University of Rhode Island

2010 Water Quality Report

THE QUALITY OF YOUR DRINKING WATER

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the water quality and services that we, the University of Rhode Island (URI), delivered to you in 2010. Included are details about where your water comes from,what it contains, and how it compares to standards set by regulatory agencies. Our goal is to provide you with a safe and dependable supply of drinking water. We're proud to inform you that you drinking water meets or exceeds all federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact Dave Lamb, Utilities Engineer, URI Facilities Services Department at (401) 874-7896.

There are no regularly scheduled meetings, but we welcome all suggestions and comments from our customers. Please feel free to call us at (401) 874-7896 or visit our web site at www.uri.edu/facilities and click on the utilities tab.

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THE SOURCE OF YOUR DRINKING WATER

The University of Rhode Island, Kingston Campus owns and operates its own water system. The system draws from three gravel packed, high volume wells, located on the Chippuxet ground water aquifer. The wells are in the area located just east of 30-Acre Pond and the Chippuxet River. These wells and pump stations are numbered #2, #3, and #4. Site #2 is located at the end of the Access Road, Site #3 is located south of the Access Road, and Site #4 is located just north of the Access Road. We disinfection chlorinate the raw water being distributed to the campus. The wells and associated pump stations pump the water through a 16 inch main that feeds into the one million gallon elevated storage tank at the intersection of North and Flagg Roads. The storage tank provides water for the campus water distribution system. Three interconnects exist between the campus distribution system and our neighboring water system, the Kingston Water District, providing added reliability to both systems. An emergency generator for the entire water system is located adjacent to pump station #4, and is capable of supplying all of the campus water requirements. Average daily water usage during school sessions is approximately 600,000 gpd.

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 or 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 means that the water could one day become contaminated. This rating is primarily based on land use in and around the aquifer. Monitoring and protection efforts are necessary to assure continued water quality. The complete Source Water Assessment Report is available from the University of Rhode Island or the Department of Health at (401) 222-6867.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

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

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

PESTICIDES & HERBICIDES - which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

ORGANIC CHEMICAL - including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

RADIOACTIVE - which can be naturally occurring or the result of oil and gas production and mining activities.

WHY ARE THERE CONTAMINANTS IN DRINKING WATER?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants in the water does not necessarily indicate that the 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 (1-800-426-4791).

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

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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

IMPORTANT LEAD INFORMATION

Testing showed the amount of lead in our drinking water is below the EPA allowed level (see test result table at right). If present in elevated levels 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.

The University of Rhode Island is responsible for providing high quality drinking water, but cannot control the variety of materials used in residential 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.

2010 Test Results from The University of Rhode Island

Unless otherwise noted, test results are from 2010

Radioactive Contaminants	Violation Y/N	Level Detected			Unit of Measurement	MCLG	MCL	Likely Source of Contamination
		Well 2	Well 3	Well 4				
Combined Radium (2008)	N	1.65	1.11	ND	pCi/L	0	5	Erosion of natural deposits
Inorganic Contaminants	**Violation Y/N**	**Level Detected**			**Unit of Measurement**	**MCLG**	**MCL**	**Likely Source of Contamination**
		Well 2	Well 3	Well 4				
Barium (2008)	N	ND	0.01	0.02	ppm	2	2	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Chromium (2008)	N	2	ND	ND	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (2008)	N	0.90	4.11	2.02	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminium factories
Nitrate	N	0.44	3.96	2.35	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Synthetic Organic Contaminants	**Violation Y/N**	**Level Detected**			**Unit of Measurement**	**MCLG**	**MCL**	**Likely Source of Contamination**
		Well 2	Well 3	Well 4				
Atrazine	N	ND	ND	0.13	ppb	3	3	Runoff from herbicide used on row crops

Distribution System Test Results

Volatile Organic Contaminants*	Violation Y/N	Level Detected	Unit of Measurement	MCLG	MCL	Likely Source of Contamination
Chlorine	N	Average 0.13 Range 0.12 - 0.15	**ppm**	**MRDLG 4**	**MRDL 4**	Water additive used to control microbes
Haloacetic Acids (HAA)	N	**2**	**ppb**	**0**	**60**	Byproduct of water chlorination
Total Trihalomethanes (TTHM)	N	**8**	**ppb**	**0**	**80**	Byproduct of water chlorination

*URI now disinfects the raw water being distributed to the campus so in the 4th Quarter 2010 we began quarterly monitoring disinfection byproducts under the Stage 1 Disinfectants & Disinfection Byproduct Rule. These results are from our first round of testing in 2010.

Inorganic Contaminants	Violation Y/N	Level Detected (90th Percentile)	Unit of Measurement	MCLG	MCL	Likely Source of Contamination
Copper	N	0.22	ppm	1.30	AL=1.30	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead**	N	11	ppb	0	Al=15	Corrosion of household plumbing systems, erosion of natural deposits

**One (1) of the thirty (30) test sites sampled exceeded the lead action level. Lead: Infants and young children are typically more vulnerable to Lead in drinking water than the general population. It is possible that Lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated Lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791)

UNDERSTANDING OUR WATER QUALITY TEST RESULTS

The table to the left lists all of the drinking water contaminants that were detected through our water quality monitoring and testing. Unless otherwise noted, the data presented in this table is from the January – December 2010 monitoring period. For those contaminants that are monitored less frequently, the most recent test results are listed. The ranges listed are results from UWRI's wells.

Maximum Contaminant Levels (MCL's) are set at very stringent levels. The Maximum Contaminant Level Goal (MCLG) is set at a level where no health effects would be expected, and the MCL is set as close to that as possible, considering available technology and cost of treatment. A person would have to drink 2 liters of water every day, as recommended by health professionals, at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

UNITS & DEFINITIONS:

Not Detected (ND)-Laboratory analysis indicated the contaminant was not present.
Parts per million (ppm) or Milligrams Per liter (mg/L) - One part per million corresponds to one minute in two years or a single penny in $10,000.
Parts per billion (ppb) or Micrograms per liter (ug/L) - One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Action Level (AL) - The concentration of a contaminant which if exceeded, triggers treatment or other requirements which a water system must follow. A violation will occur only if the supplier fails to take corrective action.
Maximum Contaminant Level (MCL) -The 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.
Maximum Contaminant Level Goal (MCLG) - The MCLG is 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.
Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water.
Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health.

THE
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URI'S CROSS-CONNECTION CONTROL PROGRAM

URI has developed and implemented a cross-connection control program per the RI Rules and Regulations Pertaining to Drinking Water (Section 9.4). We've isolated all buildings on the system utilizing the proper backflow prevention devices and installed backflow prevention on all of the buildings connected to the water system. We also have an annual program to test and certify all of the existing and new devices on campus.

EMERGENCY CONTACTS

In cases of emergency such as broken mains, pump station fire, severe weather, emergency generator failure, etc., contact the Facilities Services Control Center at (401) 874-4060. During non-working hours call the campus police at (401) 874-2121.

PLEASE REMEMBER TO PROTECT & CONSERVE WATER!

Water conservation continues to be an important aspect of the URI water system operation, please remember to conserve when possible.

SYSTEM UPGRADES & IMPROVEMENTS

URI's flushing program has been ongoing since 2003 and has proved to be very successful. Since 2003 we have met our goal of being able to flush the entire system completely once every year. We have also done localized flushing as needed during the rest of the year. Water quality has steadily improved during this time.

URI has completed the upgrades of the control and information systems that we currently have at our well station. The result of these improvements is a more efficient way to operate the well and provides real time information for water system analysis.