

KENT COUNTY WATER AUTHORITY



WATER



**CONSUMER CONFIDENCE
WATER QUALITY**

**ANNUAL REPORT
2019**

KCWA Consumer Confidence Water Quality 2019 Annual Report

This year's report covers all testing completed from January 1, 2019 through December 31, 2019 and fulfills both the Environmental Protection Agency (EPA) and Rhode Island Department of Health (RIDOH) requirements to provide a "Consumer Confidence Report" to our customers. This publication reflects our ongoing efforts to keep you informed about the quality of the water and services we deliver to you every day.

We remain committed to producing drinking water that meets all state and federal drinking water standards. This report includes information related to the origin of your water, what it contains, and how it compares to the quality standards set by the EPA. Be assured, the Kent County Water Authority's professional management and staff are committed to providing our customers with the finest, most cost effective and reliable drinking water.

The Kent County Water Authority and its predecessor companies have been delivering safe, dependable water, seven days a week, 24 hours a day for 139 years. We endeavor to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water quality and safety emerge, we remain vigilant in meeting these demands while continuing to serve the needs of our customers. It's important to understand the facts about the quality of your drinking water. The information provided in this document reflects the pertinent results from public water system regulatory testing requirements. Through our monitoring and testing efforts we have found that some regulated constituents have been detected. EPA and RIDOH regulatory guidance reflect that your water is SAFE at these levels. This report explains the quality of your drinking water, its sources, an overview of the water system, our future goals, progress and more. Should you have any questions concerning this information or your water utility, please contact our Executive Director/Chief Engineer, David L. Simmons, P.E. at 401-821-9300 or customerservice@kentcountywater.org. Customer concerns regarding Providence Water results should be directed to the Customer Service Department of the Providence Water Supply Board at 401-521-6300 or RIDOH Office of Drinking Water Quality 401-222-6867.

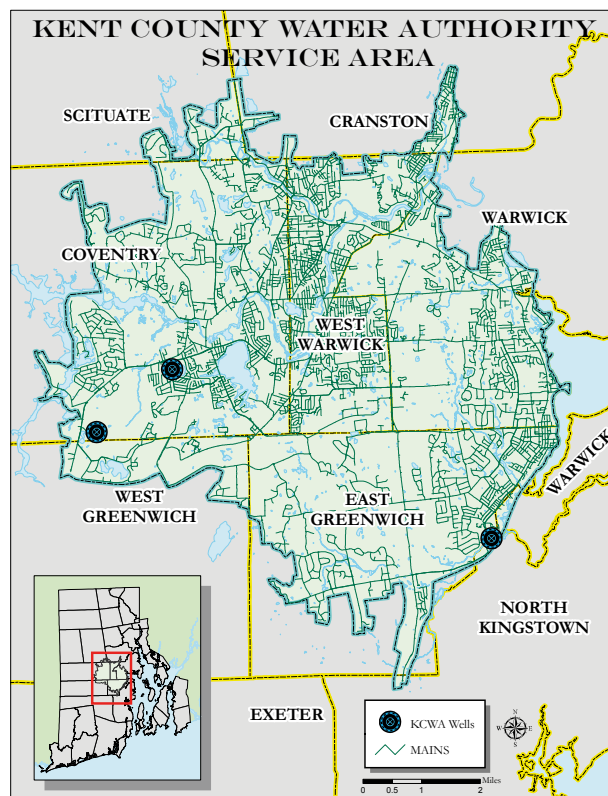
We value customer feedback. Public participation adds value to the decision making process regarding the quality of your water and the service you are provided. If you would like to learn more about your water utility or play a part in its future, please feel free to attend any of our regularly scheduled board meetings held on the third Thursday of each month. Meeting agenda information can also be found on the Secretary of State website, opengov.sos.ri.gov/OpenMeetings. Meetings begin at 3:30 p.m. at our office located at 1072 Main Street, West Warwick. We look forward to seeing you there!

Sources of Water

The Kent County Water Authority purchases approximately 80 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.

When Selling Your Home or Commercial Property

The standard closing information request must be presented to the Kent County Water Authority for any sale or conveyance of property currently receiving public water service. This form is often completed by your realtor or attorney. The processing of this form provides vital account information to the Kent County Water Authority. This form is also the mechanism to inform the seller and purchaser concerning outstanding billing amounts and identification of any possible service connection compliance defect issues that must be corrected to facilitate compliance with current rules and regulations for service.



It is imperative that the Kent County Water Authority be notified seven (7) business days in advance of the closing date to conduct an onsite service connection compliance inspection as part of processing the closing form request. This will ensure any unforeseen compliance issue that may need to either be remedied or negotiated between the seller and purchaser for correction as part of the terms of the sale before the lending institution will close on the property.

Rules and Regulations

The Kent County Water Authority Rules and Regulations represent the written guidance outlining both the water utility and customer responsibilities concerning things like billing, maintenance, ownership guidelines and other important issues. In responding to customer concerns and inquires, we have found that customers are often unaware of the customer responsibilities delineated in these Rules and Regulations. This can sometimes leave our valued customers in precarious situations when a repair may be required or a change in property ownership is about to occur. The acceptance of public water supply from the Kent County Water Authority represents a contract between the customer and water utility. Each party's responsibilities are described in the applicable sections of the Kent County Water Authority Rules and Regulations. To help better understand each party's responsibilities, we strongly recommend that all customers periodically review the Kent County Water Authority Rules and Regulations. A copy of the Kent County Water Authority Rules and Regulations are available at our main office, or online at www.kentcountywater.org. During normal business hours you may contact one of our customer service representatives, should you have a question or concern regarding the regulations.

