

WHAT'S ON TAP

Summer 2012

The KKW Water District Newsletter & Annual Consumer Confidence Report Vol. 10 No. 2

www.kkw.org

INSIDE THIS ISSUE:

Consumer Confidence Report...	2
Annual Water Quality Report....	3
Beneath the Surface.....	4
Our Watershed.....	4
Groundwater Solutions.....	5
Automatic Meter Reading.....	5
Wonders of Water.....	6
The Inevitability of Neglect.....	6
Customer Corner.....	7
Water Conservation FYI.....	7
Employee Spotlight.....	8

OUR MISSION
IS TO PROVIDE THE
HIGHEST QUALITY
DRINKING WATER
AND CUSTOMER
SERVICE AT THE MOST
REASONABLE PRICE.



SCAN OUR
QR CODE
TO SEE
WHAT'S
GOING ON



Distribution Manager Butch Tibbetts gives some instruction to an aspiring young heavy equipment operator during the May 5th Open House.

BACK AGAIN, WITH ANOTHER GREAT YEAR

Norm Labbe, Superintendent - nlabbe@kkw.org



First of all, we'd all like to thank you for your support! As you can see, we are continuing to publish the summer issue of *What's On Tap*. This is a direct result of your overwhelmingly positive response to our request for your input in last winter's issue. In addition to knowing that many of you actually read this glossy semi-annual publication, it was great to know that you enjoy it too. It is always our pleasure to provide you with the highest quality drinking and customer service; after all, it's our mission.

We've got a great year in the making. But before getting into the details, I'd like to clarify one thing up front; **there will not be any water rate increase in 2012.** This is due to many factors, including a significant reduction in our employees' health insurance costs (due to a change in insurance plans), a slight increase in water sales (customer demand is up) and the recent award of yet another State Revolving Fund (SRF) financing package for an upcoming \$1,175,000 water main replacement project in Biddeford. This SRF financing mechanism essentially allows us to defer payment for this project until late 2013 or early 2014. At this time, we do anticipate that a nominal 3-5% rate increase will be needed in 2013; our first since the 5% rate increase in 2010.

Our newest water pumping facility, the Arundel South Booster, has recently been placed into service, providing enhanced water pressure and flow for both domestic and fire suppression purposes. We have received several nice compliments regarding this "cute little building by the river" that will benefit all existing and future Arundel customers.



The new Arundel South Booster, designed and constructed by District personnel, is located on Route 1 at the Kennebunk and Arundel Town Line.

Our new online water bill payment program, *Invoice Cloud*, has been up and running since early May. In under two months, over 100 customers have signed up for this convenient, no cost (with "E-checking") service. To learn more about this, see *Customer Corner* on page 7. Also, please visit our website (www.kkw.org) to learn how you could win an iPod when signing up for *Invoice Cloud*.

On May 5th we celebrated the annual *National Safe Drinking Water Week* with an Open House at our Filtration Plant on York Street. In spite of some early threatening weather, turnout was good. Those who attended came away with a much better understanding of what we do, in particular with respect to making Branch Brook water clean and safe to drink. In addition to plant tours, there was face painting (for kids of all ages), food, video displays, demonstrations and construction equipment for the kids to climb on. We are considering coordinating our future Drinking Water Week activities with Kennebunk's May Day celebration, with activities and demonstrations at our 92 Main Street office and tours at the York Street plant. As always, your input is welcome.

In addition to the above highlights, we've included lots of information about several topics, including the roll out of our new AMR meter reading system (see Automatic Meter Reading on page 5) and our cooperative ventures with several conservation groups relating to the reopening of the Branch Brook fish ladder and the re-introduction of New England cottontail rabbits (see Our Watershed on Page 4). We hope you continue to find our newsletter informative and enjoyable to read. As always, please feel free to contact me at 985-3385 with any questions or concerns that you may have.



Kalieggh Haroldson (right) was one of several Kennebunk High School Interact Club student volunteers who helped out at the always popular face painting booth at the May 5th Open House.

CONSUMER CONFIDENCE REPORT - DRINKING WATER INFORMATION

CONGRATULATIONS! YOUR DRINKING WATER EXCEEDS ALL FEDERAL/STATE PRIMARY DRINKING WATER REGULATIONS.

