A vertical photograph of a forest stream. The water flows over large, moss-covered rocks, creating small cascades. The surrounding trees and foliage are vibrant green, with sunlight filtering through the canopy. A fallen log lies horizontally across the middle of the stream.

# Kent County Water Authority

CONSUMER  
CONFIDENCE  
water quality annual report

2006

# KCWA CONSUMER CONFIDENCE WATER QUALITY 2006 ANNUAL REPORT

Kent County Water Authority is pleased to present you with this year's Water Quality Report. This annual report fulfills the EPA and Rhode Island Department of Health's requirements to provide a "Consumer Confidence Report" to our customers. This publication reflects our efforts to keep you informed about the quality of the water and services we deliver to you every day. Our goal is to consistently provide you with safe and dependable drinking water. This 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 and its professional staff are committed to providing our customers with the safest, most cost effective and reliable drinking water.

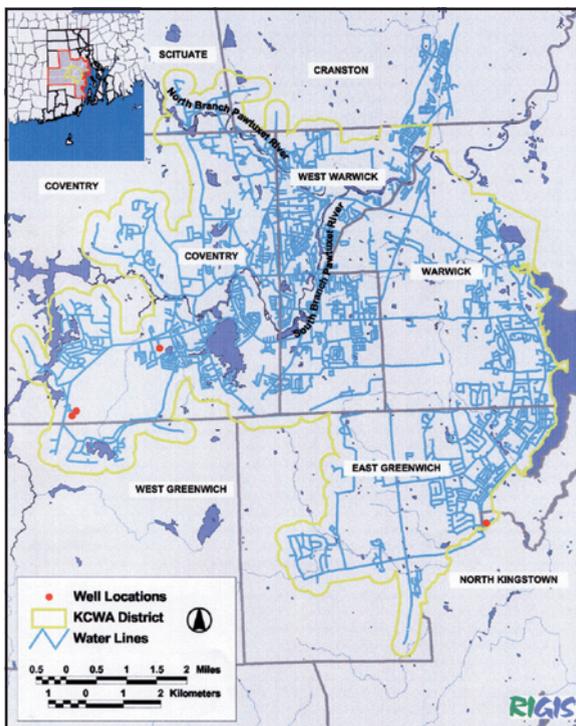
The Kent County Water Authority purchases approximately 80 percent of your water from the Providence Water Supply Board. This supply is treated surface water from the following reservoirs located in the central part of the state:

Scituate, Regulating, Moswansicut, Ponaganset, Barden and Westconnaug reservoirs. The remainder of your water is produced from the following groundwater resources: Mishnock wells #1 and #3 located off Nooseneck Hill Road bordering Coventry and West Greenwich, Spring Lake well located off Tiogue Avenue, 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 Potowomet section.

Kent County Water Authority and its predecessor companies have been delivering safe, dependable water, seven days a week, 24-hours a day for 127 years. As reported this year and in previous years, our monitoring results show our system had no water quality violations. We are proud that your drinking water meets or exceeds all federal and state requirements. You put a lot of faith in us and we take that very seriously. Thank you for your continued confidence.

We have learned through our monitoring and testing efforts that some regulated constituents have been detected. The EPA and RIDOH have determined that your water is SAFE at these levels. Should you have any questions concerning this information or about your water utility, please contact our General Manager/Chief Engineer, Timothy J. Brown, P.E. at 401-821-9300. Customer concerns regarding Providence Water results may be directed to the customer service department of the Providence Water Supply Board at 401-521-6300.

We value your input and want our customers to stay informed about their water utility. Public participation adds value to the decision making process regarding the quality of your water and the service that you are provided. If you would like to learn more about your water utility, or play a part in its future, please attend any of our regularly scheduled board meetings, held on the third Thursday of each month. Board meeting agenda information can also be found on the Kent County Water Authority Website: <http://www.kentcountywater.org> and Secretary of State Website: <http://www.state.ri.us/govtracker/>. Meetings begin at 3:30 p.m. at our office at 1072 Main St., West Warwick. We look forward to seeing you there!



## ADDITIONAL HEALTH 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 man made, 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 Website <http://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 health care 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).

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 for advice from your health care provider.

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.

