

**KENT COUNTY
WATER AUTHORITY**

**CONSUMER CONFIDENCE
WATER QUALITY
ANNUAL REPORT 2005**



KCWA

KCWA CONSUMER CONFIDENCE WATER QUALITY 2005 ANNUAL REPORT

Kent County Water Authority and its predecessor companies have been delivering safe, dependable water, seven days a week, 24 hours a day for 120 years. As reported this year and previously, our monitoring results show our system had no 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 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 you're 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 Wednesday of each month. Meeting agenda information can also be found

on the Secretary of State Website. <http://www.sec.state.ri.us/gov-tracker/>. Meetings begin at 3:30 PM, at the Kent County Water Authority office at 1072 Main Street, 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 web site www.epa.gov/safewater.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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.

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

INFRASTRUCTURE IMPROVEMENTS

It is imperative to the continued viability of your water system to replace aging water mains, rehabilitate tanks and pumping stations and implement value added programs that streamline service to you, our customers. A number of projects are currently underway to replace failing water mains, enhance fire hydrant flow and better service you. Costs associated with these improvements are incorporated into the rate structure for your billing. Occasionally, rate adjustments are necessary to address these essential system improvements. Your consideration is greatly appreciated when this is required. Please be assured this is only done when necessary. Each program is fully reviewed and approved by the Public Utilities Commission. Designs for project years 2005, 2006 and 2007 are ready for construction. Funding for construction of the 2005 design has been appropriated and the contract is out for bid to replace approximately 13,000 linear feet of infrastructure in Warwick and Coventry. The 2006 and 2007 designs will go out to bid as funding appropriations allow.



Setian Lane High Service Booster pump station.

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” according to the assessment guidelines used by the Department of Health during the assessment. 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 revealed a detection of 1.4 ppb at the Mishnock well. The level observed in this reporting period is below the Department of Health 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 to contamination our drinking water sources can be.

VOLUNTARY MONITORING

In 2005, Providence Water Supply Board monitored both source and effluent waters for *Cryptosporidium* and *Giardia*. Neither of these organisms was detected.

SUPPLY DEFICIT

It has become increasingly more difficult to meet all the water demands on the system. The most recent computerized hydraulic modeling of our system demonstrates that the ability to supply our existing customers during the maximum day demand condition has been compromised by accelerated development and seasonal increases in water use. Rest assured, the system can continuously meet the average day conditions of approximately 10 million gallons per day. The problem arises mainly during the summer months when maximum day system demands rise to 16 to 20 million gallons per day over an extended period. We have found that this increased demand is directly attributed to outdoor water use.

Outdoor water use conservation can help provide a short-term approach to the supply shortfall while we look for new sources of supply and build the infrastructure necessary to support it. Balancing the available water supply to meet the needs for both the future economic development in our service area and the domestic requirements of our existing customers is paramount.

Recent legislative action has given priority to economic development, as it impacts our water supply. If conservation proves ineffective, our only recourse will be to impose a seasonal moratorium on outdoor water use until this problem can be resolved. It is anticipated that additional supply initiatives could take anywhere from three to five years to become fully implemented, or longer depending on legislative support to tap new sources, state permitting requirements and the ability to fund the projects. **Every customer must take action to conserve today.**

Development of additional drinking water resources in the Mishnock area of West Greenwich and Coventry continues to be a long time 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, through expansion of the well fields. These additional wells are vital to the economic future within the state and growth within the communities we serve, and are necessary to supplement the existing supply. For more than six years, the Kent

County Water Authority has been working with the Rhode Island Department of Environmental Management to tap the safe yield of these additional drinking water resources. We have not yet received the support necessary to be successful in this endeavour. A viable 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 abandoned our efforts towards the expanded well field and will focus our resources on tapping the full potential of our existing well field. A Department of Health approved treatment pilot program for technology is currently underway. Once this program is complete, we will move forward with the construction of a full-scale treatment plant for utilization of the full potential of the existing well field to service our customers.

BIG RIVER SUPPLY

In 2005, the Board of Directors contacted each state Senator and Representative to rally 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 water resources for both economic and domestic concerns. The majority of Rhode Island businesses and homes rely on one reservoir for their water supply. What happens if this source becomes compromised or reaches its safe yield? A second major source of supply is necessary to provide for future growth and respond to your needs should a malevolent act or major catastrophe occur. We need you to contact your local state Senator and Representative, conveying to them the importance of this initiative for our families and our future economic development.

