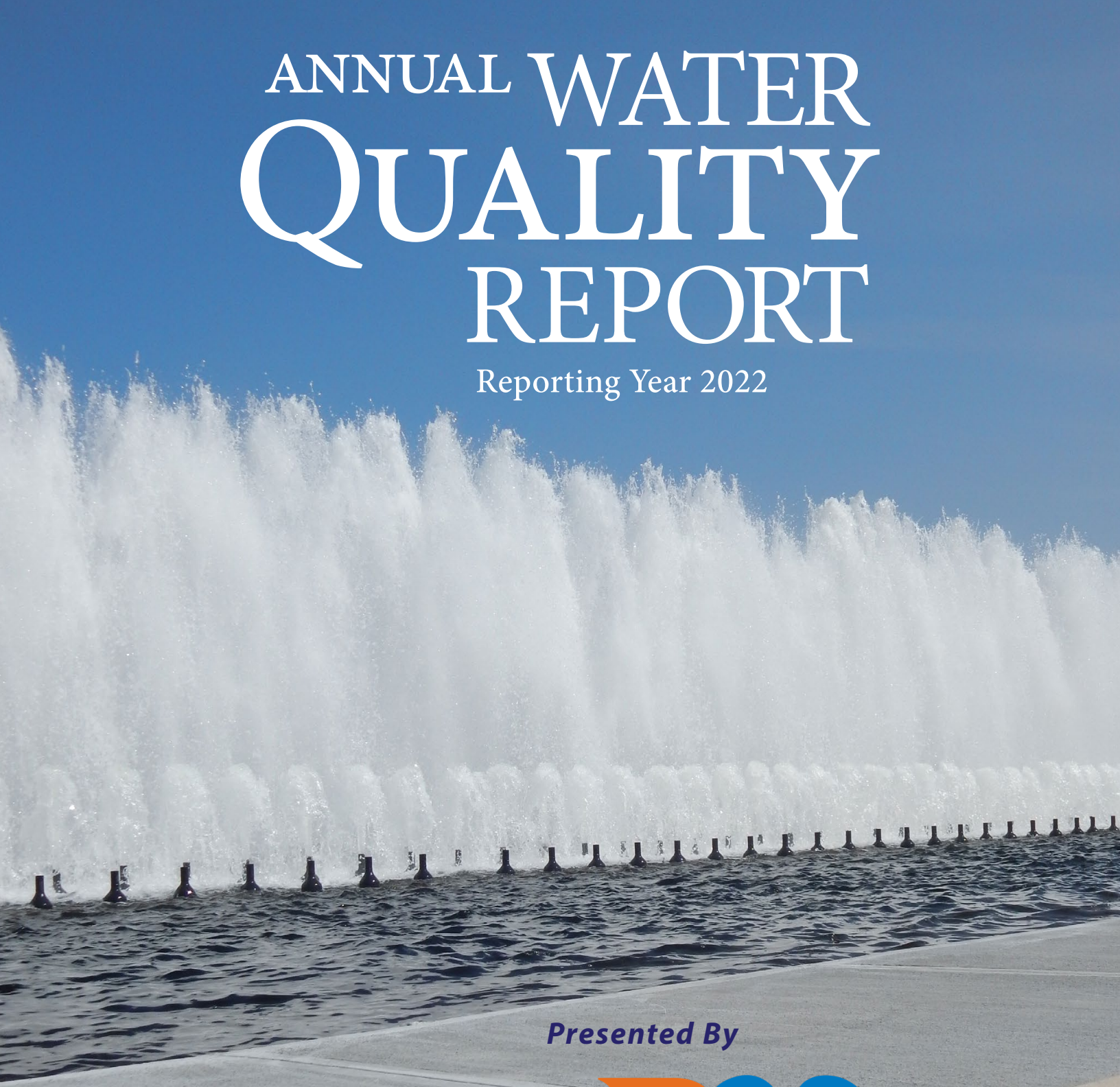
ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By

PROVIDENCE WATER

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 el 401-521-6303.

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.

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

PWS ID#: RI1592024

Message from the General Manager

It is my pleasure to present the Providence Water Annual Water Quality Report which details information about our water quality testing performed during the year of 2022. At Providence Water, we are dedicated to producing affordable, high-quality drinking water that meets or exceeds all state and federal regulations.

The drinking water that leaves the treatment plant in Scituate and is distributed through the Providence Water system has no detectable levels of lead. In the communities that we serve, some of the pipes that connect older homes to the water main in the street are made from lead. Even if you do not have a lead service line, your plumbing fixtures such as faucets and pipe solder can contain small amounts of lead. There is no safe amount of lead exposure, which is why Providence Water has been working hard for many years to address lead at the tap.

Over the last 15 years, we have spent approximately $76 million replacing public lead service lines. We have also made changes to the water treatment process to make the water less corrosive in an effort to reduce lead levels in some homes. Providence Water developed a lead service line replacement program, created a ten-year zero-interest loan program for our customers to replace private lead service lines and has been working to obtain grant funding for private lead service line replacement. In 2022, Providence Water replaced more than 900 service lines in our system, with almost 500 private side lead service lines in economically disadvantaged areas being replaced at no cost to homeowners due to the grant funding obtained by Providence Water.

As we look towards the future, we will continue to invest in our infrastructure and innovative technology to ensure the safety, reliability and sustainability of our water supply for many generations to come. If you have any questions about your drinking water, please call our Water Quality Hotline at 401-521-6303.

Ricky Caruolo, General Manager

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/CDC (Centers for Disease Control and Prevention) 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 http://water.epa.gov/drink/hotline.

