

The Department of Public Works, Water Division is pleased to present our customers this Water Quality Report. This report fulfills an Environmental Protection Agency requirement to provide a "Consumer Confidence Report" to all customers receiving water from a public system. The intent of this report is to inform you about the quality and the services we provide to our customers 24 hours per day, seven days a week.

This report details the origin of your water, the contents of your water, and how it compares to the quality standards mandated by the federal government. Our professional staff of employees is trained and committed to the provision of safe drinking water through routine sampling of tap water that exceeds Health Department requirements and the prudent use of water revenues to maintain the system.

Your water system is comprised of two service areas as required by regulation. Potowomut System & Warwick System.

With the exception of the Potowomut area, one hundred percent of the water is purchased directly from the Providence Water Supply Board that is a surface water supplier. As the report will indicate, water for the Potowomut system is purchased from Kent County Water Authority that originates from groundwater (wells) and surface water (reservoir). Finally, Warwick wholesales water to Kent County Water Authority at their connection on Quaker Lane via a 42" line owned and maintained by the City of Warwick.

**For more information, call
Water Division at 738-2000, Ext. 6600
EPA Safe Drinking Water Hotline
(800) 426-4791**

Warwick Department of Public Works Water Division and its predecessor commission have been delivering safe, dependable water, 7 days a week, 24 hours a day for over 65 years.

ADDITIONAL HEALTH INFORMATION

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

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All drinking water, included 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.

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 healthcare providers. EPA/CDCV guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from Safe Drinking Water Hotline.

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 healthcare provider.

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. Warwick Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When 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 www.epa.gov/safewater/lead

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day, at the MCL level, for a lifetime to have a one-in-a-million chance of having the described health effect.

In our continuing efforts to maintain a safe and dependable water supply, it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in your billing. Rate adjustments may be necessary in order to address these improvements.

We ask that all our customers help us to protect our water sources, which are the heart of our community, our way of life and our children's future.

Health Information

Our water system violated a drinking water standard over the past year. Although this was not an emergency, as your customers, you have the right to know what happened and what we did to correct the situation.

We are required to monitor our drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. Between the dates of April 1, 2013 to June 30, 2013, we did not monitor for the disinfectant by-products, Ttotal Trihalomethanes (TTHM's) and Haloacetic Acids (HAA5's), and therefore cannot be sure of the quality of our drinking water during that time.

The City of Warwick and Potowomut public water systems failed to collect, analyze, and report TTHM's and HAA5's test results for the compliance period, April 1, 2013 to June 30, 2013, as required in Section 7.5 of the Rules and Regulations pertaining to public drinking water (regulations). This failure results in a tier 3 violation of the regulations and requires the public water system to provide, as detailed in Section 16.8(4)(2), that the notice be posted in conspicuous locations throughout the distribution system frequented by persons served by the system or by mail or other direct delivery to each customer and service connection (where known); and by any other method reasonably calculated to reach other persons regularly served by the system. If all persons served can be reached with the first method chosen, then additional methods of distribution need not be used.

Sampling has taken place during September 2013 pursuant to Rhode Island Department of Health guidelines and will continue on a quarterly basis until further notice.

The Keny County Water Authority purchases approximately 90 percent of your water from the Providence Water Supply Board. This supply is treated surface water from the following reservoirs located in the central part of the state: Scituate, Regulating, Moswansicut, Ponaganset, Barden and Westconnaug reservoirs. The remainder of your water is produced from our Mishnock well field and treatment facilities located off Route 3 in Coventry and our East Greenwich well located off Post Road at the Warwick and East Greenwich line. KCWA also wholesales water to the City of Warwick to supply the Potowomut section.

**Visit the EPA's drinking water website:
www.epa.gov/safewater**

Warwick Water Service Area FACTS & FIGURES

Number of Services: 26,900
Distribution Mains: 380 Miles



Valves: 5,100
Hydrants: 1,975

Transmission Mains: 18 Miles
Storage Capacity: 12,500,000 gals

Annual Customer Usage: Approx. 2.1 billion gallons Year

El informe contiene informacion importante sobre la calidad del agua en su comunidad. Traduzcalo o hable con alguien que lo entienda bien.