This drinking water quality report contains important information about your water, what it contains and the treatment process used to make it safe. Since its incorporation in 1921, the Kennebunk, Kennebunkport & Wells Water District (KKWWD) has considered water quality of primary importance. We vigilantly monitor and safeguard our water supplies and our highly trained and State licensed Water System Operators strive to provide our customers with drinking water that surpasses State and Federal standards for safety and quality. We are pleased to report that your drinking water continued to meet all drinking water quality requirements in 2011. Here's to your health!

SOURCE WATER ASSESSMENT

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive materials and can pick up substances resulting from human or animal activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural applications and septic systems.
- **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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 private plumbing. KKWWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in private 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 <http://www.epa.gov/safewater/lead>.

The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Assessment Program (SWAP). The assessments include geology, hydrology, land uses, water testing information, and the extent of land ownership or protection by local ordinances to see how

likely our drinking water source is to being contaminated by human activities in the future. Assessment results are available at public water suppliers, town offices and the DWP. For more information about the SWAP, please contact the DWP at (207) 287-2070.

WATER SOURCES

KKWWD utilizes both high quality surface water and groundwater as supply sources. Surface water is obtained exclusively from Branch Brook, a largely spring-fed, naturally flowing water body that originates in Sanford and forms the town line between Kennebunk and Wells. In addition to Branch Brook, KKWWD obtains groundwater from its three naturally developed gravel well sites. The KKWWD also maintains mutual-aid system interconnection agreements with the Biddeford-Saco Water Company and the York Water District.

Protection of the Branch Brook watershed and well sites remains a top priority. The KKWWD continues to purchase property, seek conservation easements and work with local officials to develop ordinances within the watershed and wellhead protection zones as opportunities arise. You can help too. Please be careful as you live, work and play to limit what goes onto the ground, into storm drains, tributaries and surface waters to help preserve the water quality and the diverse ecosystems it supports. If you witness illegal or suspicious activity within the Branch Brook watershed or at the well sites, please report it immediately by calling the KKWWD at 207-985-2362 or notify the Police at 911.

WATER QUALITY MONITORING/REPORTING

VIOLATIONS: No water quality violations were issued in 2011.

WAIVER INFORMATION: In 2011, KKWWD was granted a 'Synthetic Organics Waiver.' This is a three year exemption from the monitoring and reporting requirements for the following industrial chemicals: *HERBICIDES, CARBAMATE, PESTICIDES, TOXAPHENE/CHLORDANE/PCB* and *SEMIVOLATILE ORGANICS*. This waiver was granted due to the absence of these potential sources of contamination within a half mile radius of the water source.

TREATMENT PROCESS

SURFACE WATER from Branch Brook flows into our Filtration Plant where multiple processes are used to remove particles and microorganisms. The first process is **COAGULATION**, where chemicals (primarily food-grade alum) are added, causing particles to destabilize and attract to each other. Then **FLOCCULATION** occurs in mixing chambers where the small particles combine into larger particles called floc. Next, **CLARIFICATION** occurs in the settling basins where the heavier floc particles settle out. Chlorine dioxide (see Note 1) is then introduced for **PRIMARY DISINFECTION**. The **FILTRATION** process follows where clarified water passes through dual media filters (sand and anthracite) to remove any remaining floc particles. Finished water chemistry is then optimized for **CORROSION CONTROL & SEQUESTRATION** using ortho-poly phosphates, **FLUORIDATION** (see Note 2), and **SECONDARY DISINFECTION** with free chlorine prior to being pumped into our distribution system where over 212 miles of transmission and distribution system water mains and seven storage tanks distribute water to our customers.

GROUNDWATER from our three well sites (six wells) is pumped to our Pumping, Treatment and Recycling (PTR) Facility where the water chemistry is optimized for **CORROSION CONTROL & SEQUESTRATION** with ortho-poly phosphates, **FLUORIDATION**, and **DISINFECTION** with free chlorine before being pumped directly into the distribution system at the same entry point as surface water.

Notes:

- 1.) The District began using chlorine dioxide for primary disinfection in place of free chlorine in March 2011.
- 2.) The optimal level of fluoride in drinking water was reduced from 1.2 to 0.7ppm by the Maine Drinking Water Program as of February 29, 2012.

