

UNIVERSITY OF RHODE ISLAND

Annual Water Quality Report

Covering Calendar Year - 2023

This report is a summary of the quality of the water that we provided in 2023. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. We are proud to report that your drinking water complies with regulatory standards. If you would like to learn more about our decision-making processes that affect drinking water quality, please call Matthew Simeone, Water System Manager, Facilities Operations at 401-874-4203 or via email at matthew_simeone@uri.edu. You may also visit our website at www.uri.edu/facilities and click on the utilities tab.

Your water comes from:

Source Name	Source Water Type	Location
WELL #2	Ground Water	Chipuxet Aquifer
WELL #3	Ground Water	Chipuxet Aquifer
WELL #4	Ground Water	Chipuxet Aquifer

The University of Rhode Island, Kingston Campus owns and operates its own water system. The system draws from three high volume wells, located in the Chipuxet ground water aquifer. We disinfect the drinking water through chlorination and adjust pH. From the wells and associated pump stations, treated water is pumped into the distribution network. Treated water to meet demand is also stored in an elevated storage tank. We are interconnected with our neighboring water system, Kingston Water District, providing added reliability to both systems.

The RI Department of Health, in cooperation with other state and federal agencies, has assessed the threats to URI's water supply sources. The assessment considered the intensity of development, the presence of businesses and facilities that use, store, and generate potential contaminants, how easily contaminants may move through the soils in the source water protection area, and the sampling history of the water.

Our monitoring program continues to assure that the water delivered to you is safe and wholesome. However, the assessment found that the water source is at MODERATE RISK of contamination. This rating is primarily based on land use in and around the aquifer. Monitoring and protection efforts are necessary to assure continued water quality. Our active source protection program routinely surveys, monitors and protects the aquifer. The complete Source Water Assessment Report is available from the University of Rhode Island or the Department of Health at (401) 222-6867.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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. EPA/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).

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that we test for include:

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

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water 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 storm water run-off, agriculture, and residential users.

Radioactive contaminants, which can be naturally occurring or the result of mining activity.

Organic contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and come from gas stations, urban storm water run-off, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

In addition to testing for over 133 contaminants, our water system is required to test a minimum of 20 samples per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

Water Quality Data

The following table lists all the drinking water contaminants which were detected during the 2023 calendar year. The presence of these contaminants does not necessarily indicate the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1- December 31, 2023. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. The presence of a substance in the water does not necessarily indicate that it poses a health risk. For those substances monitored less frequently the most recent test results are listed.

2023 Water Quality Results

The following table lists all the drinking water contaminants which were detected during the 2023 calendar year.

Regulated Contaminants

Contaminant	Collection Date	Highest Value	Range (low-high)	Unit	MCL	MCLG	Violation	Typical Source
Total Coliform Bacteria	2023	No total coliform bacteria detected in the 240 distribution samples that were collected and analyzed in 2023				0	No	Naturally present in the environment
Chlorine Residual	2023	0.251	Avg= 0.193	ppm	MRDL=4	MRDLG=4	No	Water additive used to control microbes
Total Trihalomethanes	9/28/2023 (Barlow Hall)		4.5	ppb	80	0	No	Byproduct of drinking water disinfection
Total Trihalomethanes	9/28/2023 (Swan Hall)		7.6	ppb	80	0	No	Byproduct of drinking water disinfection
Copper	9/21/2021	90 th Percentile=0.233	0 sites above AL	ppm	AL=1.3	1.3	No	Corrosion of household plumbing systems
Lead	9/21/2021	90 th Percentile=4.2	0 sites above AL	ppb	AL=15	0	No	Corrosion of household plumbing systems
Barium	3/13/2023	0.03	0.007-0.03	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	3/13/2023	0.49	<0.20-0.49	ppm	4	4	No	Natural deposits
Nitrate	3/13/2023	3.22	1.10 - 3.22	ppm	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
PFAS Compounds	Collection Date	Detected Level	Range (low-high)	Unit	MCL	MCLG	Violation	Typical Source
Total RI Regulated PFAS (Sum of 6)	6/15/2023	25.7	N/A	ppt	20	0	Yes	Cleaning products, paints, fire-fighting foams, stain- and water-resistant fabrics and carpeting, cookware, and food packaging.
Total RI Regulated PFAS (Sum of 6)	7/6/2023	31.9	N/A	ppt	20	0	Yes	Cleaning products, paints, fire-fighting foams, stain- and water-resistant fabrics and carpeting, cookware, and food packaging.
Total RI Regulated PFAS (Sum of 6)	11/15/2023	26.9	N/A	ppt	20	0	Yes	Cleaning products, paints, fire-fighting foams, stain- and water-resistant fabrics and carpeting, cookware, and food packaging.
Radiological Compounds	Collection Date	Detected Level	RL	Unit	MCL	MCLG	Violation	Typical Source
Radium-226	3/13/2023	<1.00	1.00	pCi/L	5	0	No	Erosion of natural deposits
Radium-228	3/13/2023	<1.00	1.00	pCi/L		0	No	Erosion of natural deposits
Uranium	3/13/2023	<1.0	1.0	ppb	30	0	No	Erosion of natural deposits