## INFRASTRUCTURE IMPROVEMENTS

It is imperative for the continued viability of your water system to replace aging water mains, rehabilitate tanks and pumping stations, and implement programs that streamline our service to our customers. Several projects are currently underway to replace failing water mains, enhance hydrant fire flow and better service our customers. Costs associated with these improvements are incorporated in the rate structure for your billing. Occasionally, rate adjustments are necessary to address essential system improvements. Your consideration is greatly appreciated when this is required. Be assured this is only done when necessary and each program is fully reviewed and approved by the Public Utilities Commission.



*Radial stress crack in aged infrastructure*

In 2006, KCWA initiated infrastructure improvement projects in Warwick and Coventry. These projects, which are expected to be completed by summer, include the replacement of approximately 14,000 linear feet of water main, new water services, and the associated appurtenances, and an additional project that will alleviate a long outstanding pressure problem in the Oak Haven section of Coventry. The Tiogue Tank will be taken offline once this project is complete. The design for project year 2007 is ready for construction. Funding for construction of this project has been appropriated and the contract is out for bid to replace approximately 20,000 linear feet of infrastructure in West Warwick and Coventry.

The 2007 project serves a dual purpose, improving existing infrastructure, while providing the necessary transmission mains for a planned emergency interconnection with Providence Water. Kent County Water Authority receives 80 percent of its supply from a connection to Providence Water's 78-inch diameter aqueduct. This aqueduct needs inspection and maintenance. The current configuration of the aqueduct does not allow for continued service to KCWA during inspection, maintenance, or emergency events. The installation of a 78-inch isolation valve will allow Providence Water the ability to supply water to KCWA during future inspection, maintenance, or emergency events.

To accomplish this, KCWA must install approximately 16,000 linear feet of transmission mains to function with a new emergency interconnection with the Providence Water aqueduct system. It is anticipated that the 78-inch diameter aqueduct will be out of service for three to six weeks during the fall/winter of 2007. KCWA will supply customers from the planned emergency interconnection and transmission system. This project will significantly improve our ability to continue to supply safe drinking water to customers during emergency conditions. We anticipate varying pressure and flow conditions and will institute emergency moratorium provisioning if necessary to maintain service during this period. We appreciate your patience and consideration during this critical construction and maintenance period.

After 18 years of service, the existing coating system on the Technology Park Tank is failing. The tank must be blasted and recoated to protect the steel structure from further deterioration. This project contract has been awarded to the lowest bidder for \$729,000 and the project is expected to be completed in June 2007.

## SOURCE WATER ASSESSMENT

The Rhode Island Department of Health completed a source water assessment of the Kent County Water Authority supplies during 2003. Susceptibility to contamination was determined to be "MODERATE" at that time, according to the assessment guidelines used by the Department of Health. This ranking is considered to be an average ranking for the water supply. Individual ground water recharge areas may fall into the high

or extreme risk of susceptibility to contamination from land use activities. Future risk is expected to increase with continued development. Copies of this Assessment can be obtained from the RI Department of Health at 401-222-6867.

The gasoline additive Methyl Tertiary Butyl Ether (MTBE) is not a regulated substance requiring testing under the Safe Drinking Water Act. The increasing occurrence of groundwater contamination by this product has prompted an initiative for surveillance testing as an indicator of contamination potential in local aquifers. The Rhode Island Department of Health maintains the present health advisory (ha) level at 40 ppb. Testing conducted of the Kent County Water Authority's groundwater resources disclosed a detection of 1.0 parts per billion (ppb) at the Mishnock wells and 1.2 ppb at the Spring Lake well. The levels observed in this reporting period are below the Department of Health's 40 ppb health advisory level. Currently, this level of detection is not considered at risk for public drinking water concerns by the Rhode Island Department of Health, but is a strong indicator of just how vulnerable our groundwater sources are to contamination.

**We ask our customers to help us protect these sensitive and critical water sources.** They are at the heart of our community, of our way of life and essential for our children's future. Protecting these drinking water aquifers and recharge areas is perhaps the most important step in this endeavor. Wellhead protection signs have been strategically positioned within existing Wellhead Protection Areas as a visible reminder of your drinking water sources in 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.

Contact your local zoning officials to see what else can be done to protect these resources. Public participation in the zoning decision making process can be very valuable in helping to protect drinking water resources.

