ANNUAL WATER QUALITY REPORT

Reporting Year 2023

Presented By

Woonsocket Water Division

PWS ID#: RI1559518

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, 2023. 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.

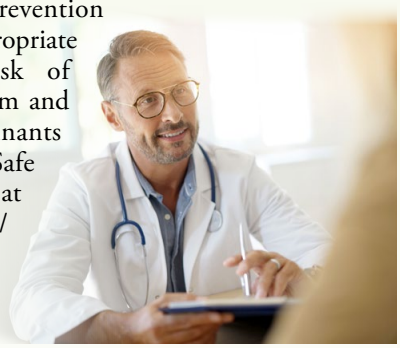
Source Water Assessment

The Rhode Island Department of Health, in cooperation with other state and federal agencies, has assessed the threats to Woonsocket's water supply sources. The assessment considered the intensity of development, the presence of businesses and facilities that use, store, or generate potential contaminants, the ease with which contaminants can move through the soils in the source water protection area, and the sampling history of the water.

Our monitoring program continues to ensure that the water delivered to your home is safe and wholesome. However, the assessment found that the water source is at moderate risk of contamination. This means that the water could one day become contaminated. Protection efforts are necessary to ensure continued water quality. The complete Source Water Assessment Report is available from Woonsocket Water Division at (401) 767-1411, from HEALTH at (401) 222-6867, or at https://health.ri.gov/publications/assessments/WoonsocketWaterDept.pdf.

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. Environmental Protection Agency (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 http://water.epa.gov/drink/hotline.



What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection. For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

Where Does My Water Come From?

Woonsocket Water Division uses surface water from the Crookfall Brook and Harris Pond watersheds. The Crookfall Brook watershed extends over approximately 7.93 square miles. It is a protected, high-quality, primary source of supply for the Woonsocket Treatment Plant. Harris Pond has a watershed area of approximately 33.3 square miles and is used as a supplemental source as needed. Woonsocket maintains an active watershed protection program and closely monitors the watershed lands to protect water quality.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Marc Viggiani, Water Division Superintendent, at (401) 767-1411 or visit www.woonsocketri.org.

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.

> **"When the well is dry, we know the worth of water."**
>
> *—Benjamin Franklin*

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.

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit http://bit.ly/3Z5AMm8.

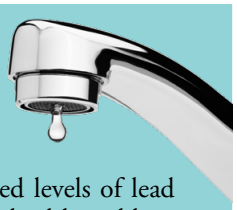
Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 40 percent of bottled water is actually just tap water, according to government estimates.

The Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water. For a detailed discussion on the NRDC study results, visit https://goo.gl/Jxb6xG.

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. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.

How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is drawn from our water source into the treatment plant. Chemicals are added to initiate the next process, called coagulation and flocculation, which combines unwanted substances with the added chemicals to create small particles. This process is followed by clarification, where these small particles are floated to the top using dissolved air flotation and skimmed from the top of the basin. The clear supernatant is then filtered through a carbon filter that removes the smaller suspended particles. After filtration, the water undergoes disinfection, fluoride addition (to prevent tooth decay), corrosion inhibitor addition, and pH adjustment before it is pumped out into the distribution system.

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 can deteriorate in areas of the distribution mains 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 maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. 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. Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

BY THE NUMBERS

5.1 TRILLION
The dollar value needed to keep water, wastewater, and stormwater systems in good repair.

12 THOUSAND
The average amount in gallons of water used to produce one megawatt-hour of electricity.

2
How often in minutes a water main breaks.

47.5 TRILLION
The amount in gallons of water used to meet U.S. electric power needs in 2020.

1.7 TRILLION
The gallons of drinking water lost each year to faulty, aging, or leaky pipes.

33
The percentage of water sector employees who will be eligible to retire in 2033.

About Our Five Violations

1. State Reporting Violation: Failure to submit a satisfactory monitoring report by the due date for the January 2023 monitoring period.

   Total organic carbon (TOC) for two sample points and alkalinity for one sample point were not uploaded electronically by the due date of April 10, 2023. Reporting was correctly uploaded on October 20, 2023.

2. State Reporting Violation: Failure to submit a satisfactory monitoring report by the due date for the March 2023 monitoring period.

   TOC for two sample points and alkalinity for one sample point were not uploaded electronically by the due date of April 10, 2023. Reporting was correctly uploaded on October 20, 2023.

3. State Reporting Violation: Failure to submit a satisfactory monitoring report by the due date for the May 2023 monitoring period.

   TOC for two sample points and alkalinity for one sample point were not uploaded electronically by the due date of July 10, 2023. Reporting was correctly uploaded on October 20, 2023.

4. State Reporting Violation: Failure to submit a satisfactory monitoring report by the due date for the June 2023 monitoring period.