KCWA Website Makes Payments Easier

Customers may pay their bill online by credit/debit card and electronic check using the Kent County Water Authority website www.kentcountywater.org. It is imperative that customers only use the www.kentcountywater.org website when making payments. This requires you to directly type the website address into your search engine. If you generically search Kent County Water Authority you may end up at a third-party website that charges additional fees and often leads to undue delays in receipt of your payment. Additional information on credit/debit card and electronic check payment methods can be obtained on www.kentcountywater.org or by contacting any of our customer service representatives at (401) 821-9300.

Remittance Address For Bill Payment By Mail

Offsite payment processing has been a great success to more efficiently processed bill payments. Customer service representatives can now be more effective in meeting the daily inquiry needs of our valued customers and meeting the compulsory regulatory demands on a public water system. The mailing address for your water bill payments is Kent County Water Authority, P.O. Box 9901, Providence, RI 02940. The most efficient payment methods are remittance by mail and

online credit/debit card bill payment or electronic check. Customers can continue to make payments in person at our office located at 1072 Main Street, West Warwick, RI, however, for safety reasons cash is no longer accepted. Payments made in person at our office must be in the form of a check, money order or credit/debit card.

Emergency Mass Notification System

In our continuing effort to keep our customers better informed, we have implemented the use of the SmartNotice system. SmartNotice allows KCWA officials to deliver a prerecorded, tailored message, to either an entire community or a select portion of a city, advising residents about emergencies and/or important system maintenance information regarding the drinking water system. SmartNotice allows us to quickly reach our customers and area residents using telephone, email and/or text communication. The SmartNotice system is a product line of the same Emergency Communication Network that handles the familiar CodeRED community notification system, with the exception that SmartNotice has been specially tailored for utility applications. Once you sign up, you will receive a phone call, email, or text from our new emergency notification system in the event of a drinking water emergency or important system maintenance that arise in your area.

The basic SmartNotice telephone databases has its limitations as it is derived from the listings that are in the local printed telephone directories. To ensure you are included in our customer notification database it is imperative that every customer visit our website www.kentcountywater.org and register your cell phones, home phone and any unlisted phone numbers you wish to receive notifications on to ensure you are fully capable of receiving notifications. Even if you live in a community that already uses CodeRED you will still need to enroll in SmartNotice so you can get messages specific to your drinking water. All numbers will remain confidential and will be used only to communicate drinking water emergencies and other important information regarding the public water system.

If you are reading this online follow this link to sign up today: <https://public.coderedweb.com/CGE/BF0FB15C3487>



Infrastructure Improvements

Kent County Water Authority distribution and transmission mains comprise a network of more than 490 miles of underground infrastructure, storage tank facilities, and a multitude of pumps, wells and pressure control stations that must be continually maintained. Rhode Island General Law 46-15.6 requires that all large water suppliers implement an infrastructure replacement program to address such things as aging mains, rehabilitation of tanks and pumping stations. Each water system throughout the state is required by law to provide a funding mechanism to replace and/or rehabilitate identified components at the end of their useful life within the framework of

the regulations. We have several projects under construction and in the design phase. These projects will replace underground water infrastructure including mains, service pipes, valves and hydrants. As you might expect, water rates pay for the replacement of old and failing infrastructure. Costs associated with the infrastructure improvement program are incorporated in the rate structure for your billing. The rate structure and infrastructure improvement program is fully reviewed and approved by the Public Utilities Commission (PUC) prior to commencing work on the planned improvements. At the current PUC approved rate, water still costs less than a penny per gallon delivered to your home. Water is still the best bargain in town in comparison to bottled water or other utility and cable services.

In the year of this report much of the infrastructure work continued in Warwick and West Warwick. We strive to achieve the most amount of infrastructure replacement within the rate structure budgetary limits reviewed and approved by the Division of Public Utilities and Carriers. Infrastructure replacement improves water quality and the service you receive. Aging water mains, tanks and pumping stations must be systematically replaced to extend these costs over the life cycle of the asset. We are very pleased that the planned projects brought to final completion this past year improved water quality and overall service to our customers. Additionally, the roadways were paved curb to curb as part of the water infrastructure projects without any municipal cost sharing. This represents a great investment in your community without an increase burden on the municipal tax budget.

Two water storage tanks located on Read Schoolhouse Road and Tiogue Avenue (off Elton Street) are being removed as part of the IFR plan. These tanks are scheduled for removal in Spring 2020. In addition to the tank removal, the underground pump station at Tiogue Avenue is also being removed. Once the tanks are removed, any lead-contaminated soil will be removed and disposed of in accordance with all Federal and State requirements. Confirmation sampling of the soil will be performed to ensure all potentially contaminated material has been removed

Capital Improvements

Capital improvement projects are intrinsic components to the future of the water supply system. These types of projects are aimed at improving water quality, regulatory compliance initiatives, and supply improvements that better serve our customers.

Our revised 2017-2022 Capital Improvement Plan (CIP) is available online at www.kentcountywater.org under the Reports tab. The plan maintains consistency with the principles and strategic goals of the Authority and its commitment to:

- Provide a consistent source of high quality, potable water for public consumption and fire protection.
- Reduce overall short and long-term maintenance costs.
- Coordinate water system improvements to comply with local and federal guidelines for consistent management and operation of a public water supply system.