We think of our customers who live within these areas as guardians of these essential resources. Your assistance in helping preserve the aquifers contributing to these critical drinking water sources will be greatly appreciated by future generations. Contact us or the Rhode Island Department of Environmental Management if you suspect there is a potential contamination concern.

## VOLUNTARY MONITORING

During 2006, the Providence Water Supply Board monitored both source and effluent waters for *Cryptosporidium* and *Giardia*. Neither of these organisms was detected.

## SUPPLY DEFICIT

We continue to look for ways to meet the system's increasing water demands. The availability of supply sources is indeterminate within the state. State regulatory requirements for permitting new groundwater sources are not well defined or specific enough to fully evaluate the cost feasibility associated with meeting the prerequisite requirements for application, permitting and withdrawal. Consequently, efforts in this direction have been put on hold, while other alternatives are being sought. The state legislature is actively evaluating statewide water supply issues. An adequate water supply is vital to statewide economic development. Contact your area Representatives to learn more about this statewide issue and to communicate your concerns.

Outdoor water use conservation provides a short term approach to the anticipated supply shortfall, while we look for new sources of supply, and construct the infrastructure necessary to support it. Balancing the available water supply to meet the needs for the future economic development in our service area and the domestic requirements of existing customers is paramount. Seasonal conditions may necessitate implementing mandatory outdoor water use restrictions to assure domestic and fire supplies are not compromised.

Legislative initiatives promoting priority water supply for economic development demonstrate the importance your State Representatives have placed on the impact water supply has on the state's economy.

If voluntary conservation proves ineffective, our only recourse will be to impose a seasonal moratorium on outdoor water use until the overall supply problem can be resolved. It is anticipated that additional supply initiatives could take more than three years to fully implement.

### **Each customer must take action to conserve water today.**

Development of additional drinking water resources in the Mishnock area of West Greenwich and Coventry continues to be a long term goal. Scientific analysis of this aquifer has indicated that three to four million gallons per day of drinking water could be realized, without significantly impacting the surrounding environment, by expanding the property's well fields. These additional wells are vital to the state's economic future and are necessary to supplement the existing supply and support for ongoing economic growth within the communities we serve.

For more than six years the Kent County Water Authority attempted to work through the permitting process at the Rhode Island Department of Environmental Management, to economically tap the safe yield of these additional drinking water resources. A viable, cost effective permit to expand the well field could not be obtained. Given the current need for water supply to promote economic development and the increasing needs of our existing customers, we have reluctantly stopped our efforts for the expanded well field and are focusing our resources on moving forward to tap the full potential of our existing well field and other potential sources for increased supply.

A Department of Health approved treatment pilot program for technology has been completed and is under review for final endorsement of the selected treatment regime. As soon as Department of Health approval is received, we will move forward with the final design and then construction of the full scale treatment plant. Once completed, that plant will facilitate maximum utilization of the existing well field's potential supply.



In 2005 the Kent County Water Authority Board contacted state officials seeking support to build the Big River Reservoir. We continue to believe that the Big River Reservoir project is vital to the future of our state's water resources for both economic and domestic concerns. The majority of Rhode Island businesses and homes rely on one reservoir system for their water supply. It has been suggested that the Situate Reservoir may be on the verge of reaching its maximum daily production capacity. What happens if this source becomes compromised or reaches its maximum capacity or safe yield?

A second major reservoir is critically necessary to provide for future growth and to respond to your needs should a malevolent act or major catastrophe occur. We need to support the Big River initiative by conveying your concerns to your state and local Representatives. Legislative support is essential to the success of this vital water supply initiative. Prolonging construction will increase the overall future construction cost and adversely impact the future prosperity of our state.

## WATER CONSERVATION

**Water is a limited resource. It is imperative that we take steps to protect and conserve it.** The importance of water conservation cannot be overstated. Over the past several years we have introduced several programs to promote water conservation. We appreciate customer voluntary participation in these programs and will continue to strengthen our commitment to this important cause. As a KCWA customer, you play a vital role in protecting and conserving our precious water resources. Your voluntary cooperation helps us continue to provide dependable service to all our customers.