2011 ANNUAL WATER QUALITY REPORT FOR PWSID# ME0090760

Contaminant	Date	Result	MCL	MCLG	Source/Comments
Microbiological					
COLIFORM (TCR)(1)	2011	0 pos	1 pos or 5%	0 pos	Naturally present in the environment.
Inorganics					
BARIUM	7/26/2011	0.0081 ppm	2 ppm	2 ppm	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
COPPER 90th Value(4)	1/1/11- 12/31/2011	0.23 ppm	AL=1.3 ppm	1.3 ppm	Corrosion of household plumbing.
FLUORIDE (3)	1/4/2011	1.3 ppm	4 ppm	4 ppm	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer/aluminum factories.
LEAD 90th % VALUE (4)	1/1/11- 12/31/2013	8 ppb	AL=15 ppb	0 ppb	Corrosion of household plumbing systems.
Radionuclides					
RADIUM-228	8/30/2011	1.1 pCi/l	5 pCi/l	0 pCi/l	Erosion of natural deposits.
URANIUM-238 (7)	7/6/2011	1.0 ppb	30 ppb	0 ppb	Erosion of natural products.
Disinfectants and Disinfection By-Products					
TOTAL HALOACETIC ACID (HAA5) (9)	RAA ('11)	18.0 ppb Range (4.8-40.0 ppb)	60 ppb	0 ppb	By-product of drinking water chlorination.
TOTAL TRIHALO-METHANES (TTHM) (9)	RAA ('11)	20.0 ppb Range (2.7-66.4 ppb)	80 ppb	0 ppb	By-product of drinking water chlorination.
CHLORINE RESIDUAL	RAA ('11)	1.8 ppm Range (0.7-2.7 ppm-PLANT; 1.2-3.3 ppm-PTR)	M RDL=4 ppm	M RDLG=4 ppm	By-product of drinking water chlorination.
TURBIDITY LEVELS (highest levels recorded)	12/11/2011	0.26 ntu (WTP) 0.41 ntu (PTR)	0.3 ntu in 95% of samples 1.0 ntu maximum limit		Soil runoff. A average turbidity was 0.08 ntu (WTP) and 0.09 ntu (PTR). Trapped air generated one false high reading at PTR.

Definitions:

- M CL = Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water.
- M CLG = Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health.
- RAA - Running Annual Average: The average of all monthly or quarterly samples for the last year at all sample locations.
- AL = Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- M RDL = Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants.
- M RDLG = Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. M RDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- TT = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Units:

ppm = parts per million or milligrams per liter (mg/L); pos = positive samples; ntu = nephelometric units; MFL = million fibers per liter
ppb = parts per billion or micrograms per liter (µg/L); pCi/L = pico curies per liter (a measure of radio activity).

Notes:

- 1) Total Coliform Bacteria: Reported as the highest monthly number of positive samples, for water systems that take less than 40 samples per month.
- 2) Arsenic: The U.S. EPA adopted the new MCL standard in October 2001. Water systems must meet this standard by January 2006.
- 3) Fluoride: Fluoride levels must be maintained between 1-2 ppm, for those water systems that fluoridate.
- 4) Lead/Copper: Action Levels (AL) are measured at the customer's tap. 90% of the tests must be equal to or below the Action Level.
- 5) Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.
- 6) Gross Alpha: Action level over 5 pCi/l requires testing for Radium. Action level over 15 pCi/l requires testing for Radon and Uranium.
- 7) Uranium: The U.S. EPA adopted the new MCL standard of 30 ppb in December 2000. Water systems must meet this standard after December 2003.
- 8) Radon: The State of Maine adopted a Maximum Exposure Guideline (MEG) for Radon in drinking water at 4000 pCi/l, effective 1/1/07. If Radon exceeds the MEG in drinking water, treatment is recommended. It is also advisable to test indoor air for Radon. The U.S. EPA is proposing setting federal standards for Radon in public drinking water.
- 9) TTHM/HAA5: Total Trihalomethanes and Haloacetic Acids are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water.

All other regulated drinking water contaminants were below detection levels - NO VIOLATIONS WERE ISSUED IN 2011.