- Planning to meet future economic and residential growth in the service district.

The CIP consists of a systemwide evaluation to produce a detailed plan for installation of new infrastructure required to improve the water system's operation and maintenance. It provides a planning document with systematic approach to implementing projected short-term (immediate) and long-term (out to 5-year) needs and requirements. The evaluation phase includes essential enhancements that are focused on future improvements in water supply, storage, pumping, treatment, transmission and distribution systems necessary to meet regulatory requirements and overall water system service needs of the communities we serve. The plan is routinely reviewed in order to re-prioritize, modify and update projects from previous CIP's based on economic growth patterns and supply needs throughout the service area. As the system grows, supply, service and projected administrative needs are incorporated into this planning document that is reviewed by several state and municipal entities. As of the summer of 2019, 44% (217 miles) of the KCWA distribution system mains have been added or replaced as part of IFR projects, CIP projects, RIDOT partnership projects, or developer additions.

The largest CIP project we began in 2019 is the interconnection between the North and South High Service Zones. This new transmission main connection eliminates the vulnerability that previously existed and now provides a redundant supply capability to both zones. This project is expected to be completed in the Summer 2020.

Protecting Your Watershed Protects You and Your Family

Clean, safe potable water starts at the source. Contaminants are mainly introduced to the watershed in what has been termed as point and non-point source contaminates. Point source pollution is that which can be traced to a specific source such as a factory, farm, leaking fuel tank or industrial site. Non-point source contaminants are more difficult to manage because they represent small, but cumulative contributions from each of us such as paint thinner, antifreeze and pesticides. It doesn't take long for our shelves to become cluttered with half-empty containers of chemicals. Chemicals, pharmaceuticals or pollutants inadvertently put down a sink or street drain, or over application of fertilizer or pesticides sprayed around a foundation increase the occurrence of watershed contamination because they leach and travel with rainwater to the aquifers that supply your drinking water.

Responsibility in establishing future land use protection strategies, zoning and growth projections for municipalities falls squarely on each city and town through legislative empowerment in Rhode Island General Law 45-22.2-3. We cannot over emphasize that the decisions made by your municipal leaders ultimately affect the quality and overall cost of your drinking water. Public participation is key in the protection of these sensitive drinking water sources. Your input is a critical component to the city and town land use decision making

process regarding these sensitive drinking water aquifers and critical recharge areas within your communities.

We have tried to make these areas more visible by installing wellhead protection signs within existing wellhead protection areas as an indicator of the proximity of your drinking water sources located in the towns of Coventry, East Greenwich and West Greenwich. We hope these signs have helped to increase public awareness and appreciation of the vital groundwater resources in these areas. We urge you to contact your city or town council member and zoning official to see what else can be done to protect these resources. Public participation in the zoning decision making process is instrumental to protecting your drinking water resources. We think of our customers who live within these areas as the guardians of these essential resources. Your help to preserve these critical drinking water sources will be eternally appreciated by your future family and friends who must perpetually rely on them. Please contact us or the Rhode Island Department of Environmental Management at 401-222-3070 if you suspect a potential contamination concern exists.

The Pawtuxet, Mishnock and Hunt River aquifers including adjacent lands comprise the watersheds from which groundwater supply is drawn. There has been growing concern that groundwater withdrawal exceeds the recharge from some of these groundwater supplies. It should be noted that ninety to ninety-eight percent of household water use ends up down the drain. The water that goes down the drain ends up in either a septic system or in a public sewer system. Septic systems, or Onsite Wastewater Treatment Systems (OWTS), return water to the underground reservoirs. By contrast, public sewers provide conduits for the conveyance of wastewater to local sewage treatment facilities. The ferrying of water out of any recharge basin via sewers exacerbates groundwater depletion by redirecting critical replenishment supplies out of the basin. Also, these treatment facilities are required to produce an effluent discharge that, in many instances, exceeds drinking water quality standards to protect the highly sensitive flora and fauna in receiving rivers, estuaries, bays and eventually the Atlantic Ocean.

Millions of dollars each year are spent to treat sewage to near drinking water standards only to be discharged out of aquifer recharge areas and into rivers. The treated wastewater could better serve the benefit of the residents of RI and ecosystem by returning it to the aquifers where the water was drawn from to recharge these aquifers. Many states are now embracing the concept of returning treated wastewater from their treatment plants to its origins as the most cost-effective management plan to benefit the environment and keep aquifers from becoming stressed. The idea of this type of water management concept is often not readily accepted by the general public because of the heavy stigmatism associated with the word sewage. However, what many people do not think about is that in areas without public sewer systems the wastewater is treated using Onsite Wastewater Treatment Systems in each property. The effluent from these systems in turn represents the water necessary to recharge the aquifers from which the water is drawn.

Advancements in treatment technology for speeding up natural water purification processes are well understood and readily available. There are several case studies where treated wastewater reuse was safely and successfully implemented using current available technology, specifically membrane technology. This idea should be seriously reviewed by our regulatory bodies and planners when faceting together a multi-tonged initiative to preserve and conserve freshwater resources in Rhode Island. Take the opportunity to investigate these ideas and voice your opinion to promote this type of cost saving conservation initiative to your state representatives. We spend millions of dollars each year treating wastewater to drinking water quality. Why not put this effort to full circle resource recovery. There is no better way to recycle and conserve our most precious resource.