Kent County Water Authority customers consume approximately 10 million gallons of water on an average day. On hot summer days water use nearly doubles. Millions of dollars each year are spent to upgrade and expand the supply and distribution infrastructure to meet increasing water demands, provide dependable service, and deliver high-quality water to our customers. These projects are paid for by you, our customers, through the water rates. Successful water conservation efforts can help to curtail seasonal increases in water demand and could potentially eliminate the imminent need for advancing design and construction of some of these projects.



### *Drought resistant landscaping*

- **Lawn Care and Landscaping Tips** - Water usage during the summer increases significantly. This is primarily related to outdoor water use, mostly due to lawn watering. You can conserve water 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 covers.
  - **When to Plant Lawn** – The best time to plant grass is in the early spring or the early fall. The temperatures promote growth and 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 odd/even watering policy does not mean that you need to water your lawn every other day. Watering every other day can encourage shallow roots, disease, and can weaken plants.
  - **Water Grass Only When Needed.** Your lawn needs only 1 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, a good rule of thumb is to water approximately once every four to five days.**
- **Best Time to Water** - Early morning is best since less water is lost to evaporation. You will also reduce fungus problems.

- **Maintain Your Lawn Properly.** Maintain your lawn at three to four inches in length during the heat of the summer. 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 one to two inches to capture and hold runoff from your downspouts.
- **Soil Preparation** – Prepare your soil properly. 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 reduce evaporation and maintain moisture, limit heat stress, and discourage weed growth.

For more information visit the URI Healthy Landscapes Program Website, <http://www.healthylandscapes.org> or call (401) 874-5398

- **In-ground Sprinklers** - If used correctly, in-ground sprinklers can be water efficient. Unfortunately, many systems are not set up properly and some owners may not know how to reset the system for maximum efficiency. This results in 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.
  - 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 to manage it in manual mode.
- Water when the grass needs it rather than on a set schedule.
- Water once every four or five days. 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 = 1 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, <http://www.irrigation.org>

## CAPITAL IMPROVEMENTS

Capital Improvement projects are intrinsic components to the future of the water supply system. Completion of these projects will help improve water quality, facilitate regulatory compliance initiatives, and better provide supply for the customer. These projects are scheduled for completion over the next few years.

Some people may be temporarily inconvenienced during construction. We appreciate your patience and understanding during construction.

Our goal is to provide better service. As an additional benefit of these projects, the Kent County Water Authority will be resurfacing the roadway impacted by construction work. The resurfacing effort will not impact your city, town or state tax base, because it is funded solely from the project budget, which receives neither municipal nor state participation.

## MANGANESE MITIGATION

In June 2007 the rehabilitated Clinton Avenue pump station was put into operation. The capacity of this station was increased to 22 million gallons a day to the 334 low service gradient and three million gallons a day to the Read Schoolhouse 500 foot gradient. Eventually the Read Schoolhouse gradient will be loop connected to the remainder of the systems 500 foot gradient to provide additional and redundant supply capabilities to the entire service gradient. These projects will be evaluated and prioritized under the future Capital Project Plan revision. Completion of the Clinton Avenue project has significantly improved our ability to transfer water across the distribution system and better serve you, our customers.

The new 500 gradient Read Schoolhouse Road Tank project is one step closer to the construction phase. After much negotiation, the town of Coventry has approved a land swap necessary to more economically build the new tank on a town site abutting the existing KCWA site. Once activated, the new tank and transmission mains will improve overall service to this area of Coventry. This year we also moved forward with a system wide hydraulic study to evaluate the transmission, distribution, storage and hydraulic capability of the existing system. This is the first step in development of a revised Capitol Improvement Plan. We expect to move forward with the full revised Capital Plan development study during the upcoming year.

We implemented a Manganese Sequestering Pilot Treatment Program for our Warwick/East Greenwich distribution area. The goal of this program was to attempt to eliminate the staining effects related to the occurrence of manganese in source water supply. Sequestering will continue as an interim mitigation program until a full treatment process is approved by the Rhode Island Department of Health. Once approved, we can move forward with the design, bidding and construction phases. The installation of the full scale treatment system will not occur overnight, but the process is well underway. During this interim period, we ask that you continue to follow our suggestions to not use chlorinated dishwashing detergents, chlorine bleach laundry products or monthly drop-in toilet tank cleaning products that contain chlorine. These types of products promote the occurrence of staining. Certainly, feel free to contact us at 821-9300 or [customerservice@kentcountywater.org](mailto:customerservice@kentcountywater.org) if you have any questions about our proposed programs or would like to discuss aspects of the water supply with one of our customer service representatives.

