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 738-2008
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 75 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.

The Rhode Island Department of Health, Center for Drinking Water Quality (DWQ) received the analytical results for the samples collected for the Potowomut water system on May 18, 2017 (Quarter 2) to comply with the requirements of the Disinfection Byproducts Rule (DBPR) of the Rules and Regulations Pertaining to Public Drinking Water. Based on the results of the May 18 sampling event, we exceeded the operational evaluation level at the sampling location, where the sum of the two previous quarters' TTHM results (2016 Quarter 4 and 2017 Quarter 1) plus twice the current quarter's (2017 Quarter 2) TTHM result, divided by 4 to determine an average, exceeds 0.80 mg/l.

As stated in Section 7.10.7 of the Rules and Regulations Pertaining to Public Drinking Water, if a system exceeds the operational evaluation level, it must conduct an operational evaluation and submit a written report of the evaluation to the Director no later than 90 days after being notified of the analytical result that causes you to exceed the operational evaluation level. The City of Warwick complied with this directive.

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: 12,500,00 gals

Annual Customer Usage: Approx. 2.0 billion gallons Year

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

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WARWICK DEPARTMENT
OF PUBLIC WORKS

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Warwick, RI 02886

City of Warwick
Joseph J. Solomon, Mayor
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER
935 Sandy Lane • Warwick, RI • 02889
(401) 738-2008

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. This table shows the detection results from the numerous monitoring tests conducted for the period January 1, 2015 to December 31, 2015. The tables of "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	RANGE	MAJOR SOURCES	VIOLATION
BARIUM[1,2]	2017	ppm	2	2	0.015	.004-.015	Erosion of natural deposits.	NO
CHROMIUM[7]	2014	ppb	100	100	5	0.24-5	Erosion of natural deposits.	NO
NITRITE[1]	2017	ppm	10	10	3.29	0.22-3.29	Erosion from natural deposits. Leaching from septic tanks; sewage; runoff from fertilizer use.	NO
TOTAL COLIFORM BACTERIA[5]	2017	Monthly Max%	Presence of Coliform bacteria >5% of the monthly samples	0%	1%	0.125-1.0%	Naturally present in the environment	NO
TURBIDITY[1,4]	2017	NTU	TT	NA	0.22	0.02-0.22	Soil runoff.	NO
TOTAL ORGANIC CARBON[1,3]	2017	NA	TT	NA	1.62	1.54-1.78	Naturally present in the environment.	NO
FLUOURIDE[1,2]	2017	ppm	4	4	0.74	0.22-0.86	Erosion of natural deposits. Water additive, which promotes strong teeth.	
CHLORINE FREE RESIDUAL	2017	ppm	4	4	0.56	0.43-0.67	Water additive used to control microbes.	NO
TOTAL TRIHALOMETHANES (TTHM)[6]	2017	ppb	80	NA	73	33-87.5	Byproduct of drinking water chlorination.	NO
HALOACETIC ACIDS (HAA5)[6]	2017	ppb	60	NA	22.5	11.6-25.1	Byproduct of drinking water chlorination.	NO
COMBINED RADIUM 226/228 (pCi/l)[2]	2017	pCi/l	5	0	1.20	0-1.20	Erosion of natural deposits.	NO
DI(2ethylhexyl)phthalate [1,8]	2017	ppb	6	0	1.0	0-1.0	Dicharge from rubber and chemical factories	NO

LEAD AND COPPER RULE	PERIOD	UNIT	AL	MCLG	99th PERCENTILE DETECTED	RANGE	MAJOR SOURCES	VIOLATION
COPPER	2017	ppm	1.3	1.3	0.012	0 of 11 samples were above the action level	Corrosion of household plumbing systems. Erosion of natural deposits. 0 sites out of 31 were above 1.3 ppm.	NO
LEAD	2017	ppb	0.15	0	1.9	0 of 11 samples were above the action level	Corrosion of household plumbing systems. Erosion of natural deposits. 0 sites out of 31 were above 15 ppm.	NO

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	with PERCENTILE DETECTED	MAJOR SOURCES	VIOLATION
COPPER (ppm)	2015	1.3	1.3	0 of 12 samples was above the action level	Corrosion of household plumbing systems. Erosion of natural deposits.	NO
LEAD (ppm)	2015	ppb	0.25	0 of 12 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) 0.22 was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting the turbidity limit was 99.99%. The average turbidity value for 2017 was <0.10 NTU.
(5) This value refers to the highest monthly percentage of positive samples detected during the year. For 2017 Warwick collected 129 samples for Coliform Bacteria compliance monitoring, none were positive for coliform bacteria.
(6) MLC compliance is calculated using local running annual average (LRAA) for each monitoring location in the distribution system. Warwick currently has one (1) site sampled quarterly.
(7) The state allows KCWA to monitor some contaminates less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, through representative, are more than one year old.
(8) DEHP was detected in a single sample of Providence Water Supply source water. All subsequent test results for this compound sampled in 2017 were negative.