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 at 5:15 p.m. in the David F. Walsh Memorial Boardroom at our Central Operations Facility, 125 Dupont Drive, Providence.

Source Water Assessment

In 2017 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 system is at medium risk of contamination. Providence Water is continuing with protection efforts necessary to provide our customers with the highest level of water quality. The 2017 Source Water Assessment report is available on the Providence Water website at http://www.provwater.com/swap.

Barden Reservoir

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. 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

Water Quality Hotline (401) 521-6303

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;

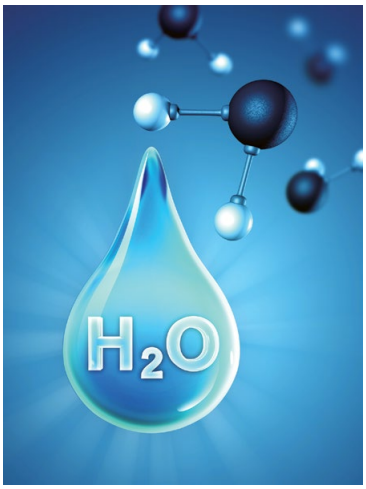
Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

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

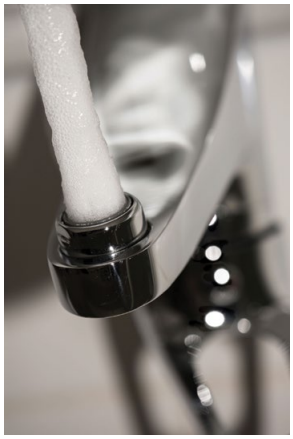
Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

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.



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 until the water gets significantly colder and then for another minute (usually three to five minutes total) before using water for drinking or cooking. If you have used toilets, washing machines, or bathtubs, a three- to five-minute flush may not be necessary. For drinking or cooking, however, you should always flush the cold water tap for at least 30 seconds.

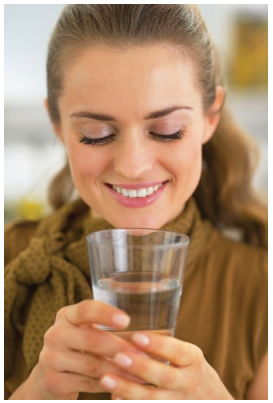
If you are concerned about lead in your water, Providence Water customers can call our Water Quality Hotline at (401) 521-6303 to have a free lead test kit mailed to their home or business. Information on lead in drinking water, testing methods, and things you can do to minimize lead exposure is available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

To find out if you have a lead service line, visit our website at www.provwater.com/lead, where you can view our service location map. If you have a lead service line, call our Water Quality Hotline at (401) 521-6303 for information on current lead service line replacement funding options.

In 2022 Providence Water analyzed lead concentrations in 613 water samples collected from homes in our retail area. 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 lead levels greater than the action level (AL) of 15 parts per billion (ppb). In the first half of 2022, this 90th-percentile value was 6 ppb. In the second half, the 90th-percentile value was 4 ppb.

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 the mains. 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.



What's In My Water

During the calendar year 2022, 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.

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 are included, along with the year in which the sample was taken.

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that do not yet have a drinking water standard set by the U.S. EPA. The purpose of monitoring for these contaminants is to help the U.S. EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that this data is available. If you are interested in examining the results, please contact Providence Water at (401) 521-6303 or 125 Dupont Drive, Providence, RI 02907

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2022	2	2	0.009	NA	No	Erosion of natural deposits
Chlorine (ppm)	2022	[4]	[4]	0.56	<0.01–1.40	No	Water additive used to control microbes
Fluoride (ppm)	2022	4	4	0.85	0.52–0.85	No	Erosion of natural deposits; Water additive which promotes strong teeth
Haloacetic Acids [HAAs]–Stage 2 (ppb)[1]	2022	60	NA	23.2[1]	5.3–24.3	No	By-product of drinking water disinfection
Nitrate (ppm)[2]	2022	10	10	0.06	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria (% positive samples)[3]	2022	TT[3]	NA	0.62	NA	No	Naturally present in the environment
Total Organic Carbon (removal ratio)[4,5]	2022	TT[4]	NA	1.69[5]	1.56–1.86	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)[1]	2022	80	NA	76.2[1]	24.3–73.0	No	By-product of drinking water disinfection
Turbidity (NTU)[6]	2022	TT	NA	1.67[6]	0.03–1.67	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit	NA	99.86	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)	2022	1.3	1.3	0.021	0/308	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2022	15	0	6	9/308	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
Bromochloroacetic Acid (ppb)	2018	1.85	0.4–2.79	By-product of drinking water chlorination
Manganese (ppm)	2018	0.0008	0.0005–0.001	Erosion of natural deposits
Sodium (ppm)	2022	14.4	NA	Runoff from road deicing operations; Erosion of natural deposits

[1] Compliance is based on the highest quarterly locational running annual average (LRAA); range is the lowest and highest individual measurement.

[2] Nitrate was detected in a single sample of source water.

[3] Highest monthly percentage of positive samples detected during the year. In 2022 Providence Water collected 2,035 samples for Total Coliform Rule compliance monitoring. Two of these samples were positive for total coliform bacteria. None were positive for *E. coli.*

[4] The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed to 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.

[5] Lowest removal ratio per quarter. Range is the lowest and highest removal ratios per month.

[6] Highest single turbidity measurement recorded. The average turbidity value for 2022 was <0.10 NTU.

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 having been 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 $582 million into the system (capital improvements and infrastructure replacement combined), during which time it has expended about $184 million on the rehabilitation of approximately 765,000 feet (145 miles).

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.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection By-Products Rule.

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.