## CROSS CONNECTION CONTROL

Cross connection control is a key element to protect against unforeseen contamination of your drinking water. Backflow, backsiphonage or return of contaminants to your drinking water through an unprotected commercial and residential service connection can be devastating. Protection of the public drinking water supply is a paramount concern. Because of this concern, the Water Authority Board unanimously voted to move forward with a phased implementation of the Cross Connection Control Program as outlined in the Rules and Regulations of the Kent County Water Authority. The program will require KCWA customers to install backflow preventers in accordance with the degree of hazard. Customers included in the first phase of the program will be receiving letters in the near future with further information and program requirements. All customers must comply with these regulations as a condition of receiving service. A copy of the rules and regulations can be obtained at our office or on line at <http://www.kentcountywater.org>.



*Clinton Avenue pump station after rehabilitation project*

## KENT COUNTY WATER AUTHORITY

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.

## WATER QUALITY DATA

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 to December 31 2006. 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.

INORGANIC CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED	RANGE	MAJOR SOURCES	VIOLATION
BERYLIUM (5)	2005	ppb	4	4	0.8	0.3-0.8	Discharge from metal refineries and coal burning factories. Discharge from electrical, aerospace, and defense industries.	NO
FLOURIDE (1)	2006	ppm	4	4	1.1	0.8-1.1	Erosion of natural deposits. Water additive, which promotes strong teeth.	NO
NITRATE-N	2006	ppm	10	10	5.46	0.16-5.46	Erosion from natural deposits. Leaching from septic tanks; sewage; Runoff from fertilizer use.	NO
MICROBIOLOGICAL CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED	RANGE	MAJOR SOURCES	VIOLATION
TOTAL COLIFORM BACTERIA (3)	2006	Monthly Max%	Presence of coliform bacteria in >5% of monthly samples	0%	0.9%	0-0.9%	Naturally present in the environment.	NO
TURBIDITY (1)	2006	NTU	TT	N/A	0.42	N/A	Soil runoff.	NO
TOTAL ORGANIC CARBON (1)(6)	2006	ppm	TT	N/A	1.24	1.16-1.33	Naturally present in the environment	NO
VOLATILE ORGANIC CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED	RANGE	MAJOR SOURCES	VIOLATION
TOTAL TRIHALOMETHANES(TTHM)	2006	ppb	80	N/A	28.5	0-60	By-product of drinking water chlorination.	NO
HALOACETIC ACIDS (HAA5)	2006	ppb	60	N/A	11	0-22	By-product of drinking water chlorination.	NO
CHLORINE FREE RESIDUAL	2006	ppm	MDRL 4	MDRLG 4	0.31	0.20-0.34	Water additive used to control microbes.	NO
RADIONUCLIDES	PERIOD	UNIT	MCL	MCLG	DETECTED	RANGE	MAJOR SOURCES	VIOLATION
COMBINED RADIUM 226 AND 228 (5)	2005	pCi/L	5	N/A	1.13	ND-1.66	Erosion of natural deposits.	NO
GROSS BETA/PHOTON EMITTERS (2)(4)	2003	pCi/L	50	N/A	10.9	ND-10.9	Decay of natural and manmade deposits.	NO
LEAD & COPPER	PERIOD	UNIT	AL	MCLG	90TH PERCENTILE LEVEL DETECTED	RANGE	MAJOR SOURCES	VIOLATION
COPPER	2006	ppm	1.3	0	.04	0 of 60 samples were above the action level	Corrosion of household plumbing systems. Erosion of natural deposits.	NO
LEAD	2006	ppb	15	0	5	1 of 60 samples were 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) Gross Beta/photon Emitters results have been measured in pCi/l. For Beta/photon Emitters, although the MCL is 4 mrem/yr, a result of <50 pCi/l is considered in compliance. Radionuclide compliance monitoring is conducted once every four years
- (3) This value refers to the highest monthly percentage of positive samples detected during the year. 1275 samples were collected for compliance monitoring and 1 tested positive. A repeat sample from the same site was tested, the results of which were negative for both fecal coliform and total coliform bacteria.
- (4) Reflects results shown in Providence Water Table for testing conducted in 2003 and must also be considered representative.
- (5) Reflects sampling at groundwater source before blending with purchased water from Providence Water Supply Board.
- (6) In order to comply with EPA standards, the removal ratio must be greater than 1.