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's 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 can help us continue to provide dependable service to all our customers.

Kent County Water Authority customers consume approximately 10 million gallons of water each day during the winter months. On hot summer days water use nearly doubles. KCWA spends millions of dollars each year to upgrade and expand our infrastructure to meet water demands, provide dependable service, and deliver high-quality water to our customers. You, our customers through the water rates, pay for these projects. Successful water conservation efforts will reduce water demand and could potentially delay or eliminate the need for some of these projects.

- **Lawn Care & Landscaping Tips** - Water usage during the summer months increases significantly. This is primarily related to outdoor water use, mostly associated with 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 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 uses that include 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 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, a good rule of thumb is to water approximately once every four to five days.*
- **Best time to water** - Early morning is best time to water. 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 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 to reduce evaporation and maintain moisture, limit heat stress, and discourage weed growth.

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

- **In-ground Sprinklers** - KCWA discourages the use of treated drinking water to irrigate. The trend toward the installation of automatic in-ground irrigation systems has caused great concern regarding the public water systems' ability to supply our customers. The installation of in-ground sprinkler systems does not assure their future use, due to system constraints. If used correctly, in-ground sprinklers can be water efficient, compared to hoses and manually set sprinklers. 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.
- 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 as well as manage it in the manual mode.
- Water once 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.

- **Reduce your lawn size and upgrade your system** with conservation technology to meet 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



Conservation tools and fixtures available to our customers

SOURCE OF WATER

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.

CAPITAL IMPROVEMENTS

This year the Kent County Water Authority moved forward with the design and construction aspects of several capital improvement projects. Completion of these projects will help to improve water quality, facilitate regulatory compliance initiatives and better supply for the customer. These projects are scheduled for completion over the next few years. Some people may be temporarily inconvenienced during construction of these projects. We appreciate your patience and understanding during the construction process. 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 no municipal or state participation.

In June 2005, we began construction on rehabilitation of our Clinton Avenue transmission pumping facilities in Scituate. This \$4.4 million project is a critical component of our Capital Improvement Program.

This project is aimed at improving the pumping capacity and overall operation of our main transmission connection to the Providence Water Supply. This project involves a complete renovation of the building, modernization of the pumping equipment and instrumentation, and expansion of the pumping capabilities to double the capabilities of the existing station. Completion of the project is scheduled for June 2006. This project, along with several ongoing and planned capital projects, will significantly improve our ability to transfer water across the distribution system and better serve our customers.



Clinton Avenue booster station construction

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 2005. 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) | 2005 | ppm | 4 | 4 | 1.2 | 0.2-1.2 | Erosion of natural deposits. Water additive, which promotes strong teeth. | NO |
| NITRATE-N | 2005 | ppm | 10 | 10 | 5.76 | 0.16-5.76 | 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) | 2005 | Monthly Max% | Presence of coliform bacteria in >5% of monthly samples | 0% | 1% | 0-1% | Naturally present in the environment. | NO |
| TURBIDITY(4) | 2005 | NTU | TT | N/A | 0.23 | N/A | Soil runoff. | NO |
| TOTAL ORGANIC CARBON (1) | 2005 | ppm | TT | N/A | 1.6 | 1.3-2.0 | Naturally present in the environment. | NO |
| VOLATILE ORGANIC CONTAMINANT | PERIOD | UNIT | MCL | MCLG | DETECTED | RANGE | MAJOR SOURCES | VIOLATION |
| TOTAL TRIHALOMETHANES (TTHM) | 2005 | ppb | 100 | N/A | 34.2 | 0-43.9 | By-product of drinking water chlorination. | NO |
| HALOACETIC ACIDS (HAA5) | 2005 | ppb | 60 | N/A | 5.9 | 0-6.7 | By-product of drinking water chlorination. | NO |
| CHLORINE FREE RESIDUAL | 2005 | ppm | MRDL 4 | MRDLG 4 | 0.31 | 0.24-0.41 | 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 | PERIOD | UNIT | AL | MCLG | DETECTED LEVEL 90th PERCENTILE | RANGE | MAJOR SOURCES | VIOLATION |
| LEAD | 2005 | ppb | 15 | 0 | 4 | N/A | Corrosion of household plumbing systems. Erosion of natural deposits. 2 out of 30 samples were above 15 ppb. | 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. 1151 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.