PLEASE CALL US AT 985-2362 WITH ANY WATER QUALITY QUESTIONS YOU MAY HAVE.



BENEATH THE SURFACE - OK, IT'S BURIED - NOW WHAT?

Don Gobeil, Technical Services Director - dgobeil@kkw.org

There's a slogan used in jest around here to the effect that "we bury our mistakes". It sounds cute, but it would be more accurate to say, "we bury our successes and exhume our mistakes". The concept being that if we do our jobs properly, once a water main is installed and buried, we will never see it again. If poor workmanship or material defects result in a 'mistake' being buried, it invariably results in digging the line up again to rectify the problem. Obviously, a result that adds cost and frustration to any project. So, if we routinely bury our successes, does that represent the end of that particular project? Hardly.

Did you know.....that Utah State University (USU) recently concluded a 12-month study of 188 water utilities with 117,603 miles of distribution mains (Water Main Break Rates in the USA and Canada - April 2012).

The study revealed an average of 11.0 main breaks for every 100 miles of main in service. By comparison, the KKWWD experienced only 2.9 main breaks per 100 miles during the same period. The USU study also revealed that PVC pipe had the lowest failure rate followed closely by ductile iron (DI). The vast majority of all new pipe installed by the KKWWD is either PVC or DI. The entire USU study can be viewed at www.usu.edu/ust/index.cfm

Once a main is installed and placed into service, it represents the beginning of an expected 100-year operational life. Maximizing the lifetime benefit of the substantial capital investment associated with every new underground facility requires a significant commitment to "behind the scenes" organizational systems here at the District offices. While it is always easy to impress folks with dramatic construction photos of big equipment doing big work, it is not nearly as engaging to outsiders to be presented with information on file folders, filing cabinets or computer database systems.

The KKWWD distribution system currently totals 210 miles of water mains representing a replacement value of over \$170,000,000 (yes, that's a lot of zeros). Over the 115 year history of our utility, those 210 miles of pipe were pieced together as the result of over 3,000 individual construction projects. Each project is unique and can include everything from a small water main extension of a few feet on a dead end street, to major large diameter pipelines that are miles in length and encounter every conceivable site condition including marshes, rivers, harbors, and solid ledge.

While every project is different, they all share the same need when it comes to setting up long term record storage and data retrieval systems. Files typically contain critical information on project costs, correspondence, pre-and post-construction maps and drawings, photos, material catalogues or any other information that is pertinent to that particular installation. Along with that, associated information can include original easements and deeds, or other legally binding documents and memorandums. Unless we have a capability to quickly access specific project information, we cannot maximize the value of that asset, or provide relevant system data to the general public, town and state officials, engineering

Continued on page 7.....



OUR WATERSHED, OUR FRIENDS AND OUR NEIGHBORS

Greg Pargellis, Chief Operator - gpargellis@kkw.org

One of the best parts of managing the Branch Brook watershed is being able to meet like-minded neighbors who care about clean water, conservation and the environment. We have always been on good terms with such fine groups as the Sanford Seacoast Regional Airport, The Nature Conservancy, the Kennebunk Land Trust, the Wells Reserve and the Department of Inland Fisheries & Wildlife. It is exciting to meet a new "neighbor" and pair up again with old friends.

A new friend and a new project being reviewed relates to the restoration of the New England Cottontail (NEC) rabbits. Owning over 2,000 acres of land in a highly desirable location for this pursuit, we have begun working closely with the NEC group to see if this might be a mutually beneficial project. Another exciting project with an old friend, the Wells Branch Brook dam at the Filtration Plant. Built in 1956 and operated to determine if a better design is available for the re-



We have also been talking with another old friend, The Nature western portion of the watershed to land-damaging ATV traffic. all it takes is a few over-zealous riders to cause the lion's share

ated sporadically over the years, the fish ladder is being introduction of sea-run fish, primarily trout and alewife.

Conservancy, about renewing our efforts to seal off the ATV use has been on the increase and unfortunately, of damage which leads to serious soil erosion.