**WARWICK DEPARTMENT
OF PUBLIC WORKS**

DIVISION OF WATER
935 Sandy Lane
Warwick, RI 02886

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CONSUMER CONFIDENCE REPORT 2013

City of Warwick
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DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER
935 Sandy Lane • Warwick • RI • 02886
(401) 738-2000 Ext. 6600

AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY,
A DEPARTMENT OF THE U.S. GOVERNMENT

How do I read these tables?

IT'S EASY! These tables show the results of our water-quality analyses. Every regulated contaminant that we detected in the water, even on the most minute traces, are listed here along with the highest levels allowed by regulation (MCL), the ideal goals for public health, the amounts detected, the usual sources of each contamination, footnotes, explaining our findings and a key to units of measurement.

Our Potowomut customers are supplied by the Kent County Water Authority. This table represents the Kent County results.

The tables list all of the drinking water constituents detected during the calendar year of this report. The presence of those constituents found in the water at the time of testing does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these tables are from testing done in the calendar year of the report. In some cases, the EPA and the State may require us to monitor for certain constituents less than once per year because the concentrations of these constituents do not change frequently.

Kent County Water Authority routinely monitors for constituents in your drinking water in compliance with Federal and State Laws. These tables show the detection results from the numerous monitoring tests conducted for the period January 1st to December 31st 2013. The tables "Testing Results" identify those constituents that were "detected" in both the Kent County Water Authority and Providence Water Supply sources. As authorized by the EPA, the state has implemented reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data, though representative, is more than one year old.

REGULATED CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED LEVEL	RANGE	MAJOR SOURCES	VIOLATION
BARIUM ^{1,2}	2013	ppm	2	2	0.017	0.006-0.017	Erosion of natural deposits.	NO
CHROMIUM ²	2013	ppb	100	100	5	3-8	Erosion of natural deposits.	NO
CADMIUM ²	2013	ppb	5	5	1.0	ND-.1.0	Erosion of natural deposits. Runoff from waste paints. Corrosion of galvanized pipes.	NO
FLUORIDE ¹	2013	ppm	4	4	1.0	0.55-0.82	Erosion of natural deposits. Water additive, which promotes strong teeth.	NO
NITRATE-N	2013	ppm	10	10	3.87	0.97-3.87	Erosion from natural deposits. Leaching from septic tanks; sewage; Runoff from fertilizer use.	NO
NITRITE	2013	ppm	1	1	0.07	0.02-0.07	Erosion from natural deposits. Leaching from septic tanks; sewage; Runoff from fertilizer use.	NO
TOTAL COLIFORM BACTERIA ⁵	2013	Monthly Max %		0%	2%	0-2%	Naturally present in the environment.	NO
TURBIDITY ^{1,4}	2013	NTU	TT	NA	0.18	0.02-0.18	Soil Runoff.	NO
TOTAL ORGANIC CARBON ^{1,3}	2013	N/A	TT	NA	1.36	1.26-1.58	Naturally present in the environment.	NO
CHLORINE FREE RESIDUAL	2013	ppm	4	4	0.4	0.23-0.62	Water additive used to control microbes.	NO
TOTAL TRIHALOMETHANES (TTHM)	2013	ppb	80	NA	68.3	35.0-97.0	By-product of drinking water chlorination.	NO
HALOACETIC ACIDS (HAA5)	2013	ppb	60	NA	25	5.3-37.0	By-product of drinking water chlorination.	NO
DI (2-ETHYLHEXYL) PHTHALATE	2013	pph	6	0	1	ND-1.0	Erosion of natural deposits.	NO
COMBINED RADIUM 226 AND 228 ²	2008	pCi/L	5	0	2.2	ND-2.2	Erosion of natural deposits.	NO

TAP WATER SAMPLES WERE COLLECTED FOR LEAD AND COPPER ANALYSES FROM SAMPLE SITES THROUGHOUT THE SYSTEM.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	90th PERCENTILE DETECTED	RANGE	MAJOR SOURCES	VIOLATION
COPPER (ppm)	2013	1.3	1.3	0.018	0 of 11 samples was above the action level	Corrosion of household plumbing systems. Erosion of natural deposits.	NO
LEAD (ppm)	2013	0.15	0	4	0 of 11 samples was above the action level	Corrosion of household plumbing systems. Erosion of natural deposits.	NO

Kent County Water Authority Table Footnotes

¹ Detection level influenced by Providence Water purchases.

² Reflects sampling at groundwater source before blending with purchased water from Providence Water Supply Board.

