

ANNUAL WATER QUALITY REPORT

Reporting Year 2023

For more information on lead and drinking water, please visit www.provwater.com/lead

Presented By



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PWS ID#: RI1592024

Message from the General Manager

It is my pleasure to present the Providence Water Annual Water Quality Report which provides the results of water quality testing performed in the year 2023. This report contains details about our water and how it compares to standards set by regulatory agencies.



Providence Water does not have any lead in our source water or our transmission system. In addition, the treated drinking water that leaves our treatment plant in Scituate and is distributed through our system has no detectable levels of lead. Over the past 16 years, Providence Water has invested approximately \$84 million replacing public lead service lines. In 2023, we implemented an Accelerated Lead Service Line Replacement Program as part of our ongoing efforts to reduce lead at the tap. The goal of the program is to replace all lead service lines in our distribution system within 10 years in accordance with Rhode Island law and subject to available funding.

Providence Water remains committed to providing affordable, high-quality drinking water to you and your family. If you have any questions about your drinking water, please contact our Water Quality Hotline at 401-521-6303.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality may deteriorate in areas of the distribution system over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through them. Flushing removes sediments that may accumulate in the pipes over time. These sediments can affect the taste, clarity, or color of the water. During flushing operations in your neighborhood, you may notice some short-term increases in the color and iron level in your cold water. You should avoid using your tap water for household purposes during this period, as it may cause minor staining of fixtures and laundry. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water to prevent sediment accumulation in your hot water tank.

Public Participation

Meetings of the Providence Water Board of Directors are open to the public and normally scheduled on the third Wednesday of each month. Meetings begin at 5:15 p.m. and are held in the David F. Walsh Memorial Boardroom at our Central Operations Facility, located at 125 Dupont Drive, Providence.



Barden Reservoir

Source Water Assessment

In 2023 Providence Water formally assessed the threats to the Scituate Reservoir. The assessment considered land use, pollution sources, and overall reservoir condition. The assessment confirmed that the Scituate Reservoir is at medium risk of contamination and identified the most common potential pollutants as agricultural and automotive. Providence Water is continuing with protection efforts necessary to provide our customers with the highest level of water quality. The 2023 Source Water Assessment report is available at provwater.com/swap.

Where Does My Drinking Water Come From?

Your drinking water comes entirely from surface water reservoirs located in a 93-square-mile, mostly rural, forested watershed basin located primarily in Scituate. The main source of this water supply is the Scituate Reservoir, which is the terminal reservoir in a network of six interconnected reservoirs: the Scituate, Regulating, Barden, Ponaganset, Westconnaug, and Moswansicut Reservoirs.

QUESTIONS?

U.S. Environmental Protection Agency (U.S. EPA) Hotline:
(800) 426-4791

Rhode Island Department of Health, Drinking Water Quality: (401) 222-6867

Providence Water:

Billing Inquiries: (401) 521-5070

Emergency Leak: (401) 521-6300, Option 1

Laboratory: (401) 521-5073

Water Quality Hotline: (401) 521-6303

Lead in Home Plumbing

If present, elevated levels of 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. Providence Water is responsible for providing high-quality drinking water to your service connection, but we cannot control the variety of materials used in plumbing components.



You can minimize the potential for lead exposure by flushing your cold water tap to rid your home's plumbing of water that may have been in contact with lead-based pipes, solder, or brass in your home. If water has been sitting for more than several hours, run the cold water tap for 3-5 minutes before using water for drinking or cooking. If you have used toilets, washing machines, or bathtubs, a 3-5 minute flush may not be necessary. For drinking or cooking, however, you should always flush the cold water tap for at least 30 seconds.

If you are concerned about lead in your water, Providence Water customers can call our Water Quality Hotline at (401) 521-6303 to have a free lead test kit mailed to their home or business. Information on lead in drinking water, testing methods, and things you can do to minimize lead exposure is available from provwater.com/lead and the Safe Drinking Water Hotline at (800) 426-4791.

In 2023 Providence Water initiated an accelerated lead service replacement program, the goal of which is to replace all lead service lines within 10 years. This program uses federal and state funding to make lead service line replacements **free** for eligible locations. To see if your property is eligible for a free lead service line replacement, go to provwater.com/lead, or call our Lead Service Line Replacement Hotline at (401) 575-0076, or email PWLeadFree@cdmsmith.com. If you are not currently eligible, you may qualify for a 10-year, zero-interest loan.

In 2023 Providence Water analyzed lead concentrations in 606 water samples collected from homes in our retail area as required by state and federal regulations. There is no maximum contaminant level (MCL) for lead. The U.S. EPA determines a lead exceedance based on whether 90 percent of the homes tested have concentrations greater than the action level (AL) of 15 parts per billion (ppb). In the first half of 2023, this 90th-percentile value was 3 ppb. In the second half, the 90th-percentile value was 2 ppb.

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 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 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.