Statewide Water Use and Efficiency Rules

As a reminder the Rhode Island Water Resources Board voted some time ago to approve new water use rules based on language in the authorizing legislation. The regulations, www.wrb.ri.gov/policy_rules_wuea.html, require a reduction in customer use, capping it at 65 gallons per person per day. This limit includes all inside and outside water uses such as lawn and garden watering, car washing, pool filling, clothes washing, cleaning, drinking, cooking and any other water use. Some of the intervention highlights include, but are not limited to:

- The retrofit installation of conservation plumbing fixtures and “WaterSense” appliances.
- Limits on the size of landscapes that require irrigation, amount of water that can be used and times for operation of irrigation systems.
- Seasonal and inclining block rate structures that increase the cost of use as consumption increases.
- Establishment of new plantings restricted to spring and fall only.
- Public education and water audits.

Many of these initiatives appear to fall under the purview and enforcement authority of city and town building and zoning officials, but so far only the water suppliers will be held accountable to if targets are not met. Rate structures will have to change to comply with the adopted regulations. Increased water prices and outside water use moratoriums can be expected if customer use exceed the 65 gallons per person per day cap. Lifestyle changes are necessary to comply with these mandates. Please take the opportunity to research better ways to curtail and take better control of your everyday water use. Looking for and repairing leaks, reducing the time in the shower and doing full loads in your clothes and dishwasher are all great ways to implement conservation wise strategies in your home.

Cross Connection Control

We are continuing to reach out to our commercial customers that were found noncompliant with RIGL and RI Department of Health containment backflow device requirements. The regulatory backflow requirements focus on the protection of the public water system through “containment” approach. Containment requires the installation of an appropriate backflow prevention device directly

following the meter or service isolation valve in the immediate vicinity where the water service enters the building or meter enclosure. Rhode Island plumbing code also requires the installation of thermal expansion appurtenances in conjunction with the backflow device installation. Our commercial customers have been receiving written notification to provide a schedule for compliance installation of these devices. Overall customer response to installation of the required containment backflow device has been good and the program is waning completion as the remaining customers acquiesce to the law. As a reminder, customers do not need to receive notification to take action towards installation of a containment backflow device. It is advisable though to contact our office prior to accomplishing the installation to assure the full containment backflow requirements will be met. Everyone's cooperation in this program is essential to assure compliance requirements are completed to meet the merit of the law and the protection of the public water system from the potential of contamination. If the required device has already been installed at your property, please contact us at 401-821-9300 to set up an appointment to have one of our field representatives perform a verification inspection.

Systemwide Meter Change Out Program

Our most recent Public Utilities rate approval, Docket 4611, incorporated funding to move forward with a meter change out program. The last system wide meter change-out program occurred more than 20 years ago. Water meters have moving parts that over an extended period of time wear incrementally in relationship to the amount of water that passes through the meter. As clearances between the parts increases, the accuracy of the metered consumption can be compromised. Basically, some water use could be unaccounted for. The Division of Public Utilities and Carriers regulatory guidance requires residential meters less than 2 inches in size to either be tested or replaced at 20-year intervals. The manufacturer no longer supports the technology for the majority of the meters currently in service. The age and technological obsolescence of the existing meters makes the systemwide testing of meters cost prohibitive and would not provide any long-term benefit to our customers. Changing out the existing meters that do not meet current technology is the only viable option that delivers the most benefit to our customers. There is no cost to the customers for the new meter. The cost of the program has been collected and incorporated into the water rates, so no direct payment is collected at the time of installation.

Radio frequency technology is the current trend in metering systems. This technology is what manufacturers have available to replace existing meters that have failed. This technology represents the latest in digital meter registering equipment for efficient retrieval and accurate accounting of consumer consumption, leak detection trending and can help provide the information necessary to answer customer questions concerning unusual or abnormal consumption related billing concerns. Radio reading technology reduces labor factors related to systemwide collection of reads and will facilitate the

future move to a monthly billing cycle similar to other utility and consumer credit billing cycles.

The meter change-out program (MCOP) contract was awarded in 2019. Meter change-out work has begun and is progressing through the district by geographic areas. As of April 1, 2020, over 5800 meters have been replaced, approximately 20% of the meters. Customers are being contacted by the installation company by mail with a post card to set up appointments to remove the existing meter and install the new meter during one visit to your property. Customers can either go online to book their appointment or call the phone number on the postcard. It is anticipated that the meter change-out program will span a 2-year period to enable a coordinated installation plan that facilitates the continuation of billing and customer service functions during the transition to the new software and metering technology. We greatly appreciate your support and cooperation as we move forward to successful completion of this complex program.

Nonpayment Shutoff

Delinquent accounts have been at an all-time high over this past year. Failure to make payment on your bill eventually leads to a shutoff notice and subsequent discontinuance of service. The charge for shutoff of a delinquent account is \$55.00. After payment of the delinquent amount the turn on charge is \$45.00. This results in an additional \$100.00 dollars added to the delinquent amount before water service can be restored to your property. It is very important that you contact us as soon as you think you may not be able to make payment within the normal 30-day grace period. At that time, we can discuss options for payment and perhaps offer a payment plan to get you through a tough period and avoid the shutoff and turn on charges. If you stay within your payment structure it will save you from the additional \$100.00 charges associated with shutoff and turn on policy.