## PROVIDENCE WATER QUALITY DATA

Our Cranston customers receive water directly through a direct-metered connection to the Providence Water Supply Board. The table below represents the results of the testing performed by Providence Water Supply Board that has been identified by Providence Water

INORGANIC CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED	RANGE	MAJOR SOURCES	VIOLATION
FLOURIDE	2006	ppm	4	4	1.1	0.8-1.1	Erosion of natural deposits. Water additive, which promotes strong teeth.	NO
NITRATE	2006	ppm	10	10	0.6	N/A	Erosion from natural deposits. Leaching from septic tanks; sewage; Runoff from fertilizer use.	NO
MICROBIOLOGICAL CONTAMINANT	PERIOD	UNIT	MCL	MCLG	DETECTED	RANGE	MAJOR SOURCES	VIOLATION
TURBIDITY (2)	2006	NTU	TT	N/A	0.42	N/A	Soil runoff.	NO
TOTAL ORGANIC CARBON (3) (Removal Ratio)	2006	ppm	TT	N/A	1.24	1.16-1.33	Naturally present in the environment	NO
RADIONUCLIDES	PERIOD	UNIT	MCL	MCLG	DETECTED	RANGE	MAJOR SOURCES	VIOLATION
COMBINED RADIUM 226 AND 228 (1)	2003	pCi/L	5	0	0.58	N/A	Erosion of natural deposits.	NO
GROSS BETA/PHOTON EMITTERS (2)	2003	pCi/L	50	N/A	10.9	N/A	Decay of natural and manmade deposits.	NO

Results shown on the Kent County Water Authority table for lead, copper, haloacetic acids, total coliform bacteria, and total trihalo-methanes are also applicable to our Cranston customers.

### Water Quality Table Footnotes:

- (1) Gross Alpha and Beta/photon Emitters are measured in pCi/L. For Beta/photon Emitters, although the MCL is 4 mrem/yr, a result of < 50 pCi/L is considered to be in compliance; no further analysis required.
- (2) 0.42 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 2006 was < 10 NTU.
- (3) In order to comply with the EPA standard, the removal ratio must be greater than 1.

### TABLE UNIT DESCRIPTIONS:

<b>AL</b>	Action Level
<b>MCL</b>	Maximum Contaminant Level
<b>MCLG</b>	Maximum Contaminant Level Goal
<b>pCi/L</b>	Picocuries Per Liter (a measure of radioactivity)
<b>ppb</b>	Parts Per Billion, or micrograms per liter
<b>TT</b>	Treatment Technique
<b>NTU</b>	Nephelometric Turbidity Units
<b>ppm</b>	Part Per Million
<b>N/A</b>	Not Applicable
<b>ND</b>	None Detected
<b>HA</b>	Health Advisory
<b>MRDL</b>	Maximum Residual Disinfection Level
<b>MRDLG</b>	Maximum Residual Disinfection Level Goal

as is applicable to reporting requirements for Kent County Water Authority customers in this area. Results shown on the Kent County Water Authority data table for lead, copper, haloacetic acid, total trihalonethomes are also applicable to our customers.

### IMPORTANT DRINKING WATER 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 requirement 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.

## METER TECHNOLOGIES

Radio frequency metering technology has begun in the Kent County Water Authority service area. Technology is a key aspect to economically providing you service. The latest tool is the implementation of new style digital metering to monitor our customers correct consumption.

These meters can be read remotely without the need to be at the customer's premis. This type of meter also provides built-in leak detection and consumption trending which can help provide the information necessary to answer customer questions on an unusual or abnormal consumption or billing concerns. Our goal is to eventually replace all existing meters with this type of technology, as our programs advance and the new equipment becomes more readily available for installation.

