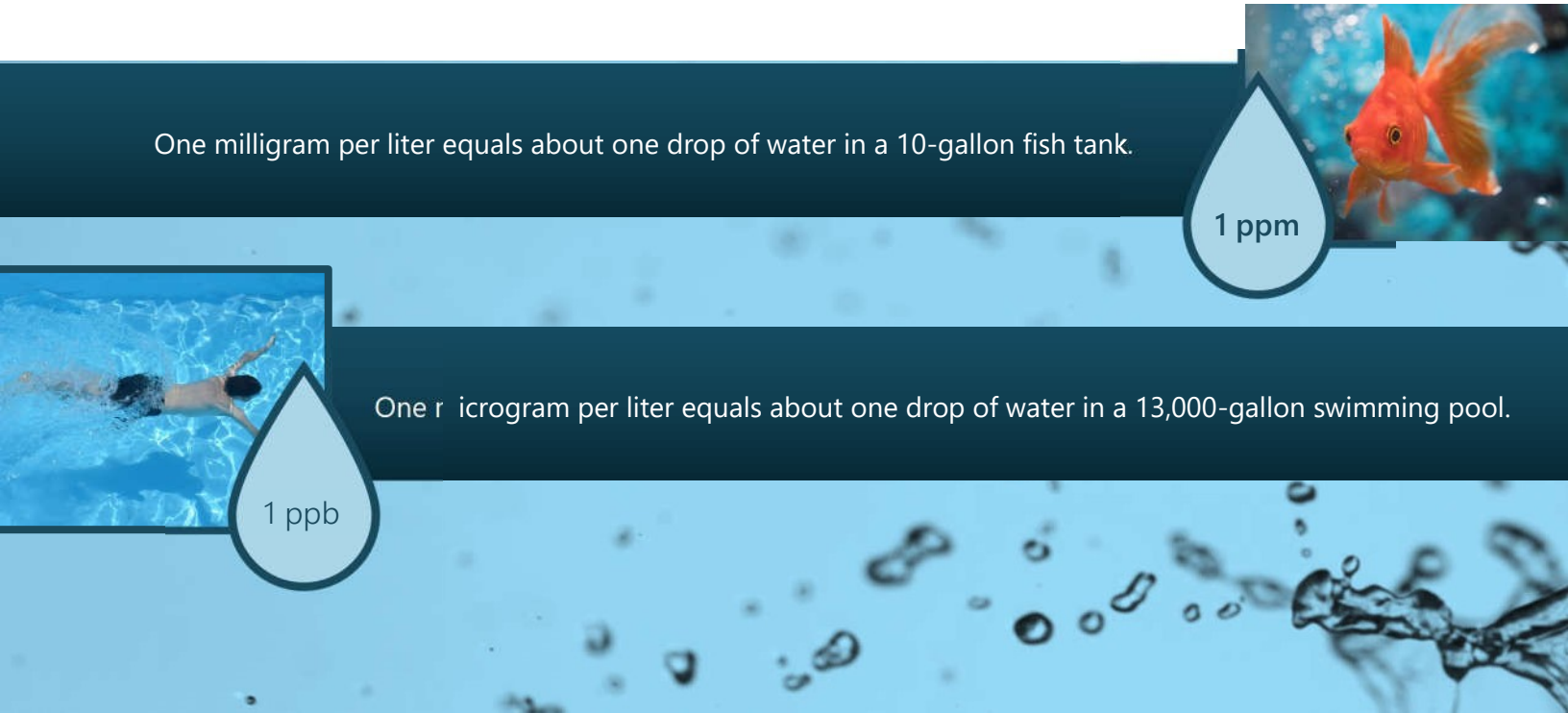
Why we test for it: Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Sources in drinking water: By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.

Sample Location	Sample Date(s)	Level Detected (Range)	Regulatory Limit (MCL/MRDL)	MCLG	Unit	Meets State Standards?
System Wide	8/22/2023	3.50	80	N/A	ug/L	☑

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.
Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Treatment Technique (TT)	A required process intended to reduce the level of a contaminant in drinking water.
Non-Detects (ND)	Laboratory analysis indicates that the constituent is not present.
Milligrams per liter (mg/L)	One part of liquid in one million parts of liquid (parts per million - ppm).
Micrograms per liter (ug/L)	One part of liquid in one billion parts of liquid (parts per billion - ppb).
Nanograms per liter (ng/L)	One part of liquid to one trillion parts of liquid (parts per trillion - ppt).
Picocuries per liter (pCi/L)	A measure of the radioactivity in water.
Millirems per year (mrem/yr)	A measure of radiation absorbed by the body.



WHAT DOES THIS INFORMATION MEAN?

The table shows that the Schreiber Water System continues to be impacted by radioactive contamination. Long-term exposure to high levels of radionuclides in drinking water may increase your risk of cancer.