Unregulated Contaminants

These chemicals do not have an enforceable regulatory limit.

Contaminant	Collection Date	Highest Value	Range (low-high)	Unit	SMCL	MCL	Violation	Typical Source
Manganese	4/25/2023	0.244	0.244	ppm	0.05	N/A	No	Natural deposits
Sodium	3/13/2023	44.8	12.5 – 44.8	ppm	100	N/A	No	Natural deposits; road salt

ADDITIONAL TEST RESULTS

Our water system has sampled for a series of unregulated contaminants in addition to those noted above. Unregulated contaminants are researched by EPA for potential future standards. As our customers, you have a right to know that this data is available. If you want to learn more, please contact Matthew Simeone, Water System Manager at 401-874-4203.

Unregulated Contaminant Monitoring Rule (UCMR5)

The EPA is required to monitor for new substances that have the potential to become problems in drinking water. Under the UCMR, public water systems nationwide test every five years for new possible contaminants. From these results the EPA determines if additional drinking water regulations are necessary. URI has just finished testing its UCMR5 requirements for the years 2023-2024. The contaminants of concern were PFAS related compounds and Lithium. After all the water systems have finished their testing, the EPA will announce whether the substances tested will need to be addressed further.

UCMR5 Results 2023

	Contaminant	Collection Date	Detected Level	Unit	RL	Violation
EPA method 533	Perfluorobutanoic Acid (PFBA)	8/17/2023	ND	ppb	0.005	No
	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	8/17/2023	ND	ppb	0.004	No
	Perfluoropentanoic Acid (PFPeA)	8/17/2023	0.007	ppb	0.003	No
	Perfluorobutanesulfonic Acid (PFBS)	8/17/2023	0.009	ppb	0.003	No
	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	8/17/2023	ND	ppb	0.003	No
	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	8/17/2023	ND	ppb	0.003	No
	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	8/17/2023	ND	ppb	0.018	No
	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	8/17/2023	ND	ppb	0.003	No
	Perfluorohexanoic Acid (PFHxA)	8/17/2023	0.008	ppb	0.003	No
	Perfluoropentanesulfonic Acid (PFPeS)	8/17/2023	ND	ppb	0.004	No
	2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	8/17/2023	ND	ppb	0.005	No
	Perfluoroheptanoic Acid (PFHpA)	8/17/2023	0.006	ppb	0.003	No
	Perfluorohexanesulfonic Acid (PFHxS)	8/17/2023	0.003	ppb	0.003	No
	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	8/17/2023	ND	ppb	0.003	No
	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	8/17/2023	ND	ppb	0.005	No
	Perfluorooctanoic Acid (PFOA)	8/17/2023	0.016	ppb	0.004	No
	Perfluoroheptanesulfonic Acid (PFHpS)	8/17/2023	ND	ppb	0.003	No
	Perfluorononanoic Acid (PFNA)	8/17/2023	0.004	ppb	0.004	No
	Perfluorooctanesulfonic Acid (PFOS)	8/17/2023	0.004	ppb	0.004	No
	EPA method 537.1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	8/17/2023	ND	ppb	0.002
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)		8/17/2023	ND	ppb	0.005	No
Perfluorodecanoic Acid (PFDA)		8/17/2023	ND	ppb	0.003	No
Perfluoroundecanoic Acid (PFUnA)		8/17/2023	ND	ppb	0.002	No
11-Chloroicosadecafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)		8/17/2023	ND	ppb	0.005	No
Perfluorododecanoic Acid (PFDoA)		8/17/2023	ND	ppb	0.003	No
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)		8/17/2023	ND	ppb	0.006	No
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)		8/17/2023	ND	ppb	0.005	No
Perfluorotridecanoic Acid (PFTrDA)		8/17/2023	ND	ppb	0.007	No
Perfluorotetradecanoic Acid (PFTA)		8/17/2023	ND	ppb	0.008	No
EPA method 200.7	Lithium	8/17/2023	9.99	ppb	9.00	No

