Narragansett Water Division-North End

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 of water and services that we 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 your drinking water meets all Federal and State requirements. As always, we remain committed to ensuring the quality of your water.

Narragansett Water does not hold regularly scheduled meetings; therefore, if you have any questions about this report or the Water Division, please contact Ed Sylvia, Water Superintendent, at (401) 782-0639. You may also call this number to obtain information about proposed or planned system improvements projects, such as main line replacement, new hydrant locations, etc. We want our valued customers to be informed about their water utility.

The Narragansett Water Division-North End
25 Fifth Avenue
Narragansett, RI 02882
Tel. 401-782-0639

WATER CONSERVATION

The Town of Narragansett offers water conservation kits FREE of charge to any customer requesting one. Please contact the Water Division for further information about this service.

THE SOURCE OF YOUR DRINKING WATER

We purchase our water from United Water Rhode Island (UWRI) and the Town of North Kingstown. The water we receive from UWRI comes from six gravel packed wells, plus one emergency well, located in two well fields. Both well fields are located off Tuckertown Road in South Kingstown. These wells can produce up to 7 million gallons of water per day. Both well fields draw water from the Mink Brook Aquifer. UWRI has initiated a very aggressive Wellhead Protection Program which has identified a well protection area around both well fields. UWRI is also conducting an inventory regarding land use within this wellhead area. UWRI uses sodium hypochloride for disinfection. Water treated at each well field is also aerated to make your water less aggressive. UWRI adds lime for pH adjustment and zinc orthophosphate for corrosion control. This reduces the possibility of lead and copper in household plumbing from dissolving in the water.

The Town of North Kingstown draws its water from eleven (11) municipal wells, which draw water from the HuntAnnaquatucket-Pettaquamscutt (HAP) aquifer system. Average daily water use in 2010 was 2.7 million gallons per day. The HAP aquifer system has been designated a "Sole Source Aquifer" by the US Environmental Protection Agency (USEPA), meaning there is no alternative source of drinking water.

The RI Department of Health, in cooperation with other state and federal agencies, has assessed the threats to UWRI's 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 (SWPA), and the sampling history of the water. Our monitoring program continues to assure that the water delivered to your home is safe to drink. The assessment found that UWRI and North Kingstown's sources are at LOW RISK of contamination. This does NOT mean that the water cannot become contaminated. Protection efforts are necessary to assure continued water quality. The complete Source Water Assessment Report is available from UWRI and the Town of North Kingstown or the Department of Health at (401) 222-6867.

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).

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.

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 Narragansett Water Division 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.

TEST RESULT TABLE - 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.

2010 Test Results from United Water Rhode Island & Town of North Kingstown

Unless otherwise noted, test results are from 2010 and the ranges listed are results from all operating wells.

Contaminants	Violation Y/N	UWRI	North Kingstown	Unit Measurement	MCLG	MCL	Likely Source of Contamination
[1] Alpha Emitters	N	ND – 5.26 (2008)	ND	pCi/L	0	15	Erosion of natural deposits
[1] Gross Beta	N	5.05 (2006)	ND	pCi/L	0	50*	Decay of natural and man made deposits
[1] Combined Radium	N	ND – 3.19 (2008)	Range ND-1.52 (2008 & 2009)	pCi/L	0	5	Erosion of natural deposits
[1] Uranium	N	ND – 5.65 (2008)	ND	ug/L	0	30	Erosion of natural deposits
Barium	N	0.01 Range ND-0.10 (2008)	0.02 Range 0.01-0.02 (2008 & 2010)	ppm	2	2	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Chromium	N	10 Range ND-10 (2008)	3 Range ND-3 (2008 & 2010)	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	N	ND (2008)	0.21 Range ND-0.21 (2008)	ppm	4	4	Naturally present in the environment
Nitrate	N	2.65 Range 0.50 - 2.65	5.33** Range ND-5.33	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
[2] Fecal Coliform & E.coli	Y (UWRI)	2 (September)	ND	# of positive samples	0	A routine sample and repeat sample are total coliform positive, & one is also fecal coliform or E. coli positive	Human and animal fecal waste
[2] Total Coliform	Y (UWRI)	7% (September)	ND	Highest monthly % of positive samples	0	5% of monthly samples	Naturally present in the environment
[3] Chlorine	N	Average 0.13 Range 0.08 - 0.20	Average 0.28 Range 0.22-0.36	ppm	MRDLG 4	MRDL 4	Water additive used to control microbes
[3] Haloacetic Acids (HAA)	N	Average 26 Range 19 - 32	Average 1 Range 1 - 2	ppb	0	60	By-product of water chlorination
[3] Total Trihalomethanes (TTHM)	N	Average 4 Range: 2 – 6	Average 7 Range 6 - 9	ppb	0	80	By-product of water chlorination

[1] These test results are all from Well #7 which is only in use during emergencies. In July 2010, due to a low water pressure event, UWRI used water from Well #7.