The additional costs associated with shutoff for nonpayment of your quarterly bill is a very important consideration. These costs have been reviewed and approved by the Public Utilities Commission. These charges are in addition to the overdue amount and any accumulated interest applied at the time service has been shutoff. Waiting until the water has been shutoff for nonpayment will cost you more than making a timely payment.

Account Contact Information

Keeping your account contact information up to date is an important factor in our ability to communicate with you should a problem arise. Our customer service representatives will be asking for updated phone contact and billing information as part of any interaction with our customers. Making changes to your billing address can be done in person at the office or by sending an email to customerservice@kentcountywater.org. Our customer service representatives endeavor to assist you. Thank you for your cooperation.

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Kent County Water Authority Water Quality Data

The tables list all 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, 2019 to December 31, 2019. 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.

CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED LEVEL	RANGE	MAJOR SOURCES	SDWA VIOLATION
Barium (1)	2019	ppm	2	2	0.009	N/A	Erosion of natural deposits.	NO
Nitrate (1)	2019	ppm	10	10	0.06	N/A	Erosion from natural deposits. Leaching from septic tanks; sewage; runoff from fertilizer use.	NO
Nitrate/Nitrite	2019	ppm	10	10	4.6	0.11 - 4.6	Erosion from natural deposits. Leaching from septic tanks; sewage; runoff from fertilizer use.	NO
Fluoride (1)	2019	ppm	4	4	0.8	0.58 - 0.80	Erosion of natural deposits. Water additive, which promotes strong teeth.	NO
Turbidity (1)(4)	2019	NTU	TT	N/A	0.88	0.02 - 0.88	Soil runoff.	NO
Total Organic Carbon (1)(3)	2019	N/A	TT	N/A	1.77	1.62 - 1.87	Naturally present in the environment.	NO
Chlorine (as Cl ₂), Free Residual	2019	ppm	MRDL = 4.0	MRDLG = 4.0	0.471	0.39 - 0.54	Water additive used to control microbes.	NO
Total Trihalomethanes (T _{thm}) (5)	2019	ppb	80	N/A	64	23.4 - 84.3	Byproduct of drinking water chlorination.	NO
Combined Radium 226/228 (P _{ci/L}) (2)	2017	pCi/l	5	0	1.2	0 - 1.20	Erosion of natural deposits.	NO
Haloacetic Acids (Haa ₅) (5)	2019	ppb	60	N/A	23	5.2 - 32.3	Byproduct of drinking water chlorination.	NO
Total Coliform Bacteria (6)	2019	% positive samples per month	TT	N/A	1.06	N/A	Naturally present in the environment.	NO
LEAD AND COPPER			ACTION LEVEL					EXCEEDANCE
Copper	2019	ppm	1.3	1.3	0.019	0 of 30 samples was above the action level	Corrosion of household plumbing systems. Erosion of natural deposits.	NO
Lead	2019	ppb	15	0	7.6	1 of 30 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 sources 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) 0.88 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 2019 was < 0.10 NTU.
- (5) MCL compliance is calculated using local running annual average (LRAA) for each monitoring location in the distribution system. KCWA currently has eight (8) sites sampled quarterly

- (6) For 2019 KCWA collected 1380 samples for Coliform Bacteria compliance monitoring. Two samples from the distribution system were positive for coliform bacteria. Repeat samples from these sites were tested and the results were negative for Coliform bacteria.

Table Unit Descriptions:

AL	Action Level
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
pCi/L	picocuries per liter (a measure of radioactivity)
ppb	Parts Per Billion, or micrograms per liter
TT	Treatment Technique

NTU	Nephelometric Turbidity Units
ppm	Part Per Million
NA	Not Applicable
ND	None Detected
HA	Health Advisory
MRDL	Maximum residual Disinfection Level
MRDLG	Maximum Residual Disinfection Level Goal
ppt	Parts per Trillion or nanograms per liter

Definitions:

MCLG: Maximum Contaminant Level Goal; 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.

MCL: Maximum Contaminant Level; 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.

TT: Treatment Technique; A required process intended to reduce the level of a contaminant in drinking water.

AL: Action Level; The concentration of a contaminant, which if

exceeded, triggers a treatment of other requirements that a water system must follow.

MRDL: Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.

MRDLG: Maximum Disinfectant Level Goal, the level of 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.

Contaminates Detected That Are Not Regulated:

The USEPA mandated sampling methods performed under the National Primary Drinking Water regulatory requirements provide results that include detection of both regulated and additional monitoring data that includes unregulated contaminants, also known as the UCMR program. Regulatory requirements prohibit including nonregulated contaminants in the main table of regulated contaminants. Questions concerning these contaminants can be best

addressed by calling the Safe Drinking Water Hotline 1-800-426-4791 or RIDOH office of Drinking Water Quality 401-222-6867 or 401-222 7762. The following contaminants were detected during the UCMR4 2019 sample period and may come from a variety of sources such as minerals, agriculture, urban storm water runoff, commercial processes, water treatment and residential uses:

UNREGULATED SUBSTANCES	PERIOD	UNIT	DETECTED	RANGE	MCL	MAJOR SOURCES
Chloroform	2019	ppb	0.89	0.62 - 0.89	100	By-product of drinking water chlorination
Sodium	2019	ppm	85.6	21.6 - 85.6	1,000	Runoff from road de-icing operations
OTHER UNREGULATED SUBSTANCES					EPA HEALTH ADVISORY LEVEL	MAJOR SOURCES
Perfluorooctane Sulfonic Acid (PFOS)	2019	ppt	6.14	4.70 - 6.14	70.00	EPA Technical Fact Sheet
Perfluorooctanoic Acid (PFOA)	2019	ppt	9.70	4.65 - 9.70	70.00	EPA Technical Fact Sheet
Total PFOS and PFOA	2019	ppt	13.80	9.42 - 13.80	70.00	EPA Technical Fact Sheet
FOURTH UNREGULATED CONTAMINANT MONITORING RULE (UCMR 4)(6)				RANGE		MAJOR SOURCES
Manganese	2019	ppb	1.4	0.97 - 1.4		Erosion of natural deposits.
DiChloroAcetic Acid	2019	ppb	21.4	1.4-21.4		By-product of drinking water chlorination
TriChloroAcetic Acid	2019	ppb	2.3	1.4-2.3		By-product of drinking water chlorination
BromoChloroAcetic Acid	2019	ppb	2.3	0.5-2.3		By-product of drinking water chlorination
BromoDiChloroAcetic Acid	2019	ppb	1.4	1.4		By-product of drinking water chlorination
HAA5 Group	2019	ppb	23.3	3.7-23.3		By-product of drinking water chlorination
HAA6BR Group	2019	ppb	2.6	1.1-2.6		By-product of drinking water chlorination
HAA9 Group	2019	ppb	25.5	6.3 - 25.5		By-product of drinking water chlorination

Providence Water Quality Data

The full Providence Water Consumer Confidence Report sampling results are being provided within the Kent County Water Authority report at the request of the RIDOH Office of Drinking Water Quality. The sampling results shown in this table for lead, copper, haloacetic acids, total coliform bacteria and total trihalomethanes reflect sampling taken within the Providence Water distribution system. Some of the sample results in the table below represent results of the testing performed by the Providence Water Supply Board that has been identified

as applicable to the reporting requirements for our Cranston area customers. Results shown on the Kent County Water Authority Quality Data table for lead, copper, haloacetic acids, total coliform bacteria and total trihalomethanes reflect sampling taken within the Kent County Water Authority distribution system and are applicable to all our customers. Providence Water had one Safe Drinking Water Act violation in reference to a 90th percentile lead exceedance which was above the action level from sampling conducted within their distribution system during 2019. Questions regarding Providence Water data should be directed to the RIDOH Office of Drinking Water Quality 401-222-6867.

CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED LEVEL	RANGE	MAJOR SOURCES	SDWA VIOLATION
Barium	2019	ppm	2	2	0.009	NA	Erosion of natural deposits	NO
Chlorine (as Cl ₂), Free Residual	2019	ppm	MRDL = 4.0	MRDLG = 4.0	0.56	0.00 - 1.12	Water additive used to control microbes	NO
Fluoride	2019	ppm	4	4	0.80	0.58 - 0.80	Erosion of natural deposits. Water additive which promotes strong teeth.	NO
Haloacetic Acids (HAA5) (3)	2019	ppb	60	0	24.2	4.9 - 26.3	By-product of drinking water chlorination	NO
Total Organic Carbon (TOC) (1) removal ratio	2019	NA	TT	NA	1.77	1.62 - 1.87	Naturally present in the environment	NO
Total Trihalomethanes (TTHM) (3)	2019	ppb	80	0	71.8	18.2 - 68.5	By-product of drinking water chlorination	NO
Turbidity (2)	2019	NTU	TT	NA	0.88	0.02 - 0.88	Soil runoff	NO
Total Coliform Bacteria (4)	2019	% Positive Samples	TT	N/A	1.06	NA	Naturally present in the environment	NO
Nitrate (5)	2019	ppm	10	10	0.06	NA	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	NO
LEAD AND COPPER	ACTION LEVEL					EXCEEDANCE		EXCEEDANCE
Copper	2019	ppm	1.3	1.3	0.02	NA	Corrosion of household plumbing systems. Erosion of natural deposits. 0 sites out of 300 were above 1.3 ppm.	NO
Lead	2019	ppb	15	0	16.4	NA	Corrosion of household plumbing systems. Erosion of natural deposits. 35 sites out of 301 were above 15 ppb.	YES

Water Quality Table Footnotes:

- 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.
- 0.88 NTU was the highest single turbidity measurement recorded. The lowest monthly percentage of samples meeting the turbidity limit was 100.0%. The average turbidity value for 2019 was < 0.10 NTU.
- Compliance is based upon the highest quarterly LRAA and range is based upon lowest and highest individual measurement.
- This value refers to the highest monthly percentage of positive samples detected during the

year. For 2019, Providence Water collected 2125 samples for Total Coliform Rule compliance monitoring. Five of these samples were positive for total coliform bacteria. None were positive for E. Coli.

- Nitrate was detected in a single sample of source water.
- Unregulated contaminants are those that don't yet have a primary drinking water standard set by the US EPA. The purpose of monitoring for these contaminants is to help US EPA develop regulatory decisions for these contaminants.

NA = Not Applicable ND = Not Detected TT = Treatment Technique

Providence Water Fourth Unregulated Contaminant Monitoring Rule Results (UCMR4). Unregulated contaminants are those that don't yet have a primary drinking water standard set by the US EPA. The purpose of monitoring for these contaminants is to help the US EPA develop regulatory decisions for these contaminants.

