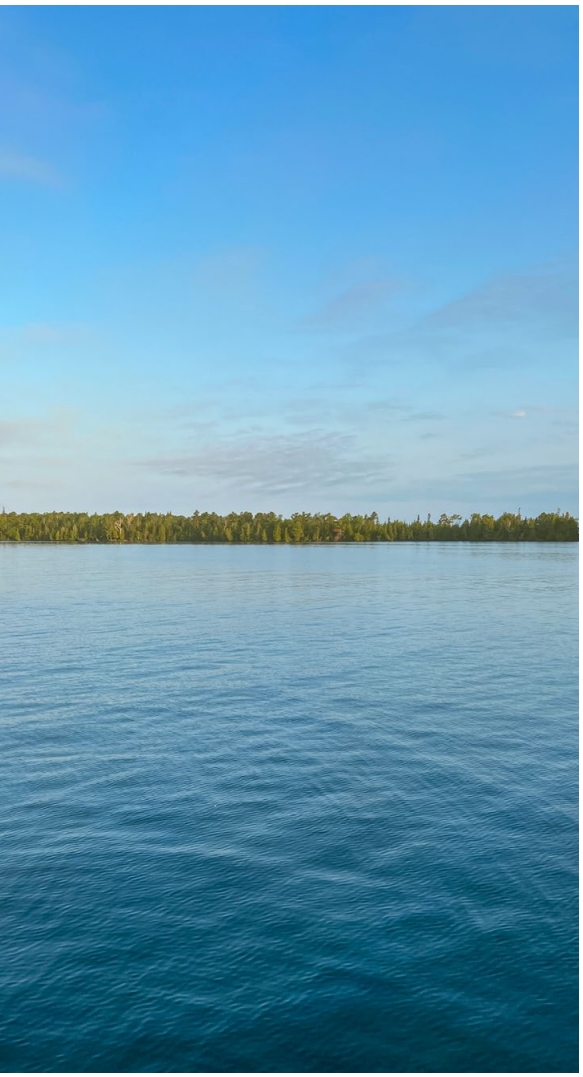
ANNUAL WATER QUALITY REPORT

Reporting Year 2024



Presented By
Rye Water District

PWS ID#: 2041010

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2024. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

Where Does Rye's Water Come From?

Rye Water District has two main sources of water: Rye production wells and water purchased from Portsmouth for customers on Wentworth Road, a section of Frontier Street, and Elizabeth Lane (off Pioneer Road).

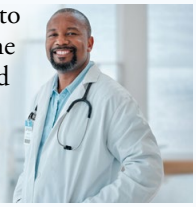
Our primary source is the Garland Well, a gravel-packed well developed in the mid-1970s which yields 400 to 470 gallons per minute (gpm). Our secondary sources are two deep-driven, high-yield bedrock wells. First is the Bailey Brook Well, developed in the early 1980s, which yields 300 to 325 gpm. Second is the Cedar Run Well, our most recent source, developed and brought online in 2004. Cedar Run Well yields 325 to 340 gpm and presently serves as an emergency backup well. Combined, these three wells supplied over 135 million gallons in 2024. The water you receive at your home is a blend of all three wells.

Community Participation

You are always invited to attend the district's monthly meetings and provide your input about your drinking water. Rye Water District Commissioners meet the first Wednesday of each month at 8:30 a.m. at the Rye Town Hall, located at 10 Central Road. Please feel free to email your questions or comments to commissioners@ryewaterdistrict.gov.

Please attend our annual meeting to vote on the water district's budget, warrant articles, and proposed projects. This meeting is normally held the last Saturday of March. See ryewaterdistrict.com for details.

Important Health Information



Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 about drinking water from their health-care providers. U.S. Environmental Protection Agency (U.S. EPA)/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791) or epa.gov/safewater.

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people: "Dump No Waste – Drains to River," or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit https://bit.ly/3IeRyXy.

Questions?

For more information about this report, or for any questions relating to your drinking water or system operations, please call Mr. Arik Jones, District Superintendent, at (603) 436-2596 or email the Rye Water District Commissioners at commissioners@ryewaterdistrict.gov. Reports and information can be viewed on ryewaterdistrict.com.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants, including per- and polyfluoroalkyl substances; synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations; urban stormwater runoff; and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

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. The Rye Water District is responsible for providing high quality drinking water and removing lead pipes but 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 Mr. Arik Jones, District Superintendent, at (603) 436-2596 or email the Rye Water District Commissioners at commissioners@ryewaterdistrict.gov. 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.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service inventory may be viewed at ryewaterdistrict.com. Please contact us if you would like more information about the inventory or any lead sampling that has been done.