Terms & Abbreviations

Maximum Contaminant Level Goal (MCLG): the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): the "Maximum Allowed" MCL is 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.

Secondary Maximum Contaminant Level (SMCL): recommended level for a contaminant that is not regulated and has no MCL.

Action Level (AL): the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.

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

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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

Non-Detected (ND): lab analysis indicates that the contaminant is not present.

Parts per Million (ppm) or milligrams per liter (mg/l)

Parts per Billion (ppb) or micrograms per liter (µg/l)

Parts per Trillion (ppt) or nanograms per liter (ng/l) – 1 ppt corresponds to 1 drop of water in 20 Olympic-size swimming pools.

Picocuries per Liter (pCi/L): a measure of the radioactivity in water.

Millirems per Year (mrem/yr): measure of radiation absorbed by the body.

Monitoring Period Average (MPA): An average of sample results obtained during a defined time frame, common examples of monitoring periods are monthly, quarterly, and yearly.

Nephelometric Turbidity Unit (NTU): a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is not regulated for groundwater systems.

Reporting Limit (RL): the value at which an instrument can accurately measure an analyte at a specific concentration.

Running Annual Average (RAA): an average of sample results obtained over the most current 12 months and used to determine compliance with MCLs.

Locational Running Annual Average (LRAA): Average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters

Important Lead Information

Testing showed the amount of lead in our drinking water is below EPA allowed levels. 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. Your water system is responsible for providing high quality drinking water but 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 2 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 or at <http://www.epa.gov/safewater/lead>.

Important Per- and Polyfluoroalkyl Substances (PFAS) Information

According to the United States Environmental Protection Agency, per- and polyfluoroalkyl substances, or PFAS, are widely used, long lasting chemicals, the components of which break down very slowly over time. The RI Regulated PFAS compounds include Perfluorooctanoic Acid (PFOA), Perfluorooctanesulfonic Acid (PFOS), Perfluorononanoic Acid (PFNA), Perfluorodecanoic Acid (PFDA), Perfluorohexanesulfonic Acid (PFHxS), and Perfluoroheptanoic Acid (PFHpA). Some PFAS compounds have been shown to cause development toxicity, immunological toxicity, and effects on cholesterol metabolism, particularly PFOA, PFOS, PFHxS, PFHpA, and PFDA. The toxicity of other PFAS compounds is currently not well understood, although they remain in the blood for shorter periods of time. More information about PFAS can be found on the EPA website at <https://www.epa.gov/pfas>. The Rhode Island Department of Health also has a website dedicated to PFAS information, available at <https://health.ri.gov/healthrisks/contaminants/about/pfas/>. The University is currently constructing a new water treatment filtration system which is expected to be on line in the fall of 2024.

SYSTEM UPGRADES AND IMPROVEMENTS

The University of Rhode Island has undertaken several system improvement projects including upgrading our supply wells and treatment systems, improving our automated control and monitoring systems, and replacing water mains and building service connections. These projects have improved water quality, provided system redundancy, and made the system more resilient. Plans are underway to install a new water treatment plant for PFAS removal. Construction began in spring of 2024 and the system is anticipated to be online by the fall of 2024.

PROGRAMS TO PROTECT WATER QUALITY

In addition to water quality testing, the URI Office of Utilities performs the following programs to maintain and protect water quality: 1) source water protection program; 2) construction review and inspection; 3) water main flushing program to remove water main sediment; and 4) annual testing and repair of backflow prevention devices.

EMERGENCY CONTACTS

In cases of emergency contact the campus police at (401) 874-2121. For facility related issues please contact the Facilities Services Control Center at (401) 874-4060