UNREGULATED SUBSTANCES	PERIOD	UNIT	AVERAGE	RANGE	MAJOR SOURCES
Sodium	2019	ppm	15.0	NA	Runoff from road de-icing operations.
FOURTH UNREGULATED CONTAMINANT MONITORING RULE (UCMR 4) (6)	PERIOD	UNIT	DETECTED LEVEL	RANGE	MAJOR SOURCES
Bromochloroacetic Acid (BCAA)	2018	ppb	1.85	0.4-2.79	By-product of drinking water chlorination
Manganese	2018	ppm	0.0008	0.0005-0.001	Erosion of natural deposits.

Lawn Care and Landscaping Tips

Water usage during the summer months increases significantly. This is primarily related to outdoor water use, the majority of which can be directly attributed to lawn watering. You can effectively reduce your summer water use in the following ways:

- **Plant less lawn** - Reduce traditional grass lawns where possible. Grass requires more water than other types of ground covers. Replace lawn with drought tolerant shrubs, perennials and ground cover.
- **When to Plant Lawn** - The best time to plant grass is in the early spring or the early fall. The temperatures promote growth and the watering requirements are significantly less.
- **Grass Selection** - Select a native, drought-resistant, or low-water-use turf grass such as fescue grasses. Many varieties are available for your use that includes blends of drought tolerant varieties.
- **Plant Trees** - Trees help maintain moisture for nearby plants.
- **Odd/Even Policy** - KCWA's year-round odd/even watering policy is in place to help promote conservation and even out the peak demands placed on the available water supplies. This policy does not mean that you are obligated to water your lawn every other day. Watering every other day when soil conditions do not require it can encourage shallow roots, disease and can weaken plants.
- **Water grass only when needed** - Your lawn needs only one inch of water a week to remain actively growing and healthy. Use a rain gauge to measure weekly rainfall and apply only the amount of extra water needed. Depending on the weather and type of grass, your lawn may go naturally dormant turning brown or hay like in color no matter how much you water. A good rule of thumb is to water approximately once every four to five days and use the rain gauge.
- **Best time to water** - Early morning is best. Less water is lost to evaporation and you will also reduce fungus problems with your lawn.
- **Maintain your lawn properly** - Maintain your lawn at three to four inches in length during the summer heat. During a serious, prolonged drought consider allowing lawns to go naturally dormant, because watering can actually stress the grass more by forcing it to grow under such adverse conditions.
- **Limit Fertilizer Use** - Fertilizer increases the plant's thirst for water. Avoid use of fertilizers in the summer.
- **Natural Runoff** - Install cisterns or rain barrels to collect water from downspouts which can later be used for watering plants and flowers or depress your lawn 1" or 2" to capture and hold runoff from your downspouts.
- **Soil Preparation** - Preparing your soil properly is perhaps the most important aspect of a water conservative landscape. Deep cultivation with lots of organic matter such as compost, leaf mold and peat moss will enrich the soil naturally and hold large quantities of water for proper growth of the root system and plants.
- **Using Mulch** - Use of mulch around plantings helps to reduce evaporation and maintain moisture, limit heat stress and discourage weed growth.

For more information visit the URI Healthy Landscapes Program website, www.healthylandscapes.org or call (401) 874-5398.

In-ground Automatic Sprinklers are perhaps the largest contributing factor to seasonal water waste. If used correctly, in-ground sprinklers can be somewhat water efficient. Unfortunately, many systems are not set up properly, or do not contain necessary moisture/rain sensors to prohibit operation when it is not necessary. In some cases, homeowners may not know how to reset the system for maximum efficiency. This results in considerable wasted water. The following general guidelines can help make your sprinkler system more efficient:

- A licensed irrigation professional should inspect and adjust your system each year.
- The point of connection is the supply line for the irrigation system. All connections, fittings and valves should be inspected for leaks and proper operation including the correct operating pressure. Excessive pressure can result in water waste and damaged parts.
- Sprinkler valves open and close to allow for operation of each zone. This is programmed into the controller and should be inspected regularly. Malfunction of these valves can also result in wasted water.
- Sprinkler heads should be checked for proper spacing and alignment, application rates and operating pressure. Move or cap sprinkler heads to avoid watering paved or non-vegetated areas.
- Look for suspicious spots in your landscape that are much greener or consistently wet and muddy. This may be due to an underground leak or other malfunction.
- Learn how to program the system and manage it in manual mode.
- Water once or twice per week. Frequent light watering events encourage disease and shallow roots.
- Water early in the morning to reduce evaporation.
- Do not over water. Use a rain gauge and strive for one inch of water per week (rainfall + irrigation = one inch/week).
- Sprinklers are best suited for grass. Drip irrigation is preferable for plants and shrubs.

Upgrade your system with conservation technology to meet current KCWA Rules and Regulations:

- Install a rain shut-off device to prevent watering when it rains.
- Install a soil moisture sensor that schedules irrigation based on soil moisture conditions.
- Consider installing a "smart" controller that schedules irrigation based on weather conditions. For more information visit the Irrigation Association website, www.irrigation.org.



Tips That Help You Save

Toilet leaks: Does your toilet cycle when no one is in the bathroom? Do you have to jiggle the handle to stop the toilet from running? These are all symptoms of worn or maladjusted components resulting in leaks inside of your toilet. We recommend testing your toilets for leaks at least once a year. The process is very simple and can save you from receiving an unexpected large water bill. Add food coloring or other non-staining dye tablets to your toilet tank. Customers can obtain free dye tablets at our office. Let the toilet stand for twenty minutes. If the water in the bowl changes color, it indicates that toilet tank water is leaking into the bowl and down the drain.