As always, we are continuing planned timber harvests in accordance with best management practices, as well as stepping up various testing of our source waters. We are fine tuning the testing that has been done for decades in an attempt to better locate the sources of various undesirable indicators such as organics. Increased organic loading in the source water from soil erosion is becoming a larger problem, and we are planning our attack to mitigate and turn back the clock on this issue. Additionally, our major pumping wells are located in the Merriland and Kennebunk River watersheds on either side of Branch Brook's watershed, so we're looking forward to increased monitoring of those areas in the future as well. It continues to be a pleasure to work with the various, good "friends and neighbors of the watershed", and we look forward to many more years of our mutually beneficial partnerships. It's been great for me personally to work and collaborate with such wonderful people to help protect our resources.



GROUNDWATER - SOLUTION TO GROWING DEMAND, TIGHT BUDGETS

Rob Weymouth, Facilities Manager - rweymouth@kkw.org

As the need for additional and more economical water increases, the District is using more and more groundwater to meet those needs. How we get that water out of the ground is more complex than one might realize, so let's take a look at how we accomplish that.

Once a suitable well site is located (that's a full article in itself), a large cable-tool well drilling machine is brought in and set up to drive (literally pound) the well casing into the ground. The casing is actually a steel pipe with a diameter typically ranging from 6 to 24 inches. As the casing is driven into the ground, the driller scoops out the dirt and rocks that get pushed into the pipe. This process is repeated until the desired depth or solid bedrock is reached. At this point, a stainless steel well screen, typically 10 to 30 feet long and just slightly smaller than the inside diameter of the well casing, is lowered inside the casing to the bottom where it is held in place while the well casing is pulled up until the bottom of the casing is just slightly lower than the top of the well screen. There is a rubber seal between the casing and well screen that forms a water tight connection.

Next, the well driller "develops" the well by pumping and surging water back and forth through the screen to remove fine silt and sand within the aquifer. This results in a clean coarse gravel pocket around the screen which allows the water to enter the well unobstructed. Well development can be a slow, painstaking process that may take up to a week to complete. Once the well development is complete, District personnel take over the remainder of the construction process.

First, a hole is dug around the well and the casing is cut off. Then a pitless adaptor (see photo), is lowered onto the casing, carefully aligned and welded into place. The side outlet of the pitless adaptor is where the water exits the well into the distribution system piping. The top of the pitless adaptor includes a bolt-on flange that can be removed to allow access into the well from above the ground to install or remove the "assembly". The assembly includes the drop pipe, check valve, power cable and well pump and is lifted and lowered into the well with the aid of a crane. The finished assembly can weigh as much as 6,000 pounds.

Lastly, the power cables are routed to the control cabinet and attached to a variable frequency drive unit that can vary the speed of the pump motor. This allows us to vary flow rates as required to meet operational needs. High capacity gravel wells differ from most residential wells which are either dug into a shallow aquifer or drilled into bedrock. Residential wells will typically yield 1 to 25 gallons per minute (gpm) while our gravel wells yield 150 to 1500 gpm. As you can see, the process to get large volumes of safe, clean drinking water from the ground is not quite as simple as just lowering a bucket on a rope into the well and pulling out what you need.



District Facilities Technician Gerry Goulden welds the pitless adaptor onto the 18" steel casing at the Merriland River well site.



AUTOMATIC METER READING (AMR) ROLLOUT PLANS FOR 2012

Wayne Brockway, Treasurer - wbrockway@kkw.org

You may remember that in our last edition of *What's On Tap*, we told you about the next step in our transition to automatic meter reading (AMR). After assessing and evaluating the two competing pilot programs, we have decided to go with a system from Datamatic, Inc.

Datamatic's mesh system technology (see *Winter 2012 - AMR Update*) outperformed the other vendor's system in several important ways. Although the cost for both systems was similar, Datamatic provided much more successful read ratios and was far easier to use for both our customer service personnel and field installers.

This summer, we will begin installing 1,000 meters within a section of Kennebunk located between the Mousam River and the Kennebunk River; and then from along Route 1 (Main Street and Portland Road) to our western service territory limits bounded by Mill Street, Alfred Road, Thompson Road and Alewife Road. This process will involve replacing your current water meter with a new AMR water meter. Your current register (located on the side of your house) will be replaced with a battery powered radio transmitter that utilizes an extremely low, 1/4 watt signal to relay your meter reading to the District's computers. In most cases we will be using the existing wires (that connect your current water meter and outside register) to connect the new AMR meter and radio transmitter.