[2] **Please note, Narragansett Water Division North End did not have any samples during this period that showed the presence of bacteria.** The source of the coliform in UWRI's water was unknown. Sample integrity, sample processing or disturbance of biolfim may have been a possible cause. All follow-up samples were negative.

[3] These tests are from UWRI and North Kingstown's distribution system. The averages presented are Running Annual Averages (RAA). The ranges are the lowest and highest individual detection levels.

*The EPA considers 50 pCi/l to be the level of concern for beta particles.

**Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

2010 Distribution System Test Results Narragansett Water Division-North End

Contaminants	Violation Y/N	Level Detected	Unit Measure	MCLG	MCL	Likely Source of Contamination
Total Coliform	N	1 positive sample (May)	Highest monthly # of positive samples	0	1 positive sample	Naturally present in the environment
[1] **Chlorine**	**N**	Average 0.24 Range 0.07-0.43	**ppm**	MRDLG 4	MRDL 4	Water additive used to control microbes
[1] Haloacetic Acids (HAA)	N	Average 7 Range ND - 13	**ppb**	**0**	**60**	By-product of water chlorination
[1] Total Trihalomethanes (TTHM)	N	Average 33 Range 3 - 63	**ppb**	**0**	**80**	By-product of water chlorination
Copper (2009) (90th Percentile)	N	0.25	ppm	1.30	AL=1.30	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead* (2009) (90th Percentile)	N	8	ppm	0	Al=15	Corrosion of household plumbing systems, erosion of natural deposits

[1] The averages presented are Running Annual Averages (RAA). The ranges are the lowest and highest individual detection levels.

*There was one (1) site that exceeded the lead action level. **LEAD:** Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficiencies in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

The State of Rhode Island requires testing for other contaminants not regulated by the US EPA. The following contaminants were detected in North Kingstown and UWRI's water:

North Kingstown: Chloroform was detected 0.60 ppb in Well #9 and Well #10.

UWRI: Metolachlor was detected at a range of 0.14 - 1.06 ppb in Well #7, the emergency well.

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 and North Kingstown Water'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.

2010 PRECAUTIONARY BOIL ORDER

In July 2010, we were required to go on a precautionary boil water order after United Water Rhode Island (UWRI), our water supplier, experienced a drop in water pressure.

The pressure problem was caused by unusual temperatures that caused sections of the system to have pressures below the required 20psi. Low water pressure increases the likelihood of bacterial contamination so UWRI and all of the systems it supplies, including Narragansett North End, were put on precautionary boil water order.

The boil order was lifted after a 48 hour period when pressure and test samples were back to normal.

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THE TOWN OF NARRAGANSETT NEWS

RIWIS SYSTEM MAKES TRACKING ONSITE WASTEWATER TREATMENT SYSTEMS (OWTS)-SEPTIC SYSTEMS EASY

RIWIS, Rhode Island Wastewater Information System, is a statewide, internet-accessed system that organizes local information about OWTS (septic systems) and cesspools, including their location and condition, inspection results, and maintenance. This tracking is not only required, but is crucial to protecting water quality and public health. The easy-to-use system was developed by Carmody Data Systems in collaboration with URI, and is provided at a very reasonable cost ($100 monthly fee) to municipalities in Rhode Island. The Town's septic system tracking needed upgrading and RIWIS has more than met that need. The system eliminates the paper report submission by homeowners. Instead, septic and cesspool pumpers now have the responsibility of submitting the pumping receipt online, and have access to the system free of charge. RIWIS uses passwords to access various levels of data, so homeowners can know that their private information is secure.

Visit our webpage www.narragansettri.gov to learn more about the Water Division

CURRENT WATER SYSTEM UPGRADES & IMPROVEMENTS

The design of the Towns chlorination system (to improve water quality by supplementing what our suppliers provide) has been completed, and will be installed during 2011(pending RIDOH approval).

We are also proposing to repaint the North End Tank during 2011.

For information regarding the Water Division's responsibilities and policies, please go to the Town's website: www.narragansettri.gov and look under the Engineering Department heading.