Frozen pipes: Each year during the winter months we respond to an increased number of calls from our customers reporting no water. The findings are almost always associated with frozen pipes and meters during this time of the year. Most often drafts, improperly insulated pipes, failed heaters or failed heat tape devices are found to be the cause. To prevent damage from occurring, the best time to inspect and correct these situations is before the cold weather sets in. Inspect the area where your meter and plumbing are located. Look for open cracks in the foundation, poorly fitted windows and doors, missing gaskets, insulation or light entering where the wood meets the concrete. Replace gaskets, seal and insulate all suspect areas. Preventive measures are very often less costly than repairs associated with flooding and burst plumbing resultant from frozen pipes.

Monitoring Your Meter: It is imperative that each customer monitor their meter on a regular basis to identify any leaks or abnormally high bills increased due to seasonal consumption is occurring. The Kent County Water Authority currently presents bills to its customers reflecting four previous “quarterly” consumption amounts. If you receive an abnormally high bill, please contact a customer service representative with your concern at 401-821-9300.

Each meter register is equipped with a leak detection feature and customers should check it regularly. On older registers it’s a small triangular indicator. On the newer digital registers, it’s a blinking faucet indicator that must be activated by waving a flashlight (cell phone lights will not work) over the register or red arrow located below the reading on the register. The process is simple. Make sure no one is using any plumbing fixtures or appliances in the home. During this period observe the register indicator. If the triangle is rotating or faucet is flashing, in the case of a digital register, this indicates a leak. You can further investigate the source of the leak by isolating or shutting the water valve off to each toilet and appliance, one at a time. Check the leak detector each time after isolating each plumbing fixture. If the detector stops, you have found the source and a plumber should be able to assist you with the repair. If you have a question about this leak detection process feel free to call one of our customer service representatives and they will be happy to assist in this concern.

Source Water Assessment

The latest source water assessment and wellhead protection plan for the Kent County Water Authority supply was completed in 2012. This plan includes the Mishnock Well Field, Spring Lake Well and East Greenwich Well. The susceptibility to contamination for all three wells was determined to be "MODERATE" according to the guidelines used by the Department of Health during the assessment. This ranking is considered to be an average ranking for the water supply. Future risk may be expected to increase with continued development. Copies of this Assessment can be obtained from the RI Department of Health at 401-222-6867.

Hydrant Flushing Program

Twice each year we flush our water mains. We often receive calls from customers asking why we are wasting water. The answer is, it’s a common waterworks maintenance practice to remove precipitated minerals and other accumulated sediment to help improve and maintain the quality of your drinking water and flow capacity to hydrants and the system as a whole. This program provides valuable system operating information relative to transmission pump operation, hydrant operation and other operational factors critical to assessing the reliability of multitude equipment components comprising the water system. So, the next time you see our water system operators performing this function know that we are doing this in the best interest our customers.

Health Effects Information

Nitrate in drinking water at levels above the MCL of 10 ppm is a health risk for infants of less than six months of age. Infants below the age of six months who drink water containing nitrate in excess of the MCL of 10 ppm could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and 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 for advice from your healthcare provider.

Nitrite in drinking water at levels above the MCL of 1 ppm is a health risk for infants of less than six months of age. Infants below the age of six months who drink water containing nitrite in excess of the MCL of 1 ppm could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. Nitrite 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 for advice from your healthcare provider.

Total coliforms are bacteria whose presence indicates that the water may be contaminated with human or animal wastes (E.Coli). Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous system, and may have an increased risk of getting cancer.

MCLs 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, for a lifetime to have a one-in-one-million chance of having the described health effects.

Additional Health Effects Information

The sources of drinking water (both tap and bottled water) include rivers, lakes, ponds, reservoirs, springs, and wells. As water travels over the land or through the ground, it dissolves naturally occurring minerals, radioactive material and can pick up substances or contaminants resulting from the presence of human or animal activities.

All sources of drinking water are subject to potential contamination from substances that are naturally occurring or manmade such as: microbes, inorganic and organic chemicals, and naturally occurring radioactive substances. All drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. More information on contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline 800-426-4791 or visit the EPA web site www.epa.gov/safewater.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer who are 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 from their healthcare providers about drinking water. EPA and CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Lead Informational Statement

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. Kent County Water Authority is responsible for providing high quality drinking water, but cannot control the variety of materials that may have been 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 www.epa.gov/safewater/lead.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring & Reporting Requirements Not Met for Kent County Water Authority

PWS# RI1559511

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

We are required to monitor your 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.

One (1) total coliform-present sample was collected from our distribution system on 10/30/2019, but our triggered well sample was not collected within 24 hours of learning of the total coliform-present result. Therefore, we cannot be sure of the quality of our drinking water during that time.

What should I do? There is nothing you need to do at this time. You do not need to boil your water or take other actions.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for the contaminant(s) and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Total Coliform
Required Sampling Frequency	1 well sample following a total coliform-present result
Number of Samples Taken	0
When All Samples Should Have Been Taken	11/04/2019 (the next business day)
When Samples Were Taken	Sample collected 11/15/2019

What is being done? We collected the triggered well sample on 11/15/2019. We are no longer in violation with this violation.

For more information, please contact David Simmons at 401-821-9300.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.



Kent County Water Authority
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West Warwick, RI 02893-0192

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