The installations will be performed solely by District employees, carrying photo identification and using clearly marked KK&W Water District vehicles. This AMR upgrade will take about 30 minutes to complete and is being done at **no charge** for current District customers. We will be contacting you to schedule a convenient time to complete this work in an orderly fashion. We only ask that you maintain an accessible pathway to your meter before our installers arrive. We estimate that the total system wide AMR meter implementation will take up to eight years to complete. So stay tuned for a follow up article in our *What's On Tap Winter 2013* newsletter and please do not hesitate to contact me at 207-985-3385 should you have any questions.



An example of a new AMR water meter (bottom) with exterior mounted radio transmitter (top).



WONDERS OF WATER (WOW) - A GOOD TIME HAD BY ALL

Lynn Mankin, Operator - lmankin@kkw.org

Wonders of Water, or WOW for short, is a national Girl Scout program designed to help scouts learn about water through involvement with public utilities. It gives kids a chance to explore the world of water/wastewater, where it comes from and where it goes. I recently had the privilege of helping local Troop 243 connect with numerous Water District employees to learn about their work and how each employee's job fits together to make this operation we know as the KK&W Water District run like a finely tuned Swiss watch.

Our first stop included a tour of the Filtration Plant with the girls learning how water is treated, made safe for drinking and delivered to customers. In the laboratory, we explained how jar tests help us to determine the proper chemical doses and demonstrated how the water is tested for pH, turbidity, color and chlorine residual. The girls also learned how we recycle the hydrosolids (a fancy name for small particles removed during the treatment process) into manufactured topsoil as well as how the Plant and distribution is continuously monitored and controlled by our computer controlled SCADA system, the "brains" behind the scene. At our next stop, Kathleen Chapin, Customer Service Coordinator, explained the billing process, and various business functions conducted by the Front Office. Justin Richardson, GIS Coordinator, introduced our Geographic Information System (GIS) by showing us the computerized distribution system maps with all the water mains, valves, hydrants, booster pump stations and storage tanks. The girls had a particularly fun time locating their homes on the GIS maps. The girls also realized how fortunate they are to have safe drinking water after seeing Superintendent Norm Labbe's PowerPoint presentation on the living/water conditions in Guatemala following his recent trip there. Steve Spofford, Meter Shop & Stock Room Clerk, showed us the Meter Shop which seemed to make an impression on the girls with over 1,000 shiny brass water meters sitting on the shelves.

After leaving the Main Office, we met up with the Flushing Crew on Storer Street in Kennebunk. Plant Operators Matt Sampson and Brian McBride were hard at work flushing the distribution system, a semi-annual affair that tests and "cleans" the mains by removing any accumulated sediment. The girls were impressed when they witnessed the roar of more than 1,000 gallons per minute of water being flushed from a hydrant and creating an instant stream that rushed down the street and into a catch basin. The "perfect puddles" left behind were cool too.

Next, we visited the construction crew installing a new 16" water main on Alewife Road. District Foreman Ed Thyng explained how the pipe was prepared and connected together. The large pipe and heavy equipment was deemed to be "epic" and if you ever have the chance to witness our construction crews in action, I'm sure you'll agree that their performance is indeed epic. We also visited our one million gallon tank in West Kennebunk to see just how much a million really is. This 140' tall light green steel tank is truly an impressive sight, towering above even the tallest pine trees. The WOW tour ended at Sea Road School with a blind taste test of three popular brands of bottled water and KK&W tap water. And guess what, we won! The perfect ending to a perfect day.



Whoever said that water is boring has never spent a day with Girl Scout Troop 243. These bright and energetic young ladies had a blast learning all about how a water utility operates as part of their 'Wonders of Water' program.



THE INEVITABILITY OF NEGLECT - A NATIONAL CRISIS IS LOOMING!