2024 is the third consecutive year in which Combined Radium 226 + 228 and Gross Alpha Activity exceeded their respective MCLs.

Do I need to take special precautions?

Research has not conclusively determined a hazardous level or length of exposure to Radium or Gross Alpha. There is no immediate health effect, but long-term exposure is associated with increased risk of some types of cancer.

Some practical measures you can take to reduce your exposure include:

- Installing a home water softening system that includes ion exchange with salt regeneration
- Installing a home reverse osmosis treatment system
- Using bottled water for drinking and cooking

Although our drinking water met or exceeded all other relevant 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).

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

Yes! During 2024, our system complied with applicable State drinking water operating, monitoring and reporting requirements.

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.

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

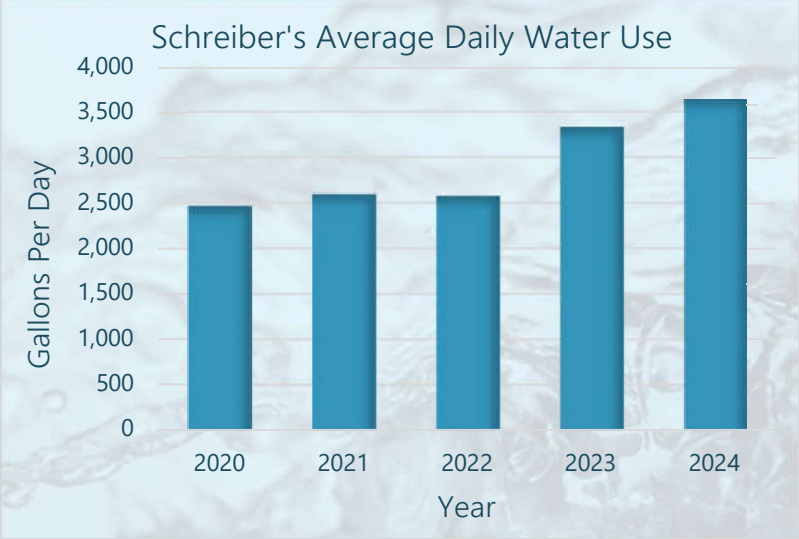
Using less water reduces the cost of treatment chemicals and electricity used in pumping water to your home. It also reduces strain on equipment, which means we need to replace wells, pumps, storage tanks, and other vital system components less often.

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 climage 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.



Every Drop Counts

Since 2020, Schreiber's water use has increased by about 40%, which adds up to over 430,000 gallons each year! Even small increases in household uses can make a big impact over time.

If you have a home water softener or filtration system, we recommend checking its performance—these systems can use extra water when they need maintenance or adjustment.

No softener? No problem! Keep reading for simple, effective ways to conserve water at home and reduce overall demand.

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.

IN CLOSING

A Message from DCWWA's Executive Director

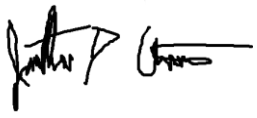
On behalf of the entire team at the Dutchess County Water and Wastewater Authority, I want to thank you for taking the time to review this Annual Water Quality Report. Our dedicated operations staff takes pride in the accurate and timely collection of thousands of water samples each year. The information in this report represents countless hours spent collecting, analyzing, and managing sample data. Presenting you with this annual synopisis of your water quality is a key part of our commitment to transparency, and we sincerely hope you find this report informative.

As the new Executive Director, a role I took on in October of 2024, I am honored to lead such a committed team of water professionals. I remain deeply focused on ensuring that our services meet the evolving needs of the people and communities we serve. As we face rising operational costs, we remain committed to controlling price increases and keeping rates as affordable as possible without compromising the quality of service you rely on.

I encourage you to reach out to our knowledgeable staff with any questions or concerns you may have about the water we provide. Your trust is important to us, and we are here to ensure that you have the data and confidence you need to make informed decisions for your family.

Thank you for your continued support. We look forward to serving you for years to come.

Sincerely,



Jonathan Churins

Executive Director
Dutchess County Water and Wastewater Authority

Frequently Asked Questions about RADIUM

What is radium?
Radium is a radioactive metal occurring naturally in trace (small) amounts in rocks, soils, and ground water. As radium decays, it continually releases energy into the environment and transforms until a stable, nonradioactive substance is formed. This energy is part of the natural radiation to which all living creatures are exposed. Radium dissolves in groundwater where acid conditions (low pH levels) are found. The naturally occurring radium isotopes most commonly found in groundwater are radium 226 and 228.

What is radioactivity and how is it measured?
Radioactive substances are unstable in nature and release energy in a process called radioactive decay. The energy can be in the form of a wave such as gamma rays; or a particle such as alpha or beta particles; or both. Scientists can identify the different types of radioactive elements by measuring the characteristics of this energy.