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.

| INORGANIC CONTAMINANT | PERIOD | UNIT | MCL | MCLG | DETECTED | RANGE | MAJOR SOURCES | VIOLATION |
|--------------------------------|--------|--------------|---|---------|----------|---------|---|-----------|
| FLOURIDE | 2005 | ppm | 4 | 4 | 1.2 | 0.9-1.2 | Erosion of natural deposits. Water additive, which promotes strong teeth. | NO |
| MICROBIOLOGICAL CONTAMINANT | PERIOD | UNIT | MCL | MCLG | DETECTED | RANGE | MAJOR SOURCES | VIOLATION |
| TOTAL COLIFORM BACTERIA (2) | 2005 | Monthly Max% | Presence of coliform bacteria in >5% of monthly samples | 0.0% | 0.5% | 0-0.5% | Naturally present in environment. | NO |
| TURBIDITY(3) | 2005 | NTU | TT | N/A | 0.23 | N/A | Soil runoff. | NO |
| TOTAL ORGANIC CARBON | 2005 | ppm | TT | N/A | 1.6 | 1.3-2.0 | Naturally present in environment. | NO |
| VOLATILE ORGANIC CONTAMINANT | PERIOD | UNIT | MCL | MCLG | DETECTED | RANGE | MAJOR SOURCES | VIOLATION |
| TOTAL TRIHALOMETHANES (TTHM) | 2005 | ppb | 100 | 0 | 36.9 | 15-55 | By-product of drinking water chlorination. | NO |
| HALOACETIC ACIDS (HAA5) | 2005 | ppb | 60 | 0 | 17.6 | 14-25 | By-product of drinking water chlorination. | NO |
| CHLORINE FREE RESIDUAL | 2005 | ppm | MRDL 4 | MRDLG 4 | 0.9 | 0-0.9 | Water additive used to control microbes. | NO |
| RADIONUCLIDES | PERIOD | UNIT | MCL | MCLG | DETECTED | RANGE | MAJOR SOURCES | VIOLATION |
| COMBINED RADIUM 226 AND 228 | 2003 | pCi/L | 5 | 0 | 0.58 | N/A | Erosion of natural deposits. | NO |
| GROSS BETA/PHOTON EMITTERS (1) | 2003 | pCi/L | 50 | N/A | 10.9 | N/A | Decay of natural and manmade deposits. | NO |
| LEAD & COPPER | PERIOD | UNIT | AL | MCLG | DETECTED | RANGE | MAJOR SOURCES | VIOLATION |
| COPPER (4) | 2005 | ppm | 1.3 | 1.3 | 0.03 | N/A | Corrosion of household plumbing systems. Erosion of natural deposits. 0 out of 80 samples were above 1.3 ppm. | NO |
| LEAD (4) | 2005 | ppb | 15 | 0 | 11 | N/A | Corrosion of household plumbing systems. Erosion of natural deposits. 8 out of 80 samples were above 15 ppb. | NO |
| UNREGULATED | PERIOD | UNIT | MCL | MCLG | DETECTED | RANGE | MAJOR SOURCES | VIOLATION |
| SODIUM | 2005 | ppm | HA=100 | N/A | 12.9 | N/A | Erosion of natural deposits. Runoff from road deicing operations. | NO |

Water Quality Table Footnotes:

- 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.
- This value refers to the highest monthly percentage of positive samples detected during the year. For 2005, Providence Water collected 2345 samples for Total Coliform Rule compliance monitoring. Two of these samples were determined to be positive for Total Coliform bacteria. Follow-up monitoring is conducted for all positive samples. The results of this follow-up testing was negative for Coliform bacteria
- 0.23 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 2005 was < 10 ntu.
- Providence Water has been granted "reduced monitoring" status for tap water sampling for determining compliance with the Safe Drinking Water Act's Lead and Copper Rule. Water Act's Lead and Copper Rule.

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 |

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. 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.

WEB PAGE UPDATE

We recently commissioned our new web site www.kentcountywater.org. Keeping our customers informed is important to us. Customer input is a valuable part of our continuous improvement process. This web site also includes an e-mail address to assist us in collecting your suggestions. You may contact us by e-mail at customerservice@kentcountywater.org. Although we are not sufficiently staffed to provide a response to everyone's e-mail, we will be reviewing all suggestions and information we receive. Thank you for being part of your water systems' improvement process.