Scott Minor, Assistant Superintendent - sminor@kkw.org

Well, there's just no way to sugarcoat it - America's water works systems are in dire straits, according to the American Water Works Association ('Buried No Longer' - March 2012). AWWA reports that after decades of neglect, the estimated nationwide cost to replace water pipes that have reached the end of their useful lives (typically 100 years) will exceed \$1 trillion through 2035. With our national debt at record levels (\$16 trillion and counting at last check), this means that the revenue for such a massive infrastructure renewal program can only come from one place - the ratepayers. AWWA estimates that many household water bills will triple through 2035 - ouch! As a nation, it's finally time that we bring the conversation about water (and sewer) infrastructure replacement above ground, as continued deferment is no longer a viable option.

So who's at fault and how did this happen you ask? Well, to quote cartoonist Walt Kelly, "we have met the enemy and he is us". For years, water (and sewer) systems of all sizes, at the urging of their ratepayers, have deferred systematic infrastructure renewal in order to keep rates down. And with an infrastructure that's buried (out of sight and out of mind) and designed to last a century, this "kick the can down the road" approach has been an all too easy de facto "policy" to adopt for many water utilities. In a perfect world, water systems would replace each pipe at the end of its 100-year useful expected life. Given that many water utilities have century old pipe, that would equate to replacing 1% of all system pipes each year.

So here we are, half way through 2012 and we're collectively at another fork in the road. Which way do we go? To the right or the left? Well, you'll be glad to know that for the past two decades, the KKWWD has taken the "right" path and followed the "road less traveled", replacing an average of 0.86% of our mains each year. Our proactive philosophy has not only improved system reliability, aesthetic water quality, and fire flows, but it also means that our ratepayers thankfully won't be seeing the massive rate hikes that many utilities will require in the coming years. AWWA's report, 'Infrastructure: Buried No Longer' can be viewed on line at www.awwa.org/government/content.cfm?ItemNumber=1062.



CUSTOMER CORNER - ARE YOU IN LINE FOR ONLINE PAYMENTS?

Kathleen Chapin, Customer Service Coordinator - kchapin@kkw.org

At long last, your request to pay your bills online has been met. Though the testing time took a bit longer than expected, we are finally up and running smoothly with several online payment options available. **Any bill received after May 2, 2012 is eligible for online payment.** In addition, any outstanding balance issued with a new bill after May 2, 2012 may also be paid online. The annual accounts in the Kennebunkport area were the first batch of bills sent after May 2, 2012 and many of you have already signed up to schedule your payments automatically and to receive paperless bills. Overall the transition has been seamless with only a few common questions, as follows:

Question: *Why is there a service charge for credit and debit card transactions?* **Answer:** Unfortunately, the bank charges us a service fee for each transaction. In our attempt to be fair to all customers, we felt that these fees should not be absorbed by those of you not using this service. We do, however, provide a FREE payment option using electronic checks. This E-checking option also allows you 5-6 additional days to use your money than with most banks' bill payment services.

Question: *I've tried signing up on your website and it will not allow me to view my account - what's wrong?* **Answer:** There are only two pieces of information required to establish your online account with us - 1) your new six digit account number and 2) your service address (or a portion of it), **exactly** as it appears on the bill. If you are still unsuccessful, we suggest putting less information in the service address field. For example, rather than "18 MAIN ST", try using only "18 MAIN". If the service address is incorrect or incomplete on the bill, you will need to type it as it appears and just let us know so we can correct and update our records.

Another great resource to help you navigate the online payment process is our FAQs, which can be found under the *Customer Service* tab on our website - www.kkw.org. As always, feel free to contact our office staff at 207-985-3385 if you have any questions or need additional help.

Please visit our website to see how you might win an i-pod by signing up for Invoice Cloud.

WATER CONSERVATION - IT'S EASY & EFFECTIVE

It's hard to imagine running out of water, especially in a place like Maine with our abundance of fresh water lakes, ponds, rivers and streams. But even here, we need to be mindful of such vital resources. From 1950 to 2000, the population of the United States doubled while public demand for water more than tripled. KKWWD's number of customer services and demand has also more than doubled during this same time period and continues to increase. This is why we have developed new groundwater sources along with continuing our efforts to protect the Branch Brook watershed.