In the U.S., radioactivity is usually measured in units called "curies." The level of radioactivity in water is very low and is measured in picocuries (one picocurie equals one-trillionth of a curie) per liter, written pCi/L.

What are the standards for radium in drinking water?
The U.S. Environmental Protection Agency has established a maximum contaminant level (MCL) for combined radium 226 and 228 in drinking water. The MCL is a maximum permissible level of a contaminant that ensures the safety of the water over a lifetime of consumption and also takes into consideration feasible treatment technologies and monitoring capabilities. The MCL for combined radium 226 and 228 is 5 pCi/L. However, the MCL for combined radium is based on a running annual average of samples. If a single sample exceeds the MCL, the monitoring frequency is changed to quarterly. A water system is considered out of compliance if the average of four (4) quarterly samples exceeds the MCL.

What Happens if a Public Water System Exceeds the Standard for Radium?
By law NYS Sanitary Code Part 5-1, community public water systems must be monitored for radioactivity. If a public water system exceeds the standard for radium, it must take corrective actions, which include notifying those who get their water from this public water system of the possible health effects from drinking this water. The notification includes information on what the system operator is doing to remedy the situation and what precautions, if any, the people may wish to take. http://www.health.ny.gov/environmental/water/drinking/regulations

What are the health risks from radium ingestion?

Radium in water does not represent a health emergency as the only health effect expected is a small increase in the risk of developing cancer with long term consumption. Radium in water will not cause any immediate health effects.

Radium, like other natural elements of the earth's crust, may enter the body through drinking water and food. In the body, radium acts much like calcium. When swallowed, a small amount of radium attaches to bones, but most of the radium will leave the body naturally in feces or urine. The radioactive particles emitted by radium can damage parts of living tissue, which may lead to the unnatural reproduction of a cell and an increased risk of cancer.

For radium 226 and 228, the U.S. EPA estimates the additional lifetime risks associated with drinking water containing 5 pCi/L is about 1 in 10,000. This means if 10,000 people were to consume two liters of this water per day for 70 years, one additional fatal cancer would be estimated among the 10,000 exposed individuals. According to the EPA model, as the level of radium increases, so does the risk. For example, increasing the concentration of radium from 5 to 10 pCi/L would increase the lifetime risk from approximately one to two additional deaths per 10,000 individuals.

The amount of radiation associated with consuming water containing 5 pCi/L of radium for one year is comparable to one chest X-ray or the cosmic radiation received during one round trip flight from New York to California. Radium-226 emits alpha particle radiation. Alpha particles cannot travel far. They are very reactive and can be stopped by most things, including air, water, and skin, etc. Most alpha particles released by radium will disappear before inhaled. Skin will effectively stop all alpha particles as well. In addition, there are no health risks associated with bathing, washing dishes or doing laundry with water containing radium.

How Can Community Public Water Systems Correct the Problem?
Sometimes a system can find a new water source. It may also blend water from more than one source to the point that the blended water does not have unacceptable levels of radium. Another option is to install a treatment process to reduce the radium levels. Treatment options include cation exchange (which is similar to home water softening), reverse-osmosis, lime softening, and electrodialysis. In addition, studies have shown filtering water through greensand or anthracite may be effective. A water system operator will consider many factors, including cost, in deciding on an option.

Can I drink the water?

Yes. As stated above, drinking water contaminated with radium does not pose an immediate health risk. Long term exposure may result in a small increased risk of developing cancer. Persons who are concerned may consider using bottled water.

I have a serious health condition, should I be concerned?
Some individuals may be more vulnerable to contaminants in drinking water. If you have special health care needs, consider taking additional precautions with your drinking water and seek advice from your healthcare provider.

Can I use ice from my ice maker?
Yes. The ice cubes would contain radium and the risks would be the same as for drinking the water. You may wish to use bottled water for making ice if there is a concern.

Does my house filter (such as a Brita water filter) treat this issue?
Most house filters do not treat radium. Contact the manufacture to be sure.

Will the water in my hot water heater be affected? Should I flush it out?
Yes. The hot water would contain radium and risks from ingesting it would be the same as drinking cold water. Radium will not impact the heater unit.

I have washed my infant's clothing, is this safe?
There is no risk of exposure to radium through washing.

How will I know when the water system is back in compliance?
The public postings will be updated when the running annual average drops below the MCL.

Can I cook with this water?
Yes. You may wish to use bottled water if there is a concern.

Can I wash my hands, shower or bathe, or brush my teeth?
Yes, you can wash your hands, take a shower or bathe as skin contact is not a concern. Bottled water may be used to brush your teeth if there is a concern.

Can I wash my dishes with this water?
Yes, you can wash your dishes. However, wipe dry or rinse them with bottled water if there is a concern.

Can I do my laundry?
Yes, you can wash your clothes as you normally would.

Will my pet(s) be affected?
We encourage you to either check with your veterinarian or provide bottled water as a precaution.