Treatment Train Description

The water you receive at your tap is untreated groundwater. However, we adjust the pH of the water from the Garland Well as part of our corrosion control program. Disinfection of all water entering the distribution system is done with chlorine at a minimal dosage of 0.6 to 0.9 part per million (ppm) as required by DES.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data is included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic[1] (ppb)	2024	5	0	ND	ND–1	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium[1] (ppm)	2024	2	2	0.031	0.0114–0.0314	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Combined Radium[2] (pCi/L)	2023	5	0	0.6	0.4–0.6	No	Erosion of natural deposits
Fluoride[1] (ppm)	2024	4	4	ND	ND–0.25	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate[3] (ppm)	2023	10	10	3	ND–3.1	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Perfluorohexanesulfonic Acid [PFHxS][3] (ppt)	2024	18	0	1.66	0.636–1.66	No	Discharge from industrial processes; wastewater treatment; residuals from firefighting foam; runoff/ leachate from landfills and septic systems
Perfluorooctanesulfonate Acid [PFOS][3] (ppt)	2024	15	0	6.73	1.79–6.73	No	Discharge from industrial processes; wastewater treatment; residuals from firefighting foam; runoff/ leachate from landfills and septic systems
Perfluorononanoic Acid [PFNA][2] (ppt)	2024	11	0	1.66	1.6–1.66	No	Discharge from industrial processes; wastewater treatment; residuals from firefighting foam; runoff/ leachate from landfills and septic systems
Perfluorooctanoic Acid [PFOA][3] (ppt)	2024	12	0	6.7	2.55–6.7	No	Discharge from industrial processes; wastewater treatment; residuals from firefighting foam; runoff/ leachate from landfills and septic systems

Tap water samples were collected for lead and copper analyses from sample sites throughout the community[4]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2024	1.3	1.3	0.102	NA	1/20	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2023	15	0	ND	NA	0/20	No	Corrosion of household plumbing systems; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride[1] (ppm)	2024	250	NA	56	37–63	No	Runoff/leaching from natural deposits
Iron[1] (ppb)	2024	300	NA	2,700	ND–4,850	No	Leaching from natural deposits; industrial wastes
Manganese[1] (ppb)	2024	50	NA	250	ND–264.6	No	Leaching from natural deposits
Sodium[1] (ppm)	2024	100-250	NA	96	56.6–105	No	Naturally occurring
Sulfate[1] (ppm)	2024	250	NA	72	46–78	No	Runoff/leaching from natural deposits; industrial wastes
Zinc[1] (ppm)	2024	5	NA	0.026	0.026–0.3	No	Runoff/leaching from natural deposits; industrial wastes

[1] Sample taken from Cedar Run Well. [2] Sample taken from Bailey Brook Well. [3] Sample taken from Garland Well. [4] Twenty annual samples collected.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

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 using the best available treatment technology.

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.

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.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (µg/L) (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (mg/L) (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (ng/L) (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

Source Water Assessment Summary

New Hampshire Department of Environmental Services (DES) prepared drinking water source assessment reports for all public water systems between 2000 and 2003 in an effort to assess the vulnerability of every state public water supply source. Included in the report are a map of each source water protection area, a list of potential and known contamination sources, and a summary of available protection options. The results of the assessment, prepared on May 2, 2002, and November 12, 2004, are noted below.

- Garland Well: Three susceptibility factors were rated high, four were rated medium, and five were rated low.
- Bailey Brook Well: One susceptibility factor was rated high, four were rated medium, and seven were rated low.
- Cedar Run Well: One susceptibility factor was rated high, four were rated medium, and seven were rated low.

This assessment is over 10 years old and includes information that was current at the time the report was completed. Therefore, some of the ratings might be different if updated to reflect current information. At the present time, DES has no plans to update this data.

The complete assessment is available for review at the Rye Water District office, 60 Sagamore Road. For more information, call (603) 436-2596 or visit the DES Drinking Water Source Assessment website, https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/rye.pdf and click Part 1. To view an assessment table by town, search for Rye.