³ In order to comply with the EPA standard, the removal ratio must be greater than 1. Detected level is the lowest removal ratio per quarter. Range is the lowest and highest removal ratios per month.

⁴ 0.16 was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting the turbidity limit was 100%. The average turbidity value for 2013 was <0.10 NTU.

⁵ This value refers to the highest monthly percentage of positive samples detected during the year. For 2013, Warwick Water collected 89 samples for Total Coliform Rule compliance monitoring. None were positive for coliform bacteria.

Our Warwick customers are supplied by multiple connections with the Providence Water System. This table represents the Providence test results.

REGULATED CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED LEVEL	RANGE	MAJOR SOURCES	SDWA VIOLATION
Regulated Substances								
BARIUM	2013	ppm	2	2	0.009	NA	Erosion of natural deposits.	NO
CHLORINE (as C12); Free Residual ⁵	2013	ppm	MRDL=4.0	MRDLG=4.0	0.35	0-1.37	Water additive used to control microbes.	NO
FLUORIDE	2013	ppm	4	4	1.00	0.66-1.00	Erosion of natural deposits. Water additive which promotes strong teeth.	NO
HALOACETIC ACID (HAA5) ⁵	2013	ppb	60	0	14.5	3.9-24.1	By-Product of drinking water chlorination.	NO
TOTAL COLIFORM BACTERIA ¹	2013	% of Positive Samples/0		0%	0.08%	0-0.5%	Naturally present in the environment.	NO
TOTAL ORGANIC CARBON (TOC) ² (Removal Ratio)	2013	N/A	TT	NA	1.05	0.90-1.51%	Naturally present in the environment.	NO
TOTAL TRIHALOMETHANES (TTHM)	2013	ppb	80	0	47.7	44.0-74.8	By-Product of drinking water chlorination.	NO
TURBIDITY ³	2013	NTU	TT	NA	0.16	0.03-0.16	Soil runoff	NO
Lead and Copper								
COPPER	2013	ppm	Action Level = 1.3	1.3	0.04	NA	Corrosion of household plumbing systems. Erosion of natural deposits. 0 sites out of 32 were above 1.3 ppm.	NO
LEAD ⁴	2013	ppb	Action Level = 15	0	30.0	NA	Corrosion of household plumbing systems. Erosion of natural deposits. 1 site out of 32 were above 15 ppb.	NO
Unregulated Substances								
SODIUM	2013	ppm	NA	NA	13.0	NA	Erosion of natural deposits. Runoff from road deicing operations.	NO
STRONTIUM	2013	ppb	NA	NA	28	26-28	Erosion of natural deposits.	NO
VANADIUM	2013	ppb	NA	NA	0.24	0-0.24	Erosion of natural deposits.	NO
HEXAVALENT CHROMIUM	2013	ppb	NA	NA	0.13	0-0.13	Erosion of natural deposits.	NO

Water Quality Table Footnotes

¹ This value refers to the highest monthly percentage of positive samples detected during the year. For 2013, Warwick Water collected 1,124 samples for *Total Coliform Rule* compliance monitoring. None of these samples were positive for total coliform bacteria.

² In order to comply with the EPA standard, the removal ratio must be greater than 1. Detected level is the lowest removal ratio per quarter. Range is the lowest and highest removal ratios per month.

³ 0.16 NTU was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting the turbidity limit was 100%. The average turbidity value for 2012 was < 0.10 NTU.

⁴ For 2013, Warwick Water did not have an exceedance of the lead action level.

⁵ Compliance is based upon the highest quarterly running annual average and range is based upon lowest and highest individual measurement.

Drinking Water Definitions

Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG):

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Action level (AL):

The concentration of a contaminant which, if exceeded, triggers treatment or other requirement that a water system must follow.

Treatment Technique (TT):

A required process intended to reduce the level of a contaminant in drinking water.

Variances and Exceptions:

State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Table Unit Descriptions

AL	Action Level
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
ppb	Parts per billion, or micrograms per liter
pCi/L	Picocuries per liter (a measure of radioactivity)
TT	Treatment Technique
NTU	Nephelometric Turbidity Units
ppm	Parts per million
NA	Not Applicable
ND	None Detected
MDL	Method Detection Limit
HA	Health Advisory
MRDL	Maximum Residual Disinfection Level
MRDLG	Maximum Residual Disinfection Level Goal

The data presented in this report is from the most recent testing done in accordance with regulations.