NA=Not Applicable TT=Treatment Technique

Sources of Water

The Kent 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, Moswanisicut, 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. The kent 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, Moswanisicut, 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.

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants (UCMRs) are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, including those for a non-detected UCMRs, please contact The Water Division at 738-2000, extension 6600.

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	2017	ppm	2	2	0.01	NA	Erosion of natural deposits.	NO
CHLORINE (as C12); Free Residual)	2017	ppm	MRDL=4.0	MRDLG-4.0	0.46	0.00-1.06	Water additive used to control microbes.	NO
FLOURIDE	2017	ppm	4	4	0.86	0.45-0.86	Erosion of natural deposits. Water additive which promotes strong teeth.	NO
HALOACETIC ACID (HAAS)[3]	2017	ppb	60	0	19.2	10.9-26.9	By-Product of drinking water chlorination.	NO
TOTAL ORGANIC CARBON (TOC)[1] (Removal Ratio)	2017	NA	TT	NA	1.62	1.54-1.78	Naturally present in the environment.	NO
TOTAL TRIHALOMETHANES (TTHM)[3]	2017	ppb	80	0	71.3	23.0-82.0	By-Product of drinking water chlorination.	
TURBIDITY[2]	2017	NTU	TT	NA	0.22	0.02-0.22	Soil runoff.	
TOTAL COLIFORM BACTERIA[4]	2017	% of Positive Samples/Mo.	Presence of coliform bacteria in >5% of monthly samples	0.6	NA	0-1%	Naturally present in the environment.	NO
DI(2ethylhexyl)phthalate[5]	2017	ppb	6	0	1.0	0-1.0	Discharge from rubber and chemical factories	
Lead and Copper								
COPPER	2017	ppm	Action Level = 1.3	1.3	0.015	NA	Corrosion of household plumbing systems. Erosion of natural deposits . 0 sites out of 35 were above 1.3 ppm.	NO
LEAD	2017	ppm	Action Level = 15	0	17.0	NA	Corrosion of household plumbing systems. Erosion of natural deposits. 3 sites out of 30 were above 0.15 ppb.	NO
COPPER	2015	ppm	Action Level = 1.3	1.3	0.027	NA	Corrosion of household plumbing systems. Erosion of natural deposits . 0 sites out of 30 were above 1.3 ppm.	NO
LEAD	2015	ppm	Action Level = 15	0	15	NA	Corrosion of household plumbing systems. Erosion of natural deposits. 2 sites out of 30 were above 0.15 ppb.	NO
Unregulated Substances								
SODIUM	2017	ppm	NA	NA	13.9	NA	Runoff from road de-icing operations. Erosion of natural deposites.	NO

Water Quality Table Footnotes:

(1) 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.
(2) 0.22 NTU was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting the turbidity limit was 99.99%. The average turbidity value for 2017 was <0.10NTU.
(3) Compliance is based upon the highest quarterly LRAA and range is based upon lowest and highest individual measurement.
(4) This value refers to the highest monthly percentage of positive samples detected during the year. For 2017. Warwick Water collected 1208 samples for Total Coliform Rule compliance monitoring. Four of these samples were positive for total coliform bacteria. None were positive for E. Coli.
(5) DEHP was detected in a single sample of source water. All subsequent test results for this compound sampled in 2017 were negative.

NA = Not Applicable
TT = Treatment Technique

Important Information About Your Drinking Water

Reporting Requirements Not Met for City of Warwick

PSW# RI1615627

The City of Warwick main water system violated a drinking water standard in 2016. Although this was not an emergency, as our customers you have the right to know what happened and what we are doing to correct the situation.
We are required to report the results of your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. In August, we failed to notify the state drinking water program that we detected E. coli bacteria in a water sample. We are required to notify the state of this information within 24 hours of when we learned of the situation but we failed to do so. We collected all required follow-up samples, which were absent for E. coli and therefore we did not exceed the drinking water standard for bacteria (coliform). Although this situation did not create a risk to public health, as our customers you have a right to know what happened and what we did to correct the situation.
In addition, for the compliance period September 1, 2016 to September 30, 2016 we did not report the results of all monitoring for bacteria (coliform) by the due date due to a change in testing methods requiring a correction. For more information please contact the Water Division at 738-2008.

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	Piocuries 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

USEPA Unregulated Contaminate Program

The UCMR program reviews sample data taken from the source water points of entry and distribution system locations to evaluate drinking water contaminate occurrence data used by the Environmental Protection Agency (EPA) in future regulatory determinations. The purpose of the program was to collect occurrence data for contaminates suspected to be present in drinking water but do not have health based standards set under the Safe Drinking Water Act (SDWA). The Third Unregulated Contaminate Monitoring Rule (UCMR3) included assessment monitoring for 21 chemical contaminates using approved EPA analytical methods. Department of Public Works, Water Division is subject to this monitoring rule. The Water Quality table represents contaminates detected during the 2015 compliance monitoring period. Additional information on the requirements, methods and contaminates for the EPA URCM3 monitoring program is available by calling the Safe Drinking Water Hotline 800-426-4791 or online at http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/index.cfm