   TOC for two sample points and alkalinity for one sample point were not uploaded electronically by the due date of July 10, 2023. Reporting was correctly uploaded on October 20, 2023.

5. State Reporting Violation: Failure to submit a satisfactory monitoring report by the due date for the July 2023 monitoring period.

   Chlorite results for the distribution system samples were not uploaded electronically by the due date of August 10, 2023. Reporting was correctly uploaded on October 20, 2023.

Public Meetings

For public comment on an ongoing basis, customers can contact the office of Mayor Christopher Beauchamp or attend the Woonsocket City Council meetings. The council holds hearings on budget and other financial matters, approves contracts, and considers ordinances that create or amend local laws. Some of these matters affect the operation of the Woonsocket Water Division. The council meets on the first and third Monday of every month at 7:00 p.m. in Harris Hall, City Hall, 169 Main Street. The meetings are televised live on Cox Cable Channel 17 and Verizon Fios Channel 22. Public comment is welcome.

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.

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).

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

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

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

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

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, detected below the laboratory detection limits, 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. We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

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.

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	0.032[1]	0.008–0.032[1]	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Benzo(a)pyrene [PAH] (ppt)	2021	200	0	200[1]	ND–200[1]	No	Leaching from linings of water storage tanks and distribution lines
Chlorine (ppm)	2023	[4]	[4]	0.40	ND–2.83	No	Water additive used to control microbes
Chlorine Dioxide (ppb)	2023	[800]	[800]	40.00	ND–40.00	No	Water additive used to control microbes
Chlorite (ppm)	2023	1	0.8	0.54	0.01–0.54	No	By-product of drinking water disinfection
Chromium (ppb)	2021	100	100	1.0[1]	ND–1.0[1]	No	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	2022	200	200	65[1]	ND–65[1]	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	2023	4	4	0.89	0.39–0.89	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2023	60	NA	27.1	4.3–27.1	No	By-product of drinking water disinfection
Nitrate (ppm)	2023	10	10	0.150[1]	ND–0.150[1]	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon [TOC] (removal ratio)	2023	TT[2]	NA	1.59	1.40–1.92	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80[3]	NA	103	17.8–103	No	By-product of drinking water disinfection
Turbidity[4] (NTU)	2023	TT	NA	0.318	0.019–0.318	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	99.45	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	0.065	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2023	15	0	9.3	3/30	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
Aluminum (ppb)	2022	200	NA	102	ND–186	No	Erosion of natural deposits; Residual from some surface water treatment processes
Manganese (ppb)	2023	50	NA	30	10–70	No	Leaching from natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2023	61.4	34.3–89.1	Naturally occurring; Compounds used for deicing roads

UCMR 4

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromide (ppb)	2019	21.1	ND–32.5	Naturally occurring; Discharge from fossil fuel power plants
HAA5 (ppb)	2019	22.043	16.24–30.25	By-product of drinking water disinfection
HAA6Br (ppb)	2019	9.373	6.238–12.041	By-product of drinking water disinfection
HAA9 (ppb)	2019	30.19	22.478–40.540	By-product of drinking water disinfection
Manganese (ppb)	2019	77.2[1]	33.7–109.0[1]	Naturally present in the enviroment
TOC (ppb)	2019	5,290.0[1]	3,110.0–7,150.0[1]	Naturally present in the enviroment

UCMR 5 WITH ADDITIONAL RIDOH SAMPLING

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2023	0.19	ND–3.18	Industrial facility where PFAS were produced or used to manufacture foam used for firefighting
Perfluorobutanoic Acid [PFBA] (ppt)	2023	0.39	ND–6.70	Industrial facility where PFAS were produced or used to manufacture foam used for firefighting
Perfluoroheptanoic Acid [PFHpA] (ppt)	2023	0.40	ND–3.7	Industrial facility where PFAS were produced or used to manufacture foam used for firefighting
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	2019	1.51	ND–4.55	Foam for firefighting
Perfluorohexanoic Acid [PFHxA] (ppt)	2023	0.79	ND–5.00	Industrial facility where PFAS were produced or used to manufacture foam used for firefighting
Perfluorooctanoic Acid [PFOA] (ppt)	2023	0.34	ND–5.80	Industrial facility where PFAS were produced or used to manufacture foam used for firefighting
Perfluorooctanesulfonic Acid [PFOS] (ppt)	2019	4.80	ND–6.93	Industrial facility where PFAS were produced or used to manufacture foam used for firefighting
Perfluoropentanoic Acid [PFPeA] (ppt)	2023	2.37	ND–7.50	Industrial facility where PFAS were produced or used to manufacture foam used for firefighting

[1] Raw, untreated surface water sampling.
[2] The value reported under amount detected for TOC is the ratio between percentage of TOC actually removed to percentage required to be removed. A value greater than 1 indicates the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation.
[3] 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 system and may have an increased risk of getting cancer.
[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.