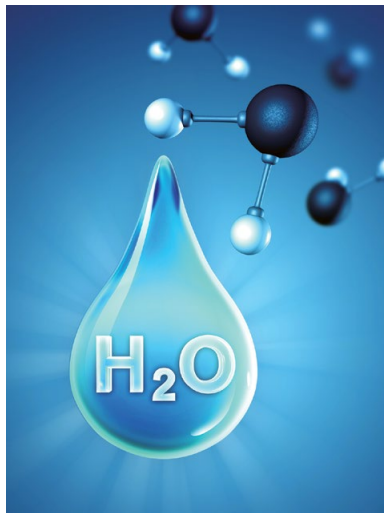
This report is available online at www.provwater.com/waterqualityreport. If you wish to have a paper copy, you can print one directly from our website. You can also get a printed version by contacting us at 401-521-6303.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

El informe también está disponible en español en línea en www.provwater.com/waterqualityreport. Si usted desea tener una copia en papel, puede imprimir una directamente desde nuestro sitio web. También puede obtener una versión impresa poniéndose en contacto con nosotros por al 401-521-6303.

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 may be particularly at risk from infections. These people should seek advice



about drinking water from their health care providers. The 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 at (800) 426-4791 or water.epa.gov/drink/hotline.

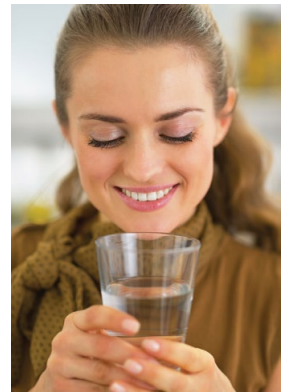
Providence Water
125 Dupont Drive
Providence, RI 02907
(401) 521-6300
www.provwater.com

Monitoring and Reporting Violation

Providence Water received a reporting violation for the monitoring period of June 1 – June 30, 2023. During this time period Providence Water collected and analyzed one water sample for total organic carbon, however the sample result was reported with an incorrect sample identification number. The sample result was resubmitted and accepted with the correct sample identification number.

Water Distribution System Rehabilitation

The Providence Water system is composed of approximately 1,080 miles of transmission and distribution mains ranging in diameter from 6 to 102 inches. Like many older water systems, a large portion of the transmission and distribution system is composed of water mains where the interior surface is bare cast iron with no protective coating. As the system ages, these mains experience internal corrosion. Since around 1950, all newly installed cast and ductile iron water mains have been coated with a protective cement lining. Almost all the water mains installed before 1950 were of the unlined variety, and it is estimated that about 55 percent, or 550 miles, of these mains were unlined cast iron, with about 40 to 50 percent installed prior to 1900. Water main rehabilitation has been part of Providence Water's Infrastructure replacement program since its inception in 1996. Since then, Providence Water has reinvested \$613.5 million into the system (capital improvements and infrastructure replacement combined), during which time it has expended about \$195 million on the rehabilitation of approximately 792,000 feet (150 miles).



What's in My Water

During 2023 Providence Water tested thousands of water samples to determine the presence of any biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those substances that were detected in the water and exactly how much of each substance was present.



REGULATED SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | MCL [MRDL] | MCLG [MRDLG] | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
|---|--------------|------------------------------------|--------------|-----------------|----------------|-----------|---|
| Barium (ppm) | 2023 | 2 | 2 | 0.008 | NA | No | Erosion of natural deposits |
| Chlorine (ppm) | 2023 | [4] | [4] | 0.52 | <0.01–1.27 | No | Water additive used to control microbes |
| Fluoride (ppm) | 2023 | 4 | 4 | 0.78 | 0.60–0.78 | No | Erosion of natural deposits; Water additive which promotes strong teeth |
| Haloacetic Acids [HAAs]–Stage 2¹ (ppb) | 2023 | 60 | NA | 20.5 | 11.8–22.2 | No | By-product of drinking water disinfection |
| Total Coliform Bacteria² (percent positive samples) | 2023 | TT | NA | 0.61 | NA | No | Naturally present in the environment |
| Total Organic Carbon [TOC]³ (removal ratio) | 2023 | TT | NA | 1.72 | 1.65–1.93 | No | Naturally present in the environment |
| TTHMs [total trihalomethanes]–Stage 2¹ (ppb) | 2023 | 80 | NA | 68.0 | 34.2–70.1 | No | By-product of drinking water disinfection |
| Turbidity⁴ (NTU) | 2023 | TT | NA | 0.55 | NA | No | Soil runoff |
| Turbidity (lowest monthly percent of samples meeting limit) | 2023 | TT = 95% of samples meet the limit | NA | 99.99 | NA | No | Soil runoff |

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

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL | MCLG | AMOUNT DETECTED (90TH %ILE) | SITES ABOVE AL/ TOTAL SITES | VIOLATION | TYPICAL SOURCE |
|-----------------------------|--------------|-----|------|-----------------------------|-----------------------------|-----------|--|
| Copper (ppm) | 2023 | 1.3 | 1.3 | 0.02 | 0/305 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 2023 | 15 | 0 | 3 | 2/305 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

UNREGULATED SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH | TYPICAL SOURCE |
|-----------------------------|--------------|-----------------|----------------|--|
| Sodium (ppm) | 2023 | 15.0 | NA | Runoff from road deicing operations; Erosion of natural deposits |

¹ Compliance is based on the highest quarterly locational running annual average, and range is based on the lowest and highest individual measurement.

² This value refers to the highest monthly percentage of positive samples detected during the year. For 2023 Providence Water collected 2,012 samples for Total Coliform Rule compliance monitoring. One of these samples was positive for total coliform bacteria. None were positive for *E. coli*.

³ The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements. Detected level is the lowest removal ratio per quarter. Range is the lowest and highest removal ratio per month.

⁴ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

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.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

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

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.