Despite our ample supplies, not wasting water is always a good idea and there are plenty of small things that you can do to conserve water which helps us keep costs down while protecting the environment. Do small changes really matter? Consider this: each of us uses an average of 100 gallons of water per day or enough to fill 1,600 eight ounce glasses! Just think how much water you can conserve if your whole family becomes more water wary. Just shortening your shower by two minutes each day can save over 1,400 gallons per year per person. Please visit our website at www.kkw.org to learn the many easy and effective ways that you can save both water AND money.



To promote water conservation, the KKWWD is offering 55-gallon food grade, recycled rain barrels at our cost of \$60 (\$125 retail). Please stop by if you are interested in purchasing one.

BENEATH THE SURFACE - CONTINUED FROM PAGE 4

firms, insurance companies or any other entity that seeks out information about our facilities. With 115 years of history and thousands of files to watch over, we must assume a packrat mentality about not wanting to toss anything out. As you may imagine, space needs are ever expanding and will ultimately fill any dedicated space assigned to that function. With a predicted inevitability, our available long-term secure record storage space reached a point where it had to be addressed. We realized that additional secure storage space was badly needed, and that our overall file system cataloging methodology needed to be revisited as part of the overall task.

To that end, we have just completed an additional fire resistant long-term storage vault within an existing building at our Main Street 'complex'. We have now embarked on the process of gathering maps and records scattered throughout the organization and integrating them into our new environment. But this process is not strictly a lift-move-stack kind of endeavor. Having a new dedicated storage facility is also providing us with a long anticipated opportunity to better organize and develop a modern computer database system capable of enhanced tracking, cataloging and data retrieval.

With over 100 years worth of data and information, we literally have 'back of the napkin' type drawings that are invaluable, but not always easily retrieved when needed. The ultimate goal of our centralized long-term storage facility is combining the permanent safe storage of valuable records with an enhanced ability to find and retrieve valuable data via a modernized database tracking system. A primary guideline that provides our organization with confidence in how we make decisions affecting our future is knowing what we've done in the past, and how we got to where we are now.

Kennebunk, Kennebunkport & Wells Water District
P.O. Box 88
Kennebunk, ME 04043

PRST STD
U.S. POSTAGE PAID
PORTLAND, ME
PERMIT NO. 7

Did you know.....that the New York City water supply system leaks a reported 36 million gallons of water per day according to the New York Times. That's over 13 billion gallons per year which is enough water to meet our customers' needs for 13 years! Experts estimate that about a third of the water drawn from the City's supply source leaks before it gets to New Yorkers' faucets. To fix this problem, New York City began constructing a new 60 mile long tunnel (Tunnel No. 3) in 1970 with the project expected to be completed by 2020. Once this new \$6 billion tunnel goes online, Tunnels No. 1 (circa 1917) and No. 2 (circa 1936) can be drained to repair the leaks.



EMPLOYEE SPOTLIGHT - A PAIR OF ACES AND TWO NEW FACES

Cindy Rounds, Administrative Assistant - crounds@kkw.org

It doesn't happen too often, but we recently had two long-time employees retire. Over 22 years ago, Elaine Roberts began working in the Front Office as a Billing Clerk and for 30 years, John Ryan was the District's Accountant. Staff along with Trustees and retired employees honored Elaine and John at retirement parties that were filled with laughter, remembrances and well wishes for a future of exciting new adventures.

With these departures, we welcomed our two newest employees, Cathy McLeod and Beth Cardner. Cathy joined the District team in January working as our Accountant. Cathy's smooth transition into the position was attributed to her extensive financial experience and quick learning style. Beth joined the customer service group (Front Office) in April filling the Billing Clerk position. Beth's excel-



Elaine Roberts (left) and John Ryan (right) decided that 2012 was a good time to retire after 22 and 30 years of service. In addition to spending more time with family, Elaine plans to do more camping while John will be breaking out the clubs.

lent communication skills and friendly demeanor make her a natural fit and nice addition to our talented customer service folks.

Welcome aboard and best wishes to both Cathy and Beth for a long and fulfilling career with the District.

So, the next time you're in the Office, please take a minute to meet our two new team members.



Beth Cardner (left) and Cathy McLeod (right) are the newest members of our team. Beth works as a Billing Clerk with the Customer Service Group while Cathy "crunches" numbers and attends to the books as our staff Accountant.