Mishnock Pilot Treatment Process for Color and Mineral Removal

METERING IMPROVEMENTS

Large Meter Testing Program - KCWA initiated its large meter testing program in October 2004. The goal of the program is to test all customer meters that are larger than two inches to ensure that the meters are working properly. Large meters are tested because of the potential for large volumes of water to be passed through them, which could result in over or under billing to customers. Unaccounted for water increases the overall costs for all consumers. Meter accuracy ensures customers are only billed for water they consume and reduces the occurrence of unaccounted for water.

Meters smaller than three inches are typically replaced rather than tested because the cost of a new meter is generally less than the cost associated with testing the meter. Large meters are expensive to replace and are typically tested, then repaired if necessary. Large meters are normally only replaced if a repair is not possible (or cost prohibitive) or if the meter is no longer in conformance with meter performance standards and KCWA Rules and Regulations.

The Kent County Water Authority has adopted the meter testing frequency standards set forth by the Rhode Island Public Utilities Commission. These standards require three-inch meters to be tested every two years and meters larger than three inches to be tested annually. Customers with meters in these categories must arrange to have their meters tested in place by a qualified testing company. The meters must perform to the values outlined in the American Water Works Association standards for accuracy. Meters that do not perform to standards must either be repaired or replaced. This program has been favorably responded to by these customer classes.

Radio Frequency Metering – The KCWA currently obtains quarterly meter readings from all the water meters in our system. Representatives from our meter department walk the entire service area and manually retrieve each individual customer read from a box located on each building or meter enclosure.

Over the past year the KCWA has begun to install radio frequency type meter registers. Several meters in the distribution system have been fitted with these meter registers

to evaluate their performance and potential for future system wide application. This type of register allows for the meter readings to be obtained from a vehicle as it drives through the service area. The radio receiving device can obtain readings at a rate of 70 meters per second from up to a mile away (depending on the terrain). Besides improving meter reading efficiency, these new registers will also allow us to obtain detailed information from each meter, which will help us better respond to our customers inquiries regarding water consumption patterns, identification of water leaks and backflow occurrences.

Based on the successful testing so far and the opportunity to improve meter reading efficiency, we have decided to move forward with full scale radio frequency meter register installation on all new meter installations and replacements to correct any malfunctioning register. In the near future, we may consider initiating a program that replaces all existing meters with a new radio frequency type. This program will require funding authorization from the Public Utilities Commission before it can be fully implemented.

MANGANESE MITIGATION

Late summer of 2004, we implemented a Manganese Sequestering Pilot Treatment Program for our Warwick/East Greenwich distribution area. The desire of this program was to attempt to eliminate the staining effects related to the occurrence of manganese in source water supply. Manganese is a naturally occurring metal that is quite common in well water in New England and originates in the groundwater source. Manganese is also found in rivers, lakes and food products. In response to our customers concerns, it was necessary for us to consider a method of controlling or eliminating its esthetically displeasing effects. The treatment study has been completed and was found to be generally quite effective. However, it was not 100 percent effective in controlling all the esthetic issues that result in staining.

CROSS CONNECTION CONTROL

In response to customer input during this program, we were made aware of another portion of our system serviced by well water that was also exhibiting similar high levels of manganese resulting in problems much like that observed in our Warwick/East Greenwich distribution areas. This occurrence is currently being studied for treatment and removal by other technologies since those levels are considerably higher than that found in our Warwick well field. By utilizing this same or similar technology for removal versus treatment by sequestering, a better supply can be provided to our customers.

Upon completion of this pilot study in our other well field, we will begin installation of the full scale treatment process there, as well as taking the steps to install that same or similar process in our future treatment facility for our Warwick/East Greenwich distribution area. This treatment method is intended to eliminate the manganese staining that has been occurring by removing it from the supply. The installation of the full-scale treatment system will not occur overnight, but the process to reach this goal is well underway.

We take our customer satisfaction seriously, and in the interim will continue to monitor our sequestering activities as a temporary measure to help control the esthetically displeasing impacts on our valued customers. 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 401-821-9300, should you have any questions about our proposed programs or would like to discuss aspects of the water supply with one of our customer representatives.

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 connection can be devastating. In one incident, a hydro seeding company caused contamination of the water system that left hundreds of customers without potable water for over a week. This incident became the impetus to reevaluate our existing cross connection control program for ways to better protect your drinking water supply from contamination.

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 for the express purpose of 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 3,292,614,468 gallons of water
- Average residential customers quarterly winter water bill was \$90.11
- Average residential customers quarterly summer water bill was \$121.33
- Total customers of KCWA is 26,670



Kent County Water Authority
P.O. Box 192
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