### Cross-Connection Control - Common Questions & Answers

#### What are the typical cross-connections found in a home?

Typical residential cross-connections include garden hoses attached to lawn pesticide or fertilizer systems, hoses which are submerged in outdoor pools or indoor fish tanks, a laundry sink connected with a hose, a handheld shower submerged in water, and in-home water treatment (softener) systems.

#### What is backflow?

Backflow is the reversal of water flow from its normal direction. Backflow may occur if there is a pressure change within a water system. If this happens, contaminated water, or water of questionable quality can flow into the piping of the public or consumer's drinking water supply system.

#### What is a cross-connection control device?

A cross-connection control device, also called a backflow preventer, is a mechanical device which prohibits the backflow of water into the drinking water supply system.

#### Why is cross-connection control important for protecting the drinking water supply?

Backflow, due to cross-connections, can cause water supply system contamination and serious illness. Use of cross-connection control devices is a relatively simple and inexpensive way to protect individuals and drinking water supply systems.

#### What is the typical cost of installing a residential cross-connection control device?

*Realtors Digest* February 2007 issue suggests that the typical cost of purchase and installation of a residential cross-connection device is approximately \$150. Installation costs may vary based on conditions, such as the age and usability of the plumbing and plumbing firm making the installation.



*New technology, Clinton Avenue Pump Station.*

## FIRE HYDRANTS MATTER

We have been receiving an increasing number of reports by our vigilant customers regarding illegal hydrant use by street sweepers, paving and hydro-seeding landscape companies.

Fire hydrants installed in the Kent County Water Authority service area are only for emergency response to fight a fire. No private companies have been authorized to connect to a hydrant for any purpose. Illegal connection to a hydrant compromises the integrity of your public drinking water system and water theft costs you more in your rates.

Illegally connecting to a hydrant is a very serious issue for everyone. We have a very large system and appreciate your help on this growing concern. We ask all of our customers to immediately report anyone seen connected to a hydrant to your local police and our office at 401-821-9300. All violators will be prosecuted.

## DID YOU KNOW

- KCWA sold 2,981,616,347 gallons of water.
- Average residential customers quarterly winter water bill was \$95.09.
- Average residential customers quarterly summer water bill was \$133.39.
- There are 26,700 KCWA customers.
- Cost per gallon of water delivered is less than ½¢.

## SPECIAL LEGISLATIVE COMMISSION

A recently completed year and a half study of the Kent County Water Authority by a special legislative commission concluded that the Authority is doing a good job, given the bureaucracy to which it and other water suppliers across the state are subjected to. In late March a Senate and House Joint Commission voted to adopt its final report.

The Commission found that many of the issues that it had originally thought to solely impact the Kent County Water Authority were much broader, demonstrating the considerable challenges that all water agencies face statewide, and the overall need for stronger statewide water policies. Among the commission's observations, were:

- Water supply needs can be met through an additional connection to the Providence Water Supply Board and well field development in the Mishnock and Big River areas.
- The regulatory decision making processes can be better coordinated and made more efficient and predictable.
- Water supply considerations should be included in economic development and land use planning regionally.
- Where water resource and development has benefits beyond the Kent County Water Authority service area, mechanisms can be established to manage and proportion the cost on a fair basis among beneficiaries.
- The Kent County Water Authority statute can be refined, as it has been several times, to provide optimal structure, powers, and duties as appropriate.
- The Big River Reservoir Project should be revisited as a possible future water supply.

The report also recognizes the need for legislative change, suggesting a more coordinated and defined state agency decision making process for regional water supply and economic development planning. The findings of this commission initiated separate Senate and House special committees to review the global challenges associated with water supply and economic development statewide.

As a Water Authority, we recognize the importance of keeping our customers informed, and are pleased to introduce:

- **Web Newsletter** that we will begin publishing on a periodic basis this summer. It will be found on our Website, <http://www.kentcountywater.org> and is intended to keep customers better informed about KCWA operations, will discuss seasonal issues, and provide helpful hints on water conservation, which in turn will save customers money.
- **Conservation Brochure** is being developed to better assist our customers to identify ways to conserve water and save money. This brochure will be available at our office and on our Website, <http://www.kentcountywater.org>. Using water wisely benefits all of us.

**“Water Is Our Most Precious Resource”**



